



**Wellfleet Transfer Station
Annual Report
2022**

Mike Cicale

A Year in Review

While 2022 had several highlights, many of the goals set out last year have not been completed. We are still waiting for the new roll-off truck to arrive. A report on PAYT was started but required a lot more detective work than anticipated and is still ongoing. The educational videos failed to happen due to AmeriCorps staffing issues. We were not able to generate a comparison report between Wellfleet and Eastham Transfer Stations or a financial report for our own. An equipment building of any kind has not been thought about and our scale is still in need of sandblasting and painting. Staffing issues and problems arising with just about everything logistical in the aftermath of the plague have made it difficult to put in the time on these projects.

Boat Shrink Wrap

We were able to accomplish other things this year that were noteworthy. Our Boat Shrink Wrap Recycling program was able to happen for a second year. Even with limited staff, AmeriCorps and the Wellfleet Recycling Committee helped us go through 2 tons of Boat Shrink Wrap in the summer heat to make sure the material was properly prepared for the new market created by our working group. Our hauling and recycling vendors from last year's program were not going to work out and the program almost didn't happen. We partnered with Republic Services Brockton MRF to find a local place for drop-

off and a market to recycle it where none existed before. Republic charged us \$55/ton and the shrink wrap will be turned into coffee lids and similar products. This kept the shrink wrap out of the trash and opened a



market for other municipalities and boat yards within driving distance of Brockton. The host Towns convoyed to the MRF so the Shrink Wrap could be dumped and baled all at once. The hope is that the program will grow, stabilize the material stream, and bring costs down. It was a fine example of what can happen with the collaboration between Cape towns, Barnstable County, AmeriCorps, local Recycling Committees, and organizations like WHOI and the Woods Hole Sea Grant.



Waste Audit

Although we did not get enough AmeriCorps members to create educational videos about Recycling, we did perform a Waste Audit. This involved dumping out a Comingled (plastic and tins) recycling container and sorting and measuring the materials inside. This helps us know where to focus our efforts about contamination and further separation. It was a valuable experience and captured on video by Stephen Sette Ducati, who is now our new seasonal employee. A full report of the Audit is attached at the end.

Signage

We are always trying to find ways to better communicate information to the users of the site. We have tried many various types of signs with different shapes, colors, pictures, ways of giving info, etc. It has been a learn as we go exercise in marketing and advertising. Getting to know our customers over the last 8 years, we have tailored things to be more effective. We call these “Alternative Signs”. These are a bit more attention grabbing and used for things outside of the normal signs, such as “Tires” or “Metal”. They have been very successful.



Money Handling

Given the Town's ongoing financial situation, we decided to re-evaluate how we handle the money coming into the TS. Using Jake Delano's retail management experience, we installed a new, larger safe which accommodates three separate cash drawers (one for each attendant) and created our own bank and ledger for making change onsite. We have not had any issues previously, but the changes allow for easier reconciliation and more modern accounting practices.

Food Waste Compost

We doubled our first year (2018) of Food Waste Compost tonnage. We received 10.29 tons. This is 1% of our MSW. MADEP states that 23% of MSW in MA is food. Four new Food Waste Compost containers were purchased from Rehrig Pacific using RDP funds. They are made with 40% recycled plastic, 10% of which is "Ocean Bound", meaning litter collected from rivers and streams. The importance of purchases like this is that it lets manufacturers know that people want products using Recycled content, which in turn, helps recycling markets be profitable and potentially lowers costs for municipalities' recycling



programs. This is “closing the loop”. With so much negative PR about plastic, residents appreciate seeing that their recycling efforts are being used in the ways they are intended. This keeps enthusiasm up and makes people more willing to accept any changes in how we must manage materials due to external factors.

Staff

Lenny Federico completed his 10th summer season. He has now worked for the Town of Wellfleet for more years than over half of the current DPW department. Stephen Sette Ducati was hired in later July giving us a full seasonal staff. With the help of Justin Pechonis, he created a new shadow box (using recycled lumber) outlining what is not recyclable. Steve’s photography skills have been used several times for our Transfer Station including the Waste Audit, leaf composting, and aerial shots that Jake used to create color coded maps for the website.

Amnesty Day

We held Amnesty Day for the first time since 2019. The new layout was finally tested, and it worked very well. Staffing

was inadequate, but the day was a success, and the residents were very pleased. A full report is attached.

Fee Analysis

A fee analysis of the Outer Cape Transfer Stations was done to see where we could make changes to bring us in line with costs. As of this writing, no meeting to discuss the changes has happened. The analysis is also attached to the end of this report.

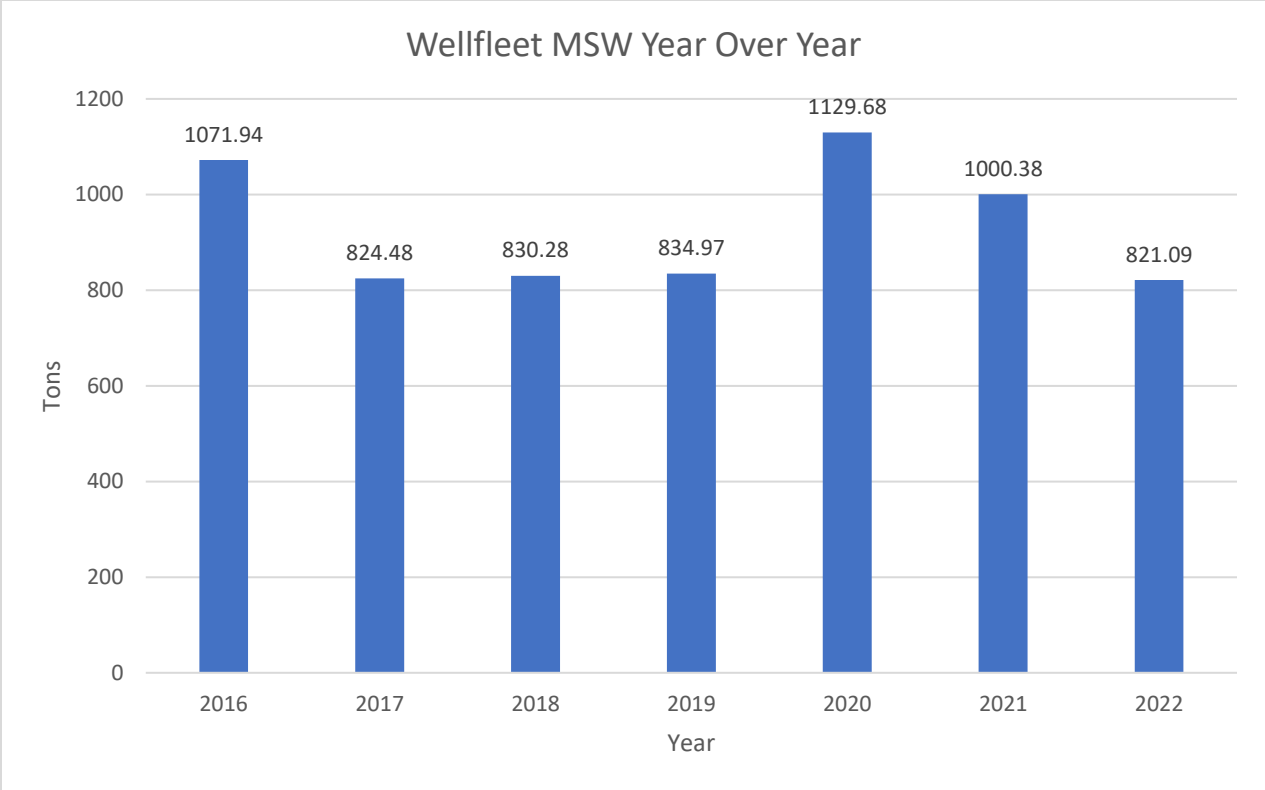
Summary

While the tonnages of things like MSW, Recycling, and Demo came back down to pre-pandemic levels, items such as Mattress, Box springs, Carpets, TVs, and Tires are remaining high. Trends are shifting but our current operation has been able to accommodate. We will monitor the changes that we see and incorporate them into our long term plans for the site. In the meantime, we will focus on smaller improvements and maintenance projects until the Town moves beyond its financial woes.

2022 Highlights

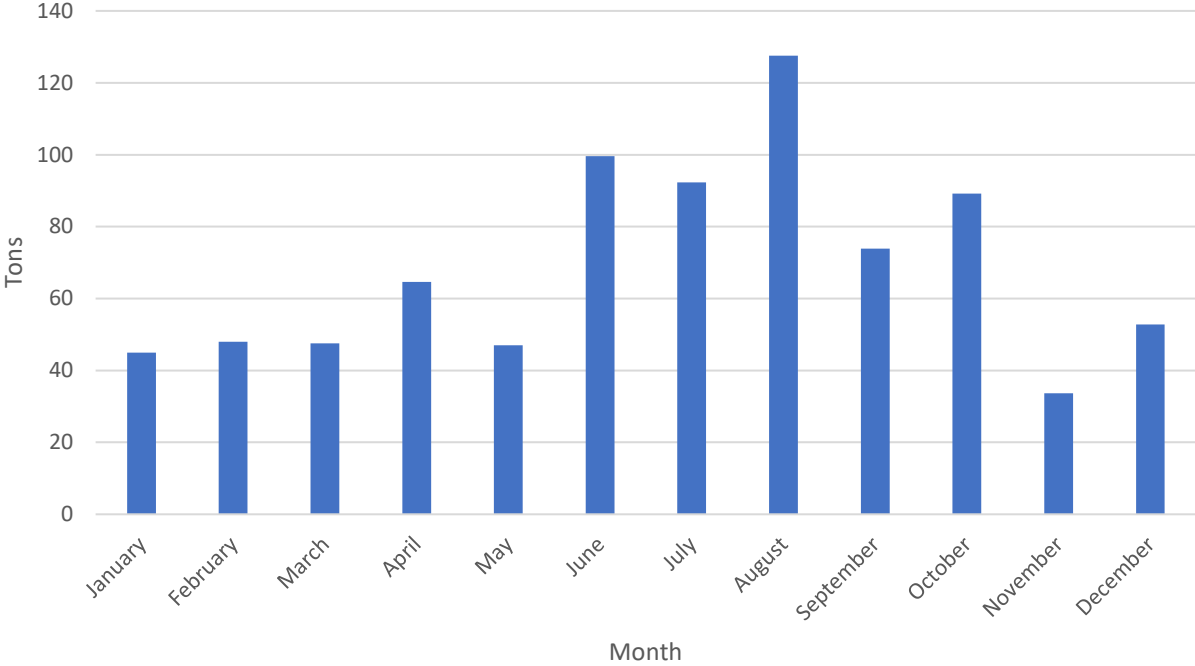
- Used old pieces of concrete pad from marine debris pile and built a pad for reefers.
- Received grant to have AmeriCorps members do waste audits.
- Recycled 2 tons of Boat Shrink Wrap.
- Created Alternative signage.
- Obtained a new safe and improved the accounting system.
- Nearly doubled food waste composting tonnage.
- Purchased new food waste containers made of 30% recycled Plastic and 10% Ocean Bound Plastic
- Used a worn-out roll-off container to create a new storage shelter.
- Received 18 RDP points beating all other cape towns by 4 points or more.
- Used RDP money to purchase 3 new recycling containers for the new roll-off truck.
- Built new shadow box for Recycling.
- Analyzed fee structure from other outer cape Towns and made recommendations.
- Held Amnesty Day with new layout.

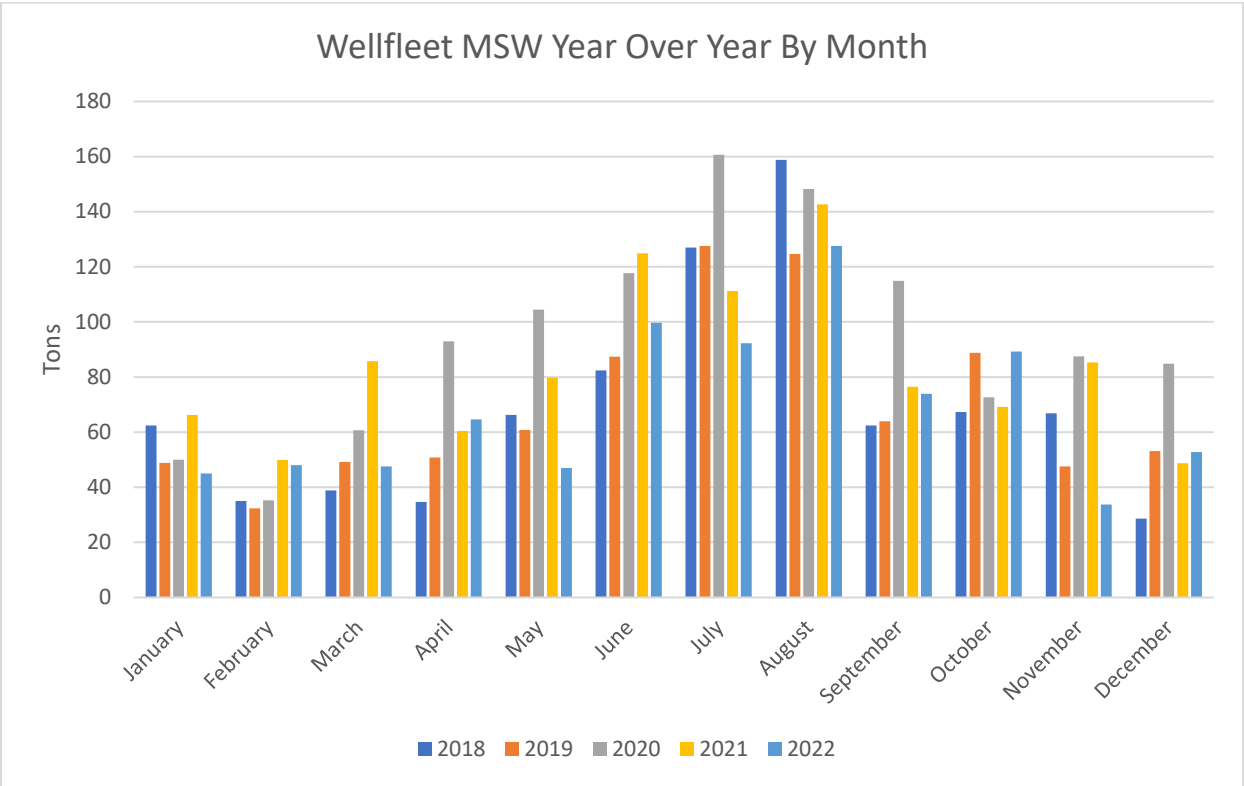
<u>ITEM</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>
Gate Fee/Non PAYT	1233	1187	1057	931	1102	866
Replacement Sticker	168	165	172	91	102	110
Second Vehicle Sticker	46	54	62	40	68	48
Late Season Sticker	56	65	20	0	9	7
First Vehicle Sticker	98	125	103	93	108	104
Third Vehicle Sticker	0	2	2	7	8	12
Bag	-	-	-	-	387	636
Air Conditioner	141	157	149	159	176	208
Box spring	163	260	176	187	302	253
Commercial Sticker	69	50	58	43	46	43
Commercial Sticker >1 ton	7	3	1	0	0	0
Compost Bin	24	35	40	59	52	31
Couch	118	164	138	141	204	227
Computer Monitor	62	83	90	72	99	91
Carpets	439	690	456	410	464	527
Chair	124	156	144	142	153	197
Dehumidifier	58	61	53	88	79	75
Dishwasher	65	83	67	46	34	47
Dryer	41	35	29	26	28	26
Fire Extinguishers	4	11	28	11	42	27
Mattress	452	508	386	490	617	593
Propane Tank #20	83	95	91	78	93	72
Refrigerator	121	139	97	104	133	120
Sleeper Sofa	30	44	28	32	42	29
Stove	45	41	42	44	46	28
Toilets	n/a	n/a	80	77	67	86
Tires	202	292	320	412	452	400
Truck Tires	n/a	n/a	12	0	7	1
TV	334	391	300	322	340	413
Washing Machine	30	43	33	36	24	21
Water Tank	152	241	167	173	153	154
propane tanks >20lbs					3	3



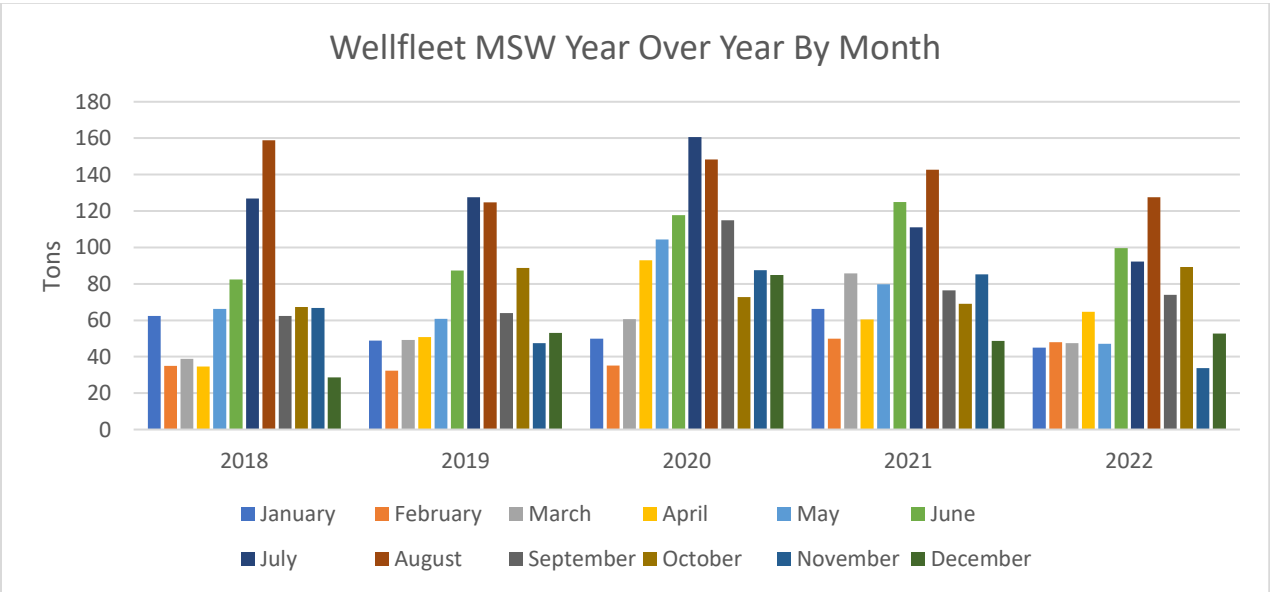
In 2022, Wellfleet had 821.09 tons of MSW which is 17% less than 2021 and back to pre-pandemic levels.

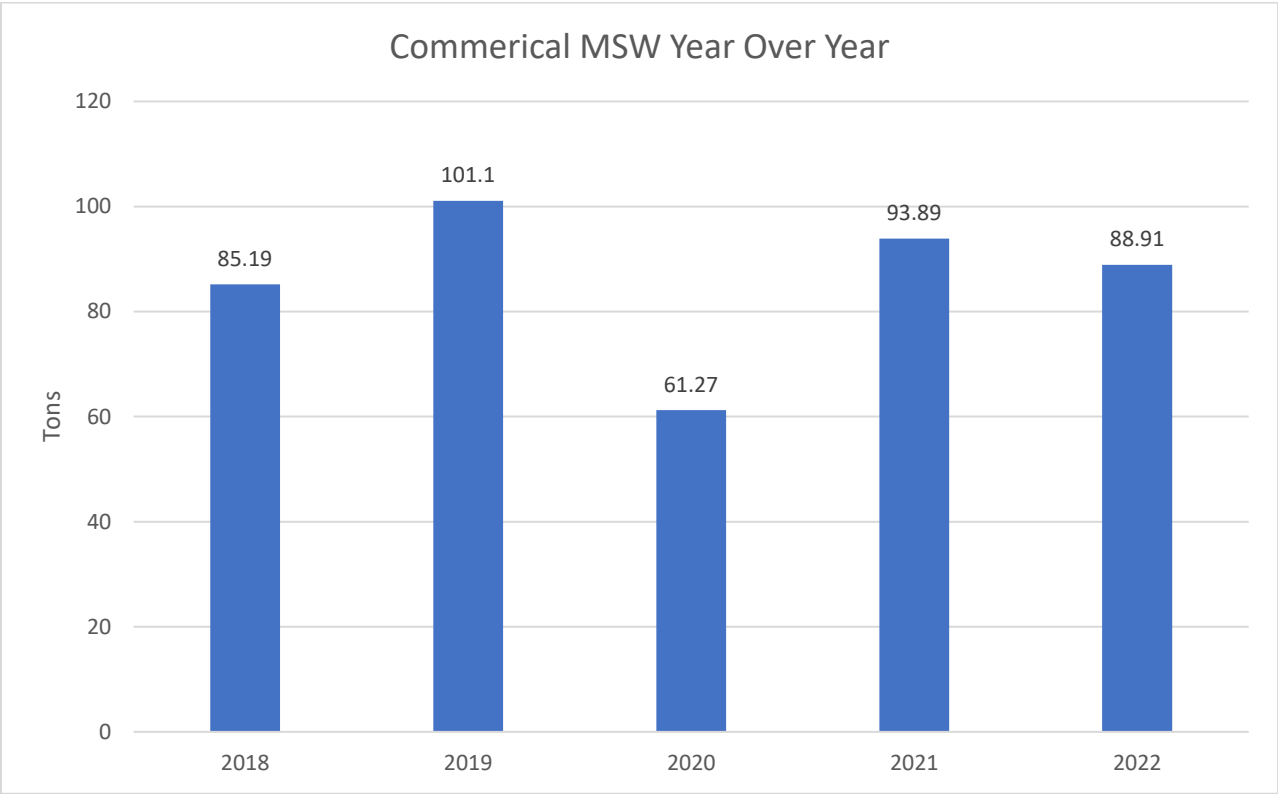
Wellfleet MSW Tonnage By Month



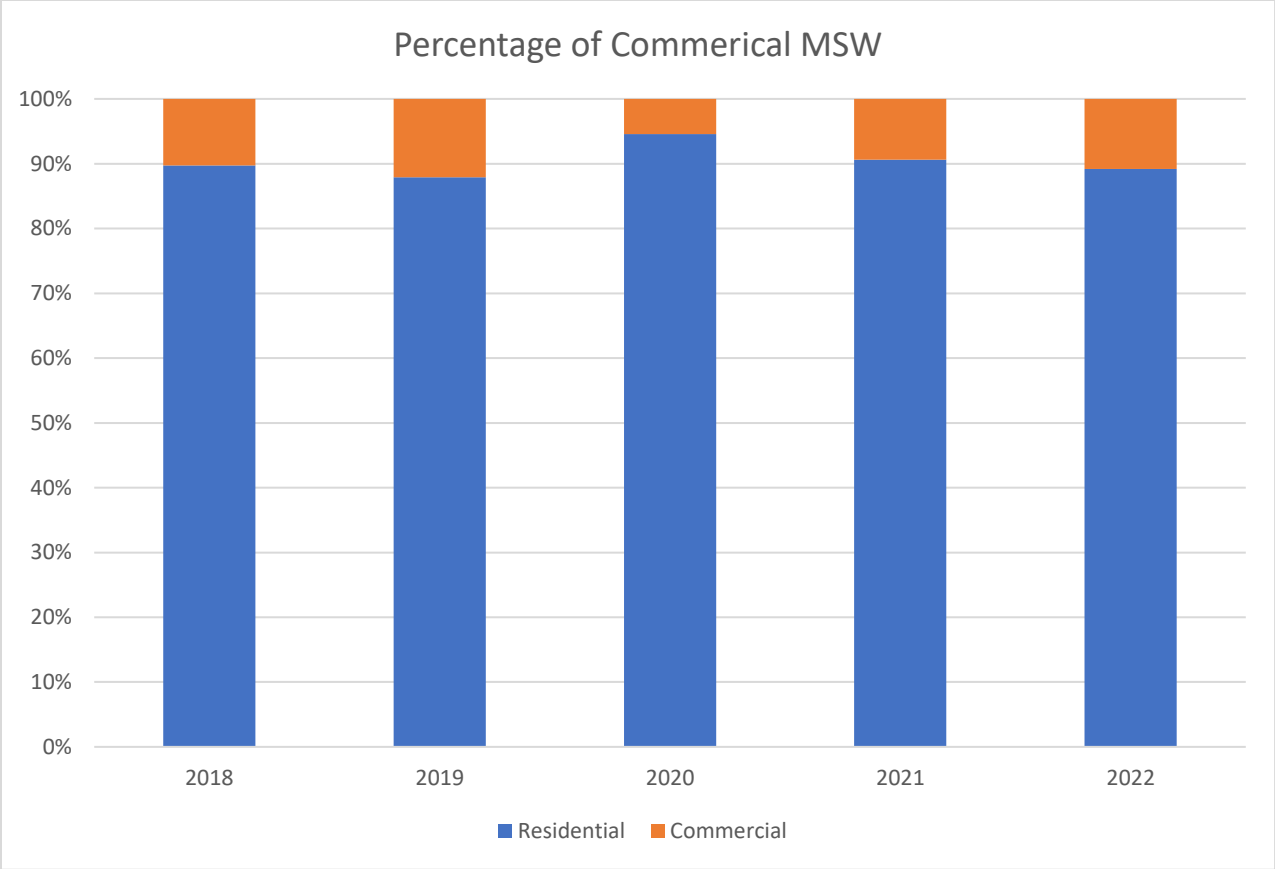


There are clearly fluctuations that coincide with the seasons and pandemic but there are other changes happening throughout the year. The following chart helps show the different trends, although the causes are unknown.

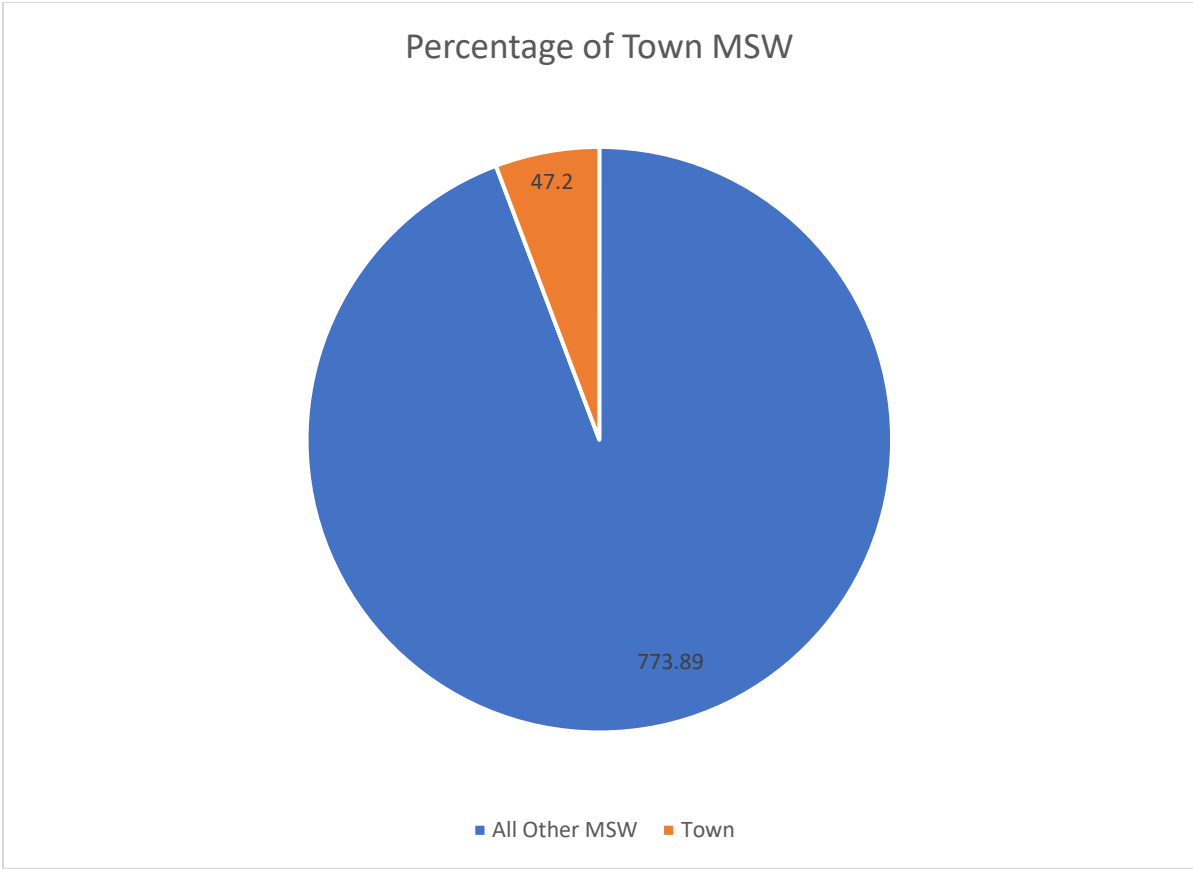




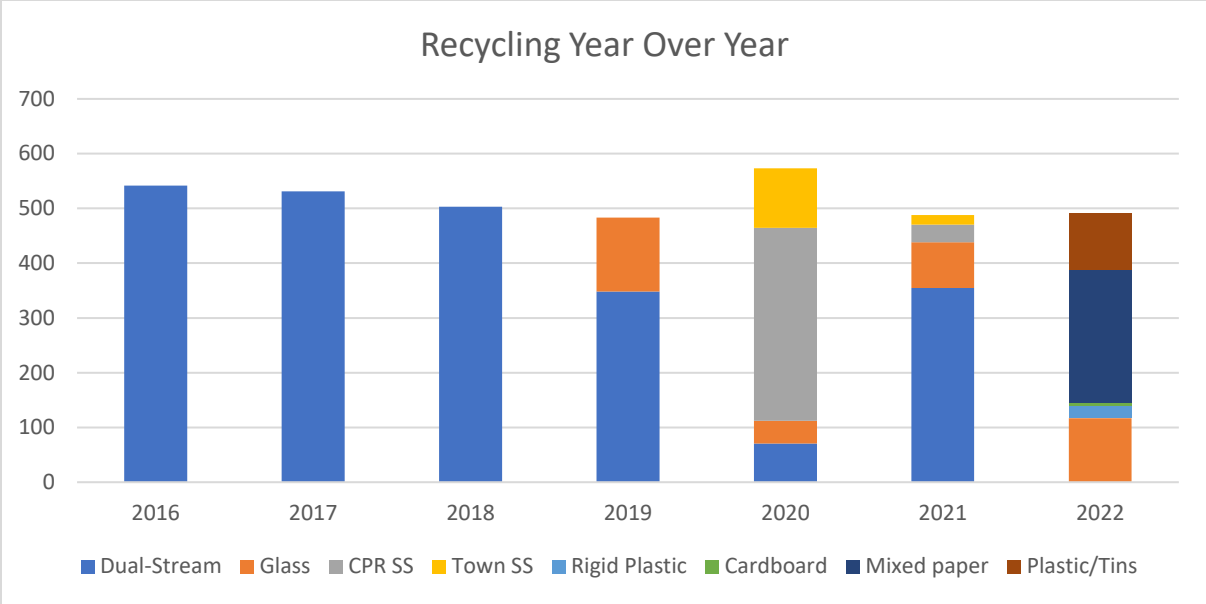
Commercial MSW consists of the small businesses that weigh up trash generated from commercial entities. At \$120/ton, we took in \$10,669.20 in revenue (Approx. \$1,900.00 profit). We do not see Trash packers use our site so this is not representative of all of Wellfleet's commercial MSW.



Commercial MSW has remained around 11% of total MSW shipped.



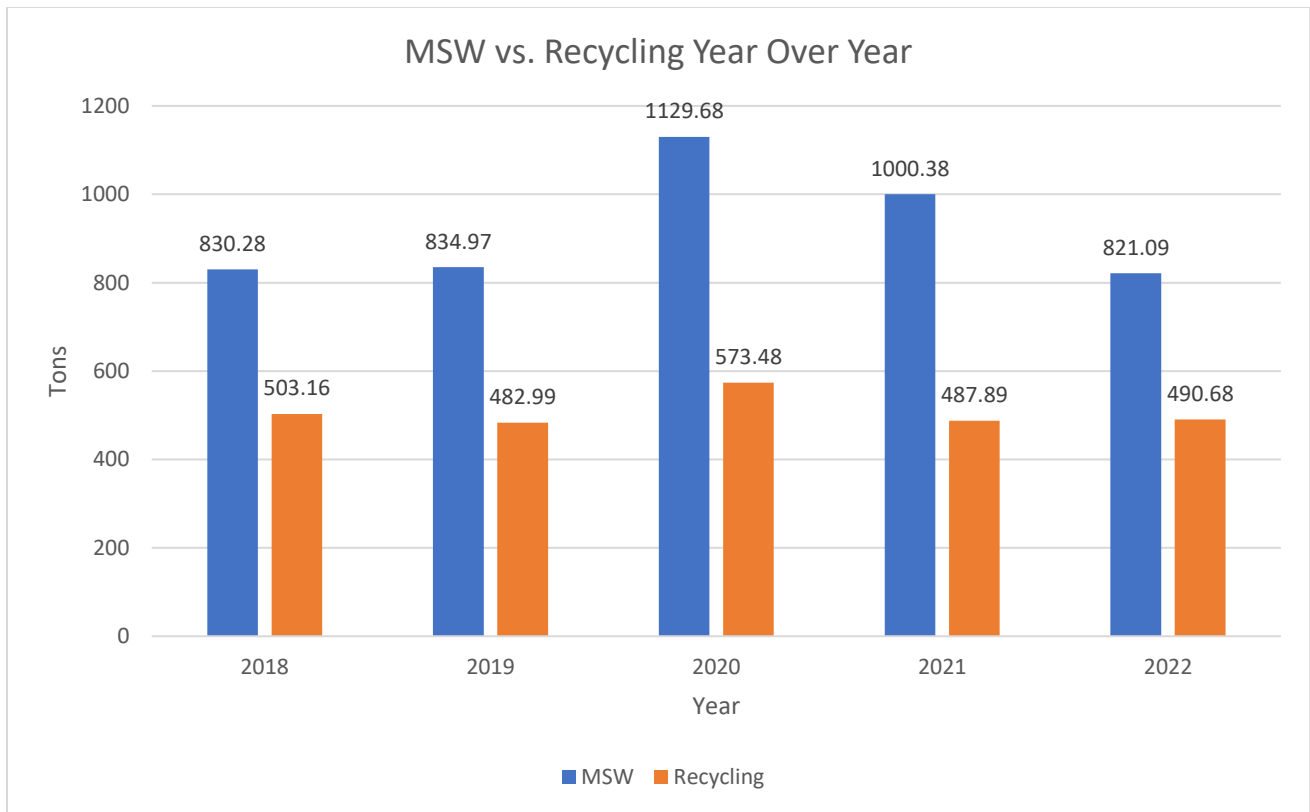
Town MSW is generated from Town beaches (not including summer time Dumpsters) and some buildings and makes up about 4% of the total MSW. The percentage has not really changed year over year.



	2016	2017	2018	2019	2020	2021	2022
Dual-Stream	541.78	531.03	503.16	348.5	70.43	354.47	
Glass				134.49	41.47	83.89	116.72
CPR SS					352.47	32.28	
Town SS					109.11	17.25	
Rigid Plastic							23.4
Cardboard							4.04
Mixed paper							243.82
Plastic/Tins							102.7
Total	541.78	531.03	503.16	482.99	573.48	487.89	490.68

Recycling tonnages seem to have gotten back to pre-pandemic levels.

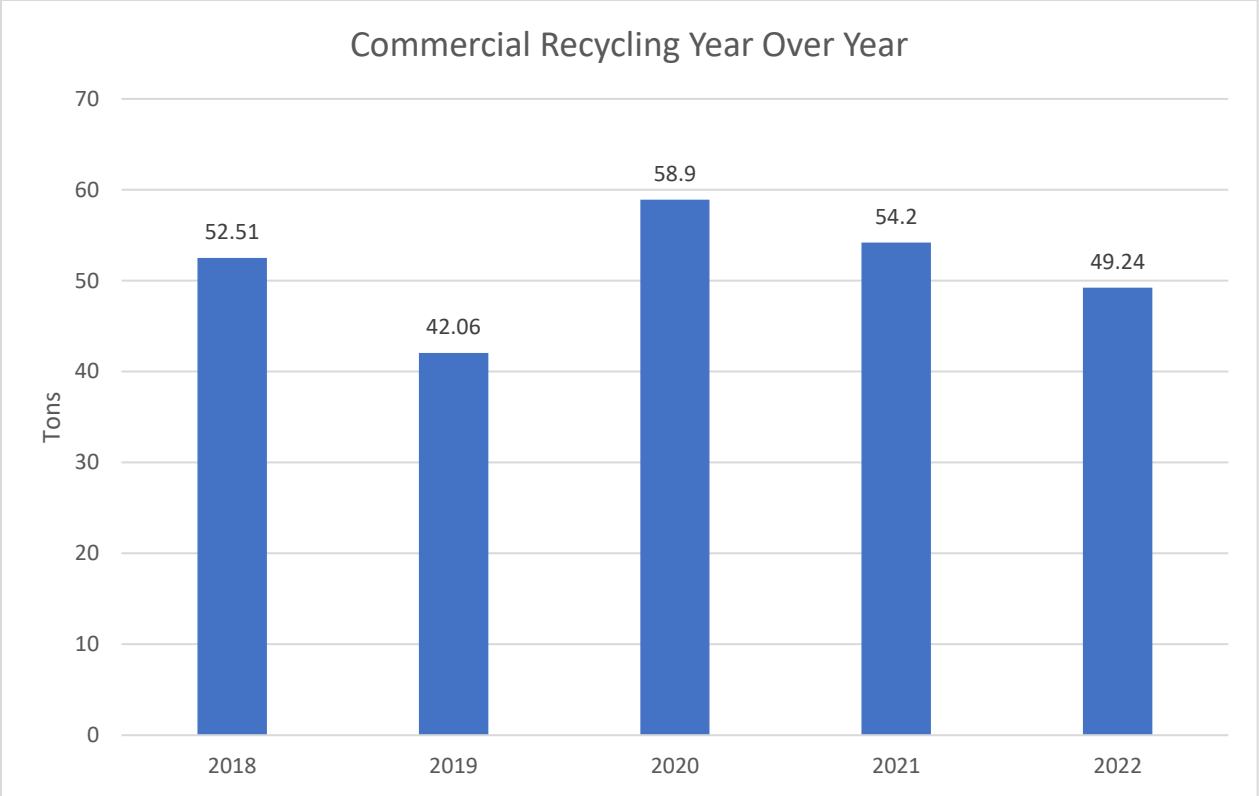
The 4 tons of cardboard was likely a very clean load of Mixed Paper that was considered cardboard at the MRF. We will break down each material stream in the chart from now on.



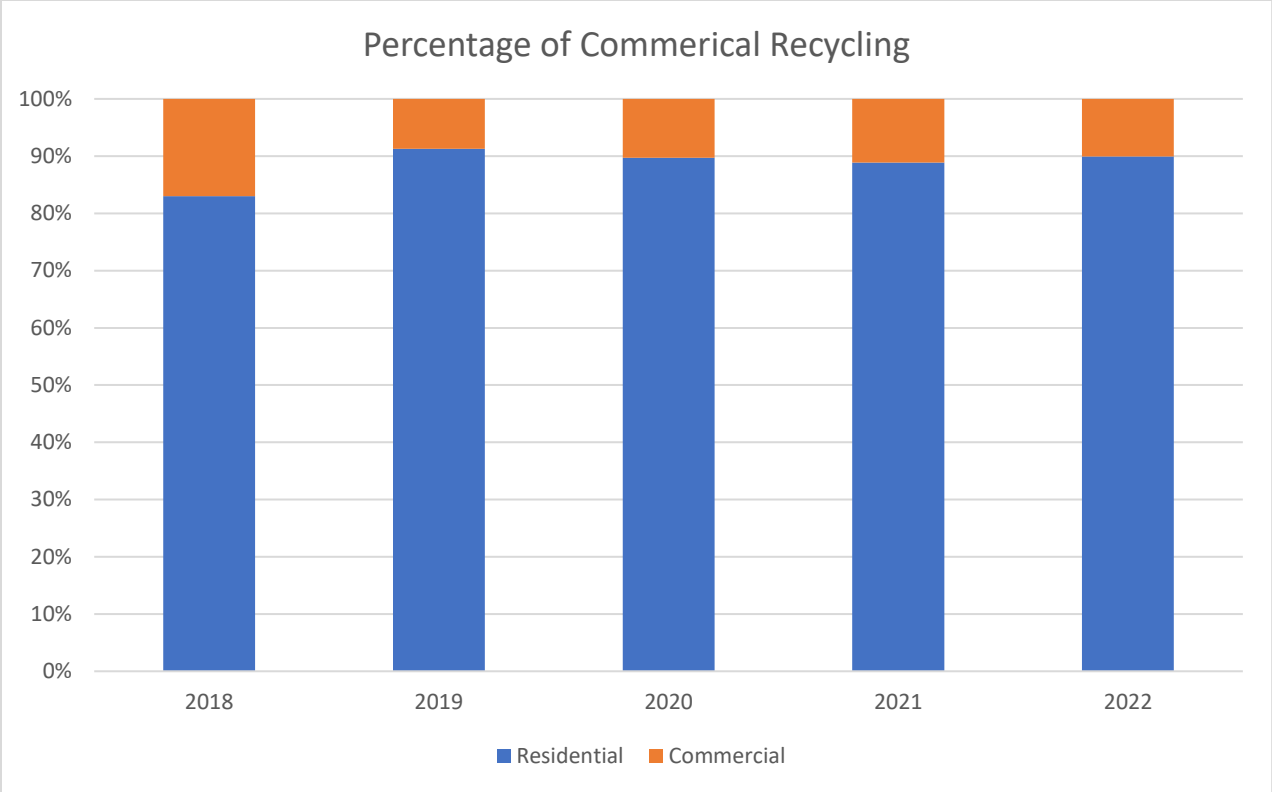
Using only our Dual-Stream data, Wellfleet’s Recycling rate climbed back to 37%. This is above the 32% national average.

Recycling rates can be subject to inconsistencies because definitions of what is and is not recyclable and the scope of materials counted vary by community. For example, San Francisco counts excavated dirt and rubble used for road base as part of their 80% diversion rate. We use our dual stream tonnage and MADEP’s formula (minus compost/HHW) to compare with the national average.

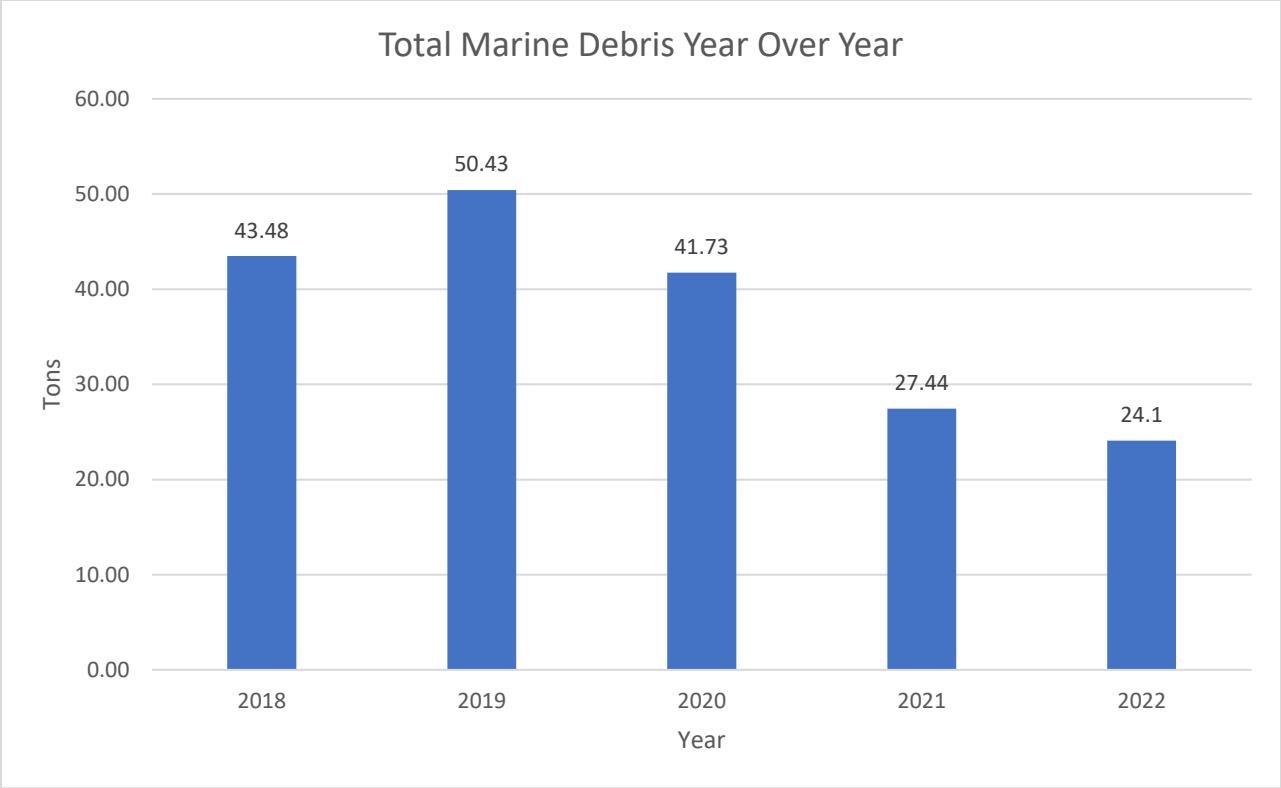
Technically, any material diverted from landfill/incineration could be used toward our recycling rate. We’d need to start weighing a few more materials including all the yard waste to get an accurate number. Doing this would certainly boost our number and look great in the papers but isn’t worth the effort. Our rate is mainly used to see the trends year over year in our Town. The rate went up this year largely due to our MSW going down.



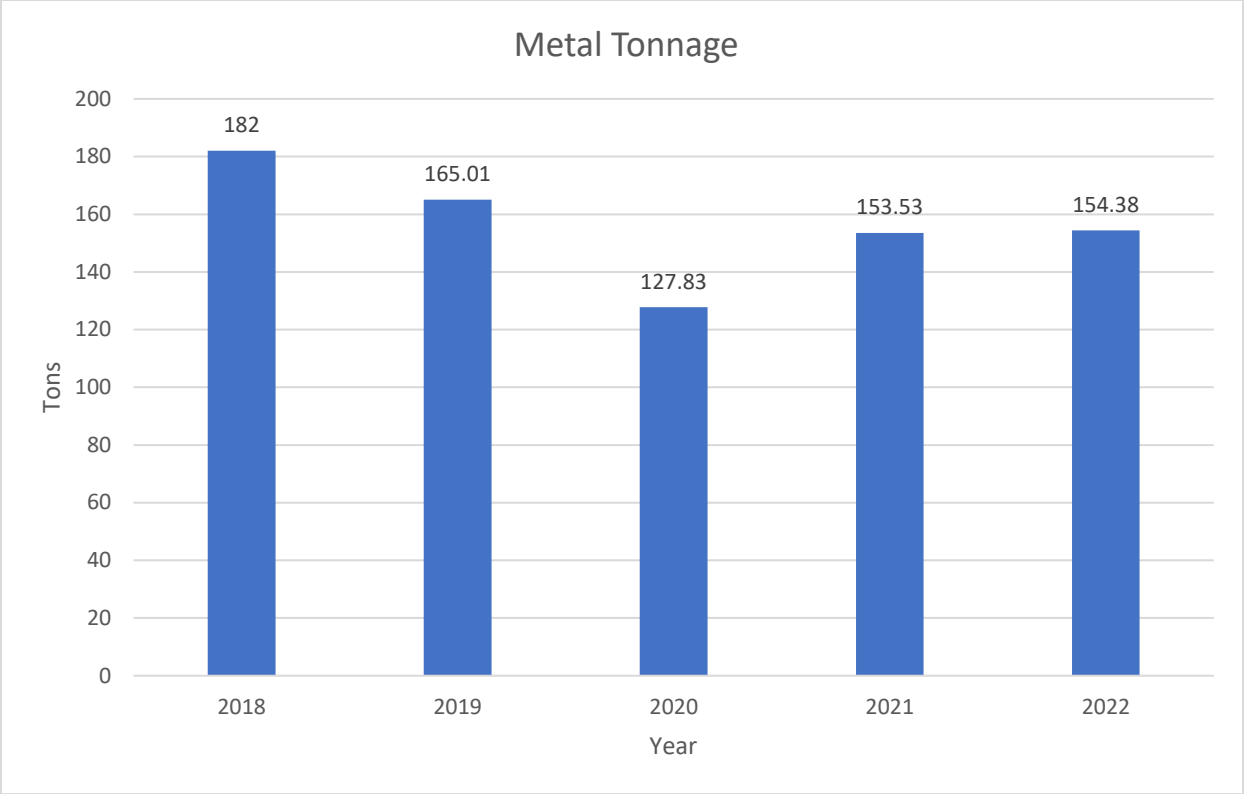
Recycling from commercial businesses and the two small haulers that we have.



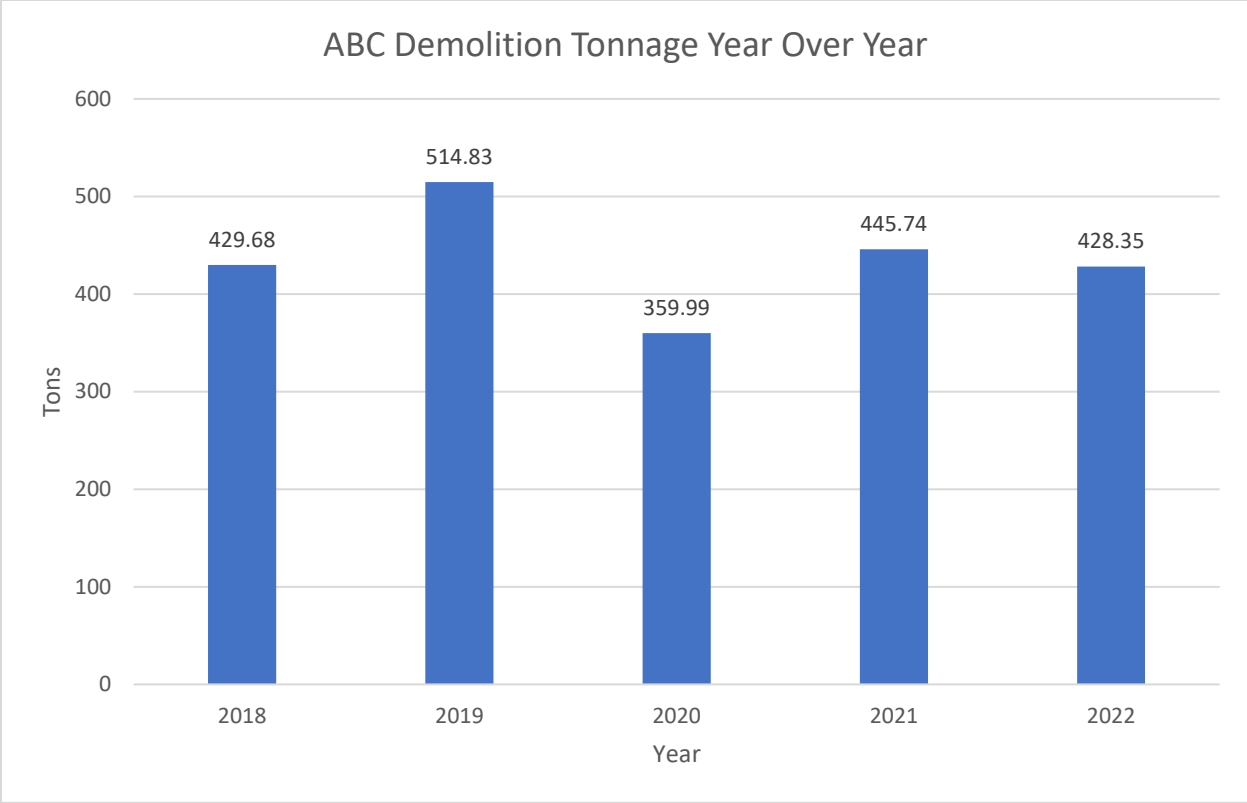
Commercial Recycling makes up 10% of total Recycling.



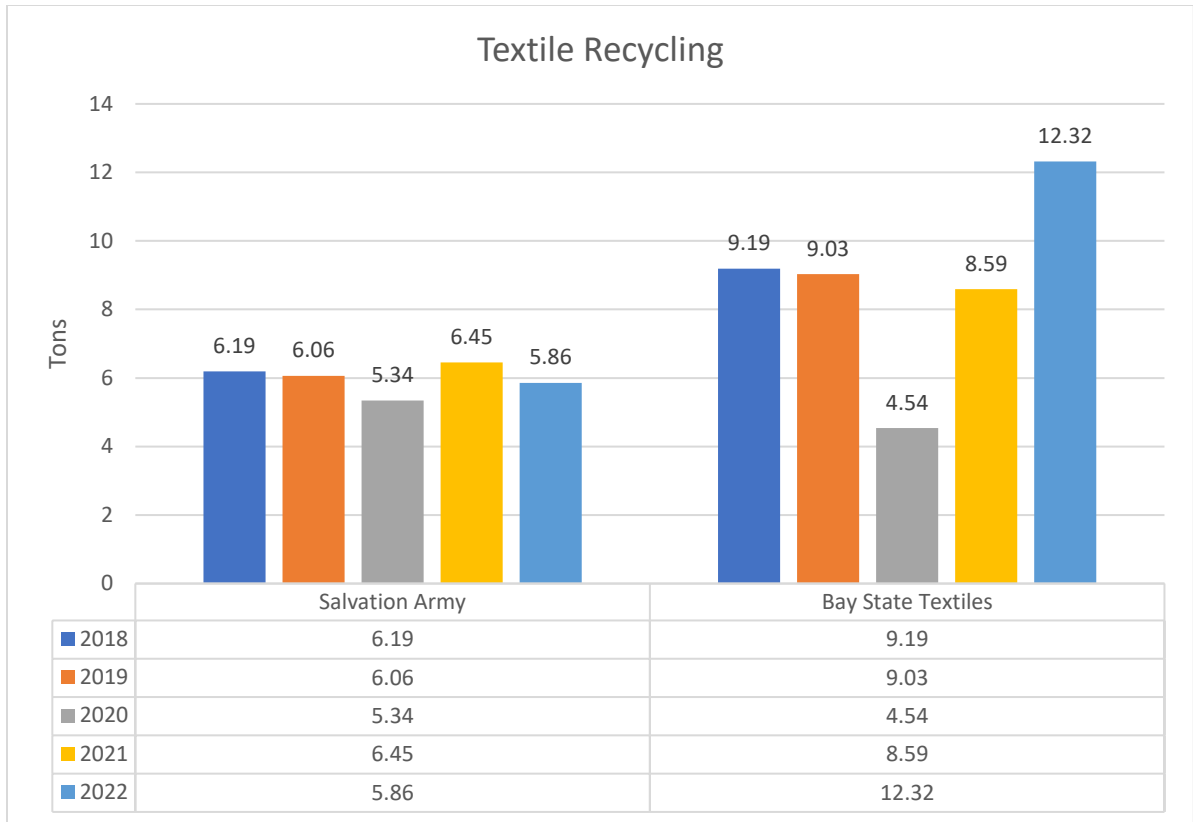
This represents tons shipped out. Due to ongoing issues with our hauler, much of the year's material remains on the ground. With the arrival of our new roll-off truck shortly, we will haul it all away and end our partnership with ABC Disposal.



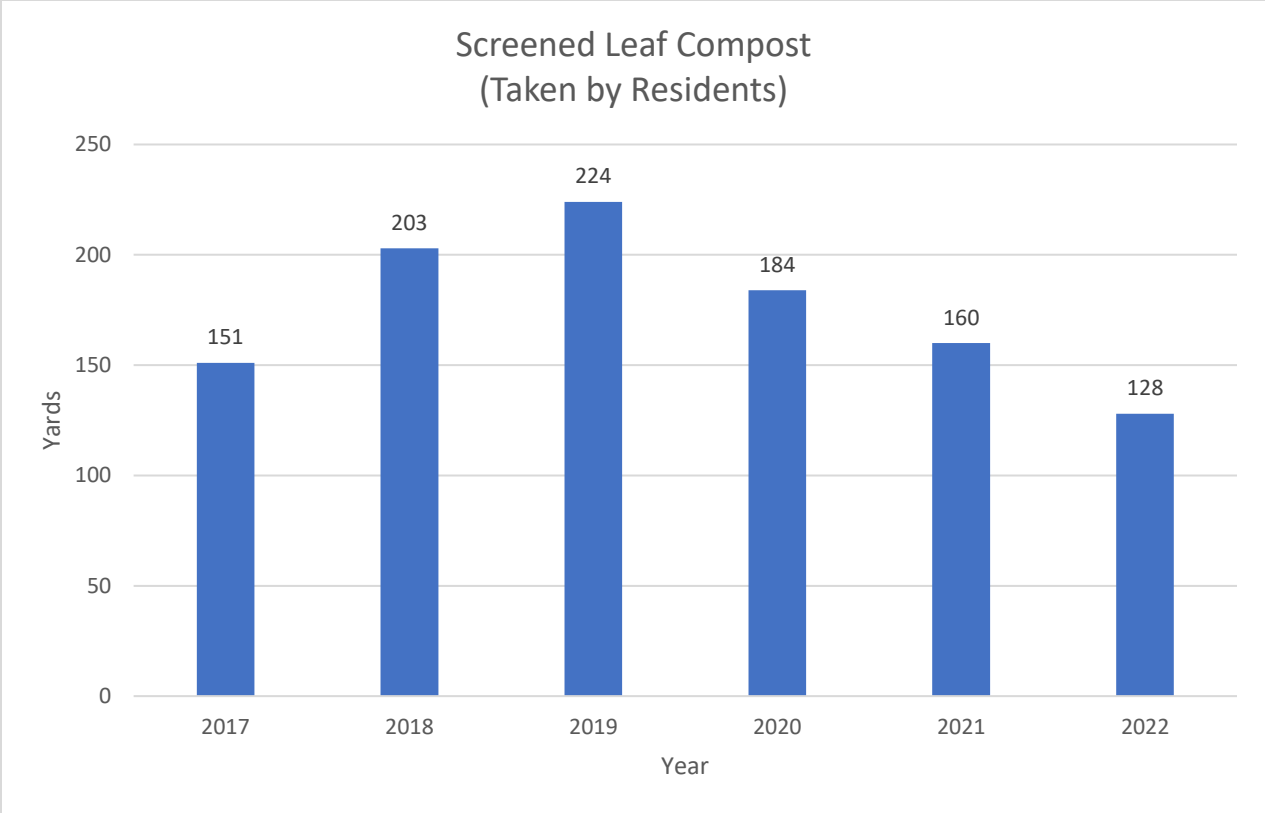
Metal was almost the same as last year.



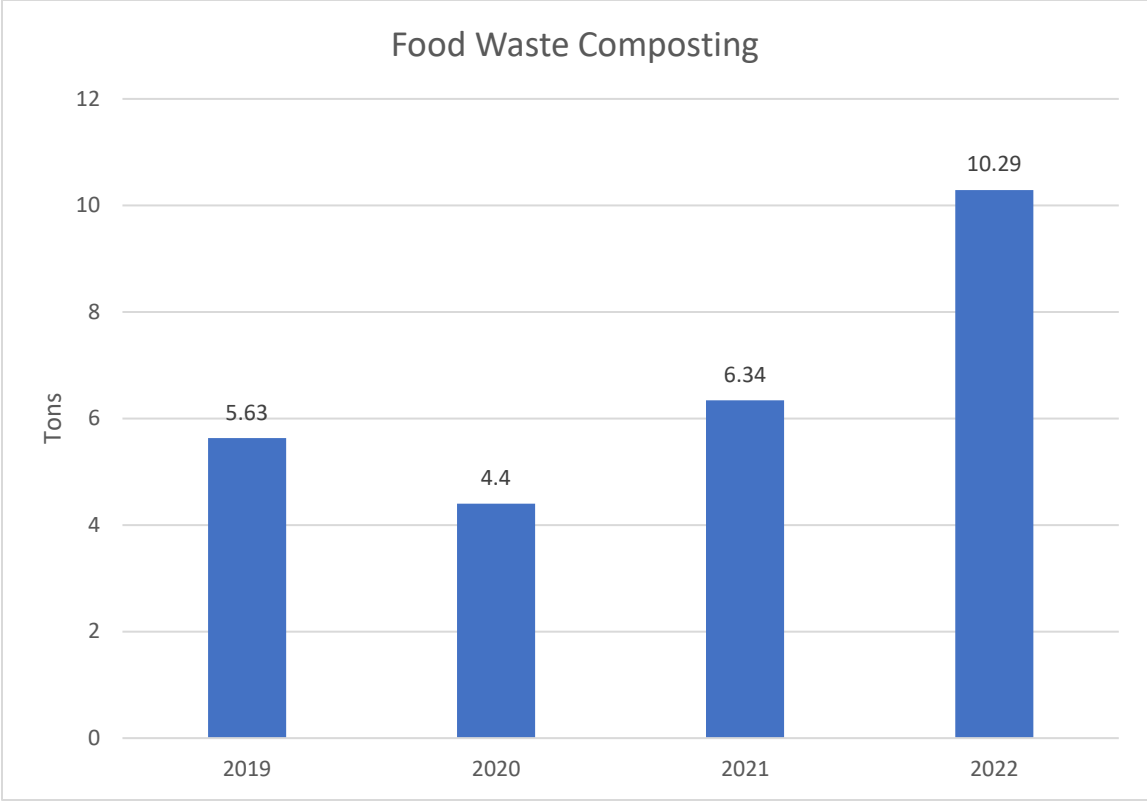
C & D, Upholstered Furniture, and Carpets.



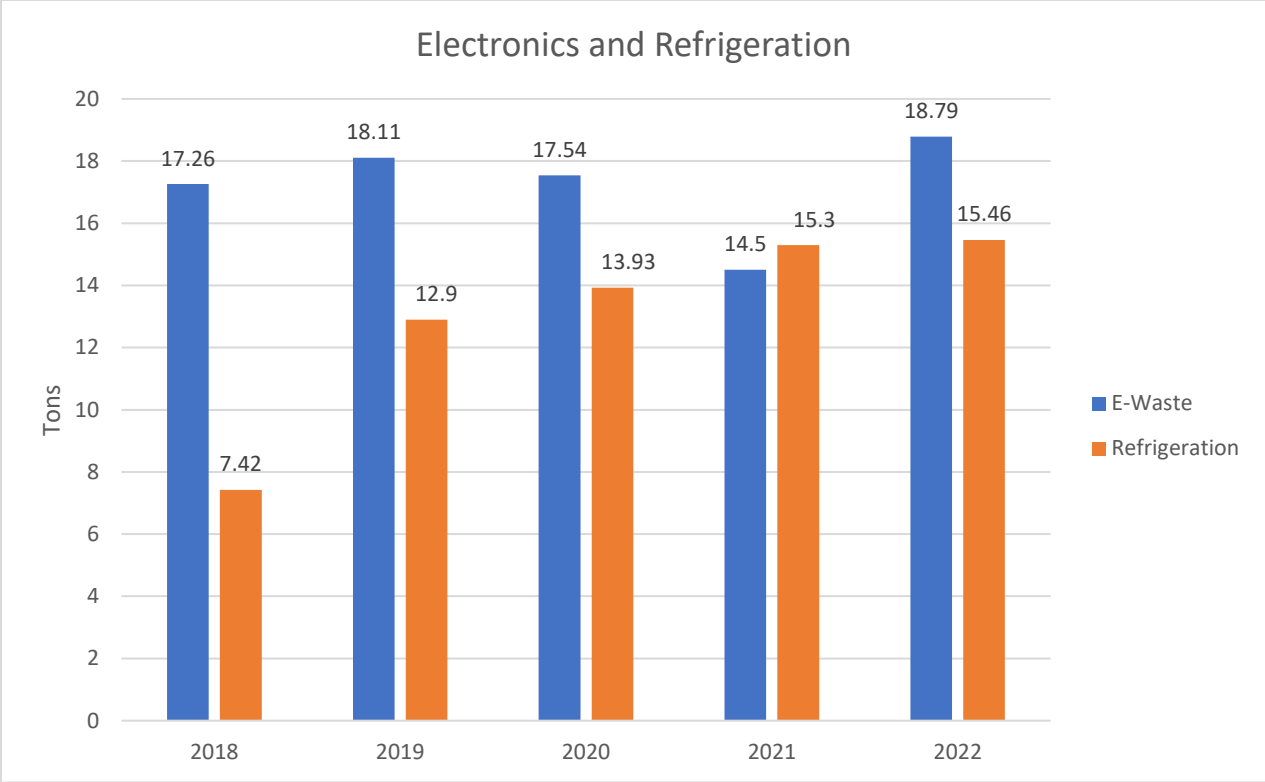
Materials that go to Bay State Textiles generate \$100/ton. The Salvation Army can accept small items that Bay State cannot and keeps those items out of the trash, free of charge.



There is still about 40 yards of compost from 2022. The screen we use has finally given out. We will try to borrow Eastham’s vibratory screen or come up with some other idea to screen the entire windrow at once. We easily would have run out of compost again; had we had the screen. We have added wood chips from brush grinding to our leaf piles to make more material and get rid of the wood chips without hauling.



We have nearly doubled our Food Waste Compost tonnage since we started. That is just over 1% of our MSW. According to MADEP, 23% of MSW is food waste so we have 22% more to go.



Both material streams being hauled by East Coast Electronics.

Looking Ahead

The project list for 2023 is long. Many of these have been on the list for a few years but due to staffing and funding issues they have been put on hold.

- The logistics of self-hauling will need to be addressed for when the new Roll-off arrives so we can decide which locations prove the most valuable.
- The PAYT report will need to be completed and recommendations will be made based on the terms of our new MSW contract.
- The fee schedule will need to be discussed and changes implemented.
- Getting quotes, purchasing equipment, and adjusting procedures to make the facility safer with regards to Hazardous Waste, material collection, equipment maintenance and repair.
- Painting the Scale, Paint Shed, tables, Power Shed, compactors and decks.
- Getting the compactors serviced.
- Creating a new parking spot and cross walks next to the Scale house for people who need to pay for items.
- Designing and pricing out some sort of cover or building for our equipment.
- Adjusting the design of the Demo Ramp for easier access.

- Designing and building some sort of leaf compost screen if borrowing one doesn't work.
- Finding a new Yard Truck for our MSW trailers.
- Looking into further separating our E-Waste
- Looking at alternative ways to handle refrigeration units and redesigning that area.
- Sighting a new Swap Shop
- Replacing the Golf Cart batteries
- Specking and quoting a Pup Trailer for the new Roll-off.
- A lot of TLC to our old Roll-off once we have the new one.
- Purchasing or designing a new system for Bulky Rigid Plastic.
- Looking into new Recycling streams such as flowerpots and four pack beer holders.
- Continue to work with Barnstable County on regional drop off facilities
- Roll-Off container maintenance, repair, painting.
- Painting the inside of the Scale House.
- Building dividers for the Universal Waste Table.

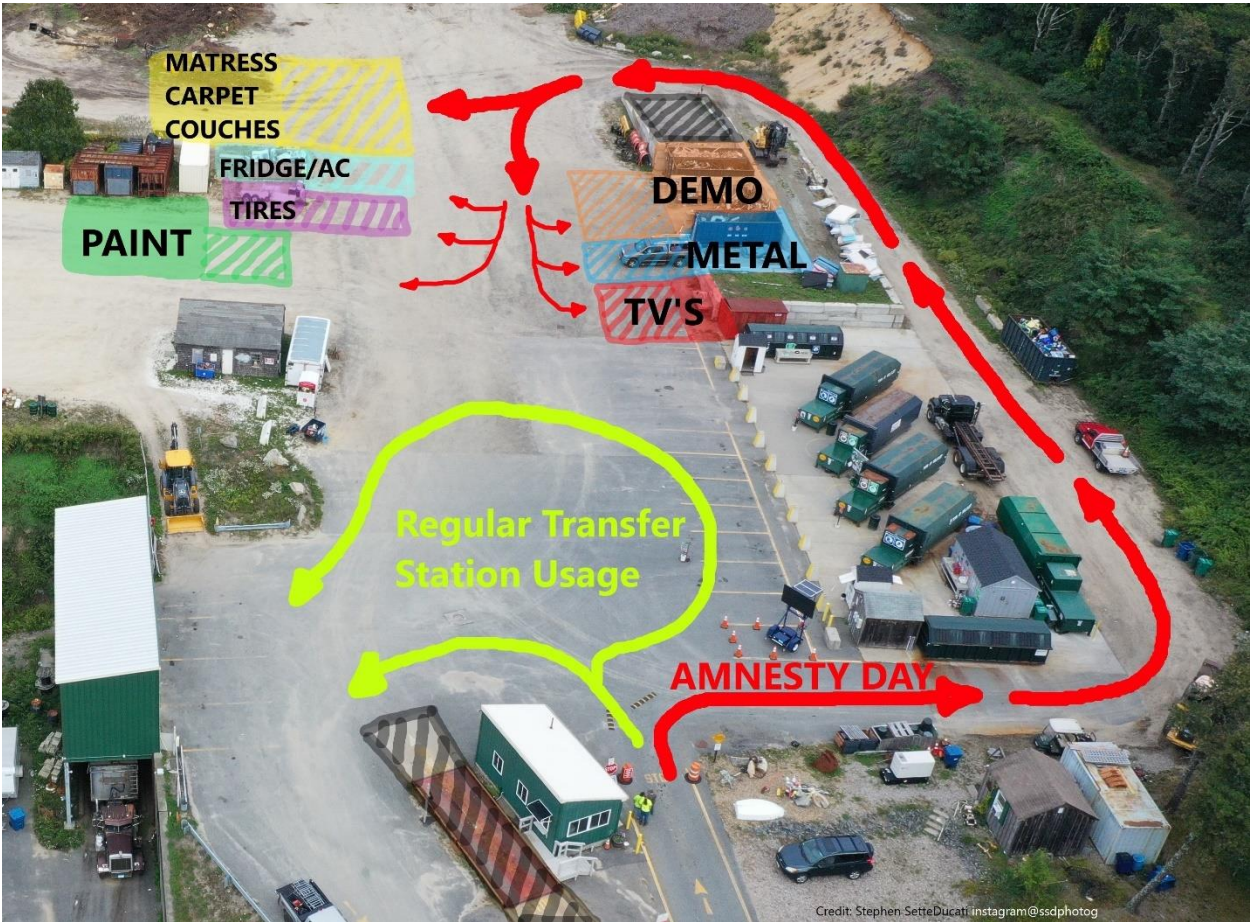
Given the state of the finances in our Town, it is not anticipated to get a lot of funding for larger projects such as a

large equipment building. The time it takes to plan for something like that, only to be postponed or not funded, letting all the quotes get outdated and frustrate the few contractors who would do the work, makes it seem like that is a goal for another year. Fear not, all that effort will be spent getting the goals from the previous page accomplished.

There is funding for extra seasonal TS help this year, and we have an applicant already, making 2023 the perfect year for knocking out a punch list of small but important maintenance projects. When the various analyses on fees and material streams is complete, we will have a better idea of what to focus on in our plan to grow the facility. As the new Roll-off truck shows the cost savings from the changes we are making, we may have a better chance at pitching future projects to the voters.

2022 Reports

AMNESTY DAY 2022



Amnesty Day was held for the first time in 2 years. It was the first time we were able to use the new bin block area for Wellfleet's favorite day. Looking at the map on the front page, we altered things slightly to accommodate the surge of drop-offs. We moved the furniture and mattresses next to the ash pile and shifted the metal pile over one bay. This allowed us to use the normal metal bin for additional demolition drop off. The wall for the normal demo ramp was designed to be removed which allowed for an additional ground level drop off point for demo. We now had 3 ground level drop offs for demo instead of the 1.5 spots that involved backing up a ramp as in previous years. We also had a dedicated paint drop off. Traffic was routed behind the recycling area to redirect the line out of the middle of the parking lot, which had caused chaos in years past with the people who were at the Transfer Station for routine trash and recycling.

The plan was formulated about a month in advance, divvying up the 11 staff that we would normally expect to attend and feeling confident that this year would be very well managed. Slowly I was informed that the help was dropping like flies. On the day before the event, I found out that 2 more key operators would not be coming in to help. We were down to 7 staff (a 36% decrease). I was able to convince one to come in, making eight. Due to the lack of staff, everyone had 2-3 jobs for an event that on a normal day, doesn't allow for breaks. Everyone stepped up and got it done. There was no stopping.

The first car arrived in front of the gate at about 7 am. We opened at 8 and quickly, there was a line. By 8:45 the line was stretching back toward the gate. At some point in the morning, a Wellfleet police officer came in to inform us that traffic was backing up on Rt.6 and asked if we could speed up. There were 318 vehicles that arrived solely for Amnesty Day. This does not include all the people coming in for normal business. In a 6-hour event (the last hour being slow and not

factored) we were able to get about 55 cars/hour unloaded. The hydraulics and the people do not go any faster. This is not to say that we can't come up with a solution to the traffic next year. It just needs to be stated that we were operating at maximum speed with the staff that we had.

The line started to show signs of slowing at 11:45. At 1:00, there was officially no one waiting to get in. Vehicles were still steady but tapered as the hour went on. Around 1:45, we were able to start reassembling the Transfer Station to its normal layout. I asked for and was granted an additional staff member for Sunday. I am happy that I did, as we both spent all day both monitoring the busy recycling area, weighing all the containers, and cleaning up the remnants of Amnesty Day.

The people coming in seemed to figure out the new set up and were happy to have their favorite day back. I was in the excavator all day and if there were complaints, I have not heard them yet. The pictures on the following pages will show how we became overwhelmed by traffic as the morning went on. While the line behind the Recycling areas worked as expected, once vehicles moved past the Demo checkpoint, they were free to go anywhere, which they did. A major contributor to the time it takes folks to unload their vehicles is the fact that they are also bringing in loads of items that we normally take for free all year long. Many loads were mixed which took even more time to sift through. One person spent about 15 minutes with a trailer blocking a large portion of the metal pile. Most of the metal he dropped off would not have had any charge attached. Piles of Bulky Rigid plastic also took time to drop off and has no fee.

At some point, I started to allow people to unload what ever they had on their vehicles at the demo drop-offs to try to speed up the

process. Pictures show how other areas that were not staffed became de-facto dumping grounds. For example, the heavily contaminated Bulky Rigid Plastic pile which spilled out onto the parking lot. The unsupervised Refrigeration area became a version of the Metal Pile. There were 2 chain link gates in front of my office that I planned to use as a loam screen. During the day, one was stolen. The unsupervised recycled latex paint boxes (which must meet certain criteria and is sorted by staff) were being rifled through by people. This created yet another mess that needed to be dealt with later.

I was more confident than ever that we would be ready for Amnesty Day. The timing of containers filling up before the event and working with vendors to schedule pickups on certain days meant we got to start with:

- The most empty Demo and furniture containers we've ever had.
- A mostly empty Trash trailer with no full trailers waiting to go.
- An empty electronic container
- Pre-made Latex paint boxes
- Recycling compactors with plenty of room left in them
- Empty tire pile
- Additional containers to separate mattresses from furniture
- An empty 40-yard container for Bulky Rigid plastic

Between the new layout, empty containers, and additional drop-off points we had space to handle the surge of materials better than ever before, but we lacked staff to supervise, direct and help unload vehicles. That could have sped up the process of moving vehicles

through the facility and given the staff a chance to breath. Everyone helped each other out and made it happen and I appreciate their hard work and keeping everyone safe.

Some interesting trends this year:

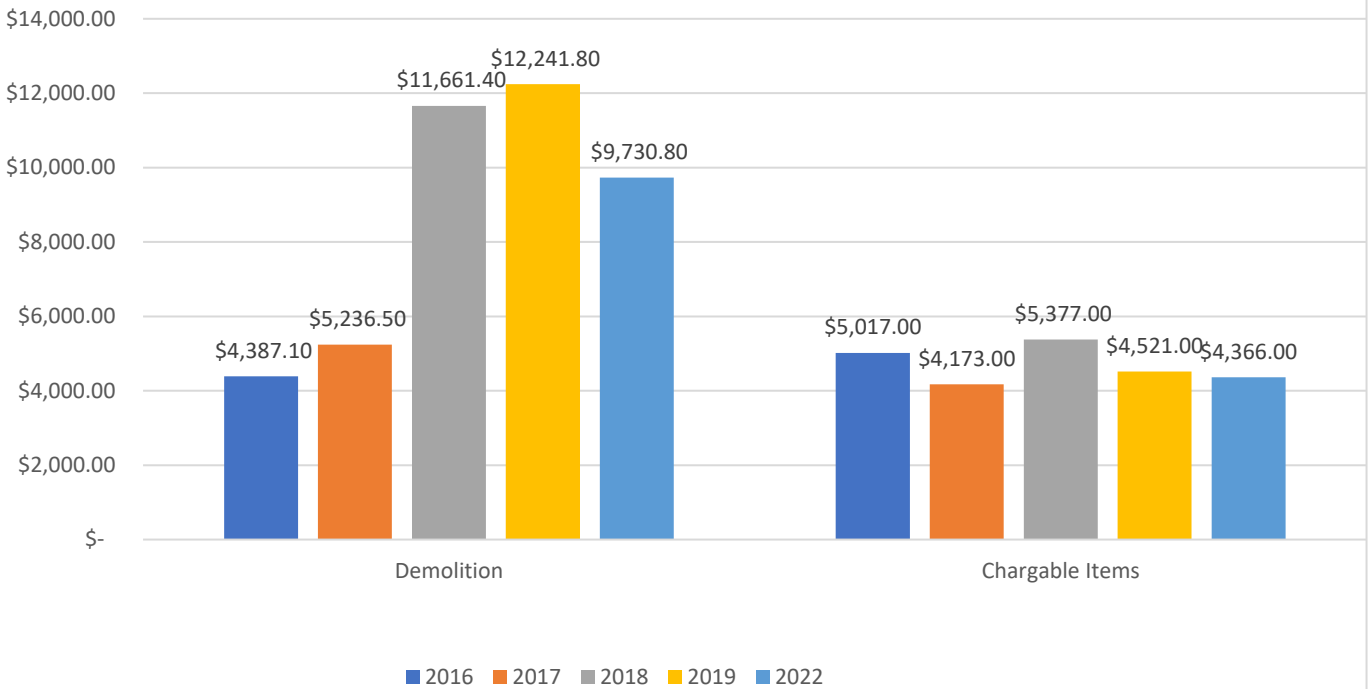
- A lack of scrap metal, likely due to high market value
- We average 3 boats of various sizes, and this year was no different
- In 2019 I noticed many familiar vehicles driven by people I didn't recognize. This year I saw maybe 3 at the most.
- Even though we had less materials brought in, it felt busier. In years past there have been lags during the day. This year we were jammed from 8:30-1:00 and then had a steep drop in vehicles.

Some things we need to change for next year are:

- Adequate staffing. We need more people to man the stations, control traffic, cover breaks or loss of staff person for other duties and help unload vehicles.
- Heavy promotion about what the day is for and how to alleviate the line by only bringing those chargeable items.
- A better drop-off for furniture which can more easily be loaded by machine.
- Shifting the wall between the Demo pit and the containers so a loader bucket can fit.
- Umbrellas for staff who are in direct sun all day.
- Additional police details, although I'm not sure what that would accomplish. Maybe we direct Amnesty Day traffic down Pamet Point Rd. as a longer cue.

As the graph shows, we lost less revenue than in 2019. Total material revenue lost was \$14,096.80. Does not include PAYT MSW.

AMNESTY DAY REVENUE LOST



The cost to haul away Amnesty Day Materials:

ABC

Trucking for 6 containers = \$1,440.00

Tipping fees for 36.04 tons = \$4,537.07

Fuel Surcharges for 6 containers = \$295.20

Total \$6,272.27

East Coast Electronics

E-Waste = \$1350

Refrigeration = \$650

Bob's Tire

78 Tires = \$195

Ace Mattress

57 Mattresses = \$741

(Note some mattress cannot be recycled and will cost \$40/piece instead of \$13.00)

Staff and Police detail are conservatively estimated at \$3,000.00.

Trash tonnage is a rough estimation. It appeared that 2/3 of the trailer space was taken up by Amnesty Day. With an average of 17 tons in a trailer that's about 11 tons. At \$97/ton that would be \$1,067.00 which were not covered by PAYT bags.

Amnesty Day Final Numbers

Costs = \$13,275.00

Revenue lost = \$15,163.80

The following pages have pictures from the day.



Probably the example I would use as what the largest boat that we accept looks like.





An example of a load. Nearly everything on the ground came from that trailer.



Things became very busy. Pic was taken at 11:02



Classic Alan B.



11:34 am was probably the height of traffic. Most vehicles in this pic are in motion or trying to be.



Bulky Rigid Plastic had no staff.



Pictures of contamination. Toasters, CD players, Umbrellas, Stoves, and Dishwashers in our Refrigeration pile, which had no staff. We found a lot more as we cleaned up.

WASTE AUDIT 2022

COMINGLED

On November 30th, 2022, we performed a waste audit on our comingled recycling. A waste audit is when you take a material stream and analyze it through sorting and measuring things like weights, volumes, anomalies, and any other categories that may be relevant.

WHY DID WE DO THAT?

We wanted to see what our comingled recycling consisted of. Recycling materials are commodities, and the quality of the product affects prices or even the ability of items to be recycled. Figuring out what's inside the containers we ship gives us data such as contamination rates, amounts of high and low value plastic, and what materials we need to focus on keeping out of the stream. Also, we received help from the AmeriCorps through a grant, which made this project possible.

WHAT WERE WE LOOKING FOR?

Ideally, we wanted as much data as possible. As the project got closer, we learned that we would be getting less AmeriCorps members than anticipated so we had to adjust how many categories we could feasibly sort through. We focused on Plastic, Tins, Bulky Rigid Plastic, Water Bottles, and Trash. We also put aside any items that were not only considered contamination, but were dangerous, such as syringes.

HOW DID WE PERFORM THE AUDIT?

We closed off the area around Comingled compactor #4 and built a corral out of snowplows and blocks. Using our Roll-off truck, we dumped material out of a full and pre-weighed comingled container onto the ground. This material was shoveled onto two sorting tables to be gone through by hand using seven people. Trash, Tins, Plastic, and Water Bottles were sorted into 32-gallon trash barrels. When the barrels were full, they were emptied into larger containers to be weighed at the end. The recyclable Plastic was dumped straight into the nearby compactor and the Bulky Rigid Plastic thrown into the loader bucket and weighed at the end. Afterwards, we re-weighed the container on the truck to determine how much total material we dumped and then weighed all the sorted material. Because the recyclable Plastic went back into the compactor, that weight was determined by adding up the sorted material and subtracting from the total material analyzed. Due to time, we only weighed several 32-gallon barrels of materials throughout the day to get an average weight per barrel. We set aside the more notable items on a table.

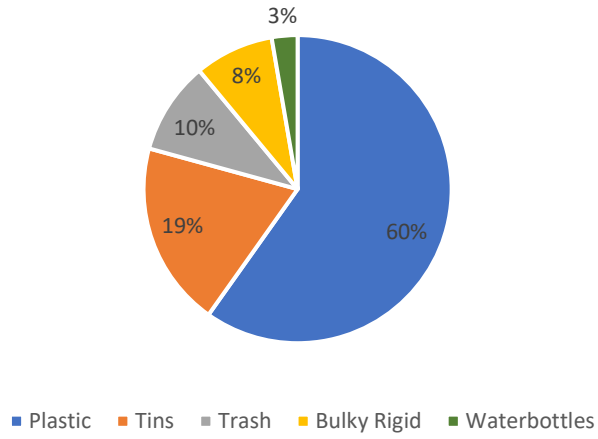
WHAT DID WE FIND OUT?

Here is the data that we gathered.

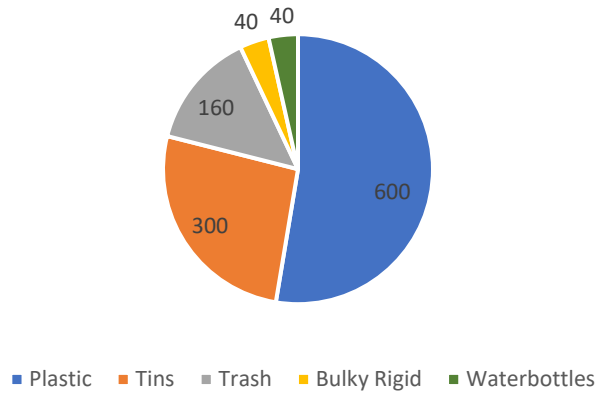
<u>Material</u>	<u>Weight (lbs)</u>	<u>Barrels (32 gal)</u>	<u>% by Weight</u>	<u>% by Volume</u>
Plastic	600	43	53%	60%
Tins	300	14	26%	19%
Trash	160	7	14%	10%
Bulky Rigid	40	6	4%	8%
Water bottles	40	2	4%	3%
<u>Total</u>	<u>1140</u>	<u>72</u>	<u>100%</u>	<u>100%</u>



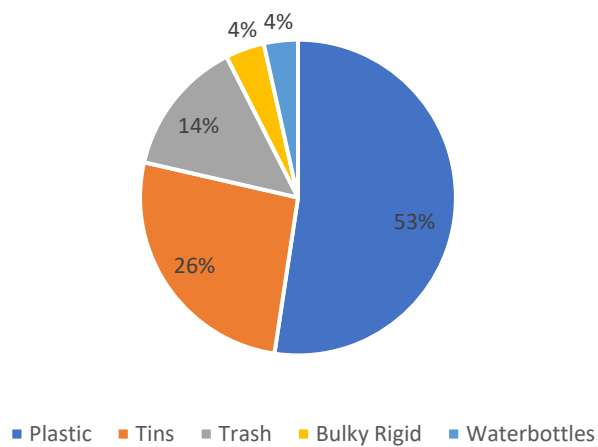
Comingled by Volume (Barrels)



Comingled by Weight (lbs)



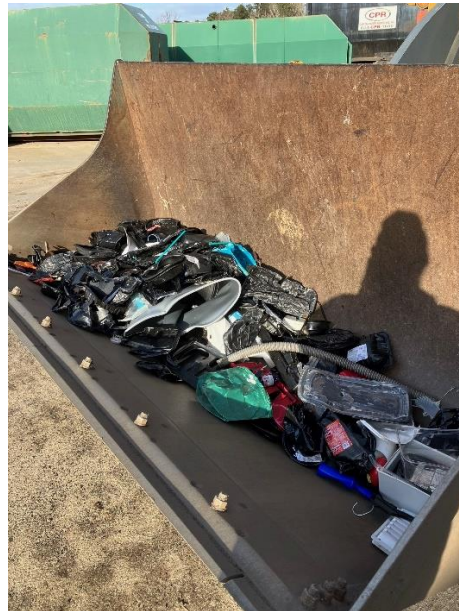
Comingled by Weight (%)



Overall, we were very happy with the quality of the materials. Recycling is measured by weight and 83% of the materials we sorted were able to be recycled. These items were of the right type and clean, meaning free of food, dirt, tangles, or other contaminants. That gives us a contamination rate of 17%.



There were 495 Water Bottles (4%) found in the material. The vast majority of these were Poland Spring 16.9 oz bottles. We placed these items in a separate category because Wellfleet has had a commercial single-use water bottle ban in place since September 2021 and thought it could be a useful data point in the future.



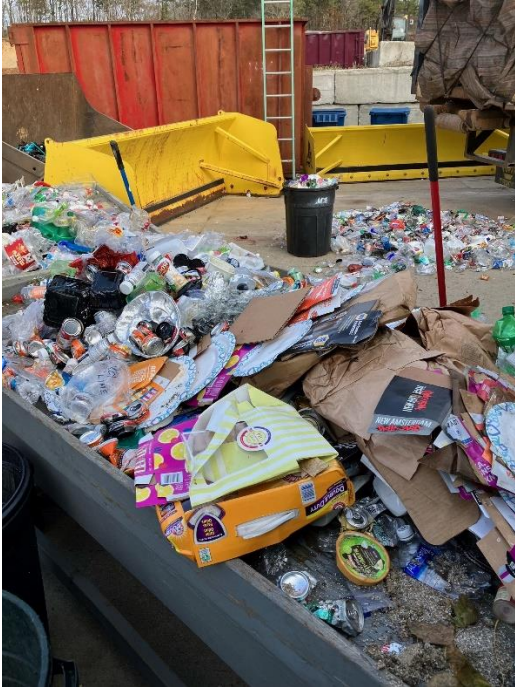
Most of the Bulky Rigid Plastic that we pulled out was not truly Bulky but because it was black, it cannot be recycled with our comingled due to the machinery at the recycling facilities. The Rigid plastic is handled differently and that is why we ask people to put black plastic in with Bulky Rigid.

The other non-recyclable items (Trash) made up 14% of our material. Most of these items consisted of plastic film or bags (often recyclable material but cannot be mixed into our collection system), or cheap brittle cookie trays which are not recyclable plastic. It also contained high value plastic bottles

that became trash due to still having food inside, such a salad dressing.



We also witnessed something that most people would not believe, but those of us in this business see all too often. While we were at lunch, someone, for some reason, put all their cardboard on our plastic sorting tables, still full of plastic, and blocked by sawhorses and “Out of Service” signage. This is what we’re up against daily.



SOME FACTORS THAT AFFECT OUR DATA

When we planned this project, the thought was there could be upwards of 13-15 people to work. With only 7 people, we had to cut back on the number of categories we would separate out and we did not have time to weigh and record each barrel, so we took averages to get our volumes. However, all the weights are accurate to within 20 lbs., which is our vehicle scale’s margin of error.

Because we had fewer people, we only sorted the very tail end of the container. At 1,140 lbs., this is only 20% of the 5,320 lbs. of comingled on the truck. This can affect things

because the compactors push material into the containers to fill them. Only when the material inside reaches all the way back to the ram will it start to crush. Due to pressures and physics, the material in the back of the container, closest to the ram, will be the most crushed and therefore densest. It also means that the material we sorted is only representative of a small window of time (i.e., a weekend during this time of year) where sorting the entire container would span material over several weeks.

Throughout the day, the sorting tables became covered in small items and debris as the larger things were sorted. While anything the size of a nip bottle or smaller is not recyclable due to size, we needed to clean off the tables frequently to have a safe workspace and because of time constraints, some recyclable items were missed. The amount would not have been enough to affect our data but for the sake of accuracy it is included with the hope of a more thorough audit in the future.

SO, WHAT NOW?

We learned many things from this Waste Audit. Most importantly, it showed a contamination rate of 17%. That's under the national average of 25% (EPA) but we would like to get to 10% or less. To do that, we will focus on educating people about the contaminants we saw such as plastic bags, black plastic, six-pack holders and cookie trays.



It also showed how clean our plastic and tin are overall. It was encouraging to find more than a few ketchup, mayonnaise, and peanut butter jars washed out before being tossed. All the people who have been doing that deserve praise. Its counter productive to have high value plastic become trash only because its dirty. That will be another outreach goal.

We learned the rate of Tin cans in our Comingled. This will be useful in deciding if it is worth it to separate Tins and send them to the scrap yard, as Eastham does. As this is written, average prices for tin cans are \$140/ton. We currently PAY \$65/ton to dispose of Comingled. The logistics if that's feasible will need to be figured out but we now know. Over ¼ of our Comingled is valuable Tin.

Observations made throughout our audit revealed that people clearly think sunglasses and rigid six-pack holders are recyclable when they are not. Those items came up frequently and will become another part of our focus.

Another point of interest was that we only found about 6 Nip bottles. These cannot be recycled in our collection system

due to their size but clearly, we do not see very many in the Recycling stream.

The most important things we will address are the syringes and medical waste that we found. If we found 5 needles in 20% of the load, there could be upwards of 20 more inside that container. For most people, when their waste gets thrown into a bin, it's the last time they think about it. But that material will pass by dozens of people on its journey through the recycling process. It bears mentioning that Waste and Recycling workers are consistently around the 5th or 6th deadliest jobs in the U.S., behind Fishing, Logging, Roofing, Construction, and Aircraft pilots. We need to direct people to properly dispose of hazardous items.

CONCLUSION

The audit was a successful learning experience that provided valuable data which will be used to help us help people be better recyclers, create a higher quality material, increase the chances of items being recycled downstream, and save the Town money by taking advantage of the markets when available.

If we are to conduct another audit, we will have a better understanding of how to design it. It might be useful to know the percentages of different plastics and types of contaminants but that would require a faster sorting system and far more people.

Working with AmeriCorps was a pleasure, as always. Previously, they helped us with our Boat Shrink wrap recycling project and took on this even filthier job with enthusiasm and hard work. We could not have completed this project without them.

We also need to thank Steven Sette Ducati and Justin Pechonis. Steve volunteered his drone photography services to record this event and helped sort material. Justin ran double duty, managing the part of the Recycling area that was open and coming back to the audit to shovel and sort.

It became clear how time consuming something like this is. We hoped to sort an entire 40-yard container in a day. We managed about 10 yards in 4.5 hours and that's with eliminating 7 categories we had hoped to sort. Another way to do an audit could be to take a smaller sample from a container and dissect it more thoroughly.

Some of these data points don't mean very much now but if more audits are done in the future, even by other entities, they will be a useful comparison.

Ideas for increasing Transfer Station Revenue

Stickers

- Wait for the new Trash contract and PAYT determination.

Sticker prices were changed in conjunction with PAYT. The sticker price is already so low, an increase could be made without too much pushback. However, because it is tied to PAYT I believe that sticker changes should happen when and if PAYT changes happen.

If there is no PAYT, Non-Sticker holders should pay the \$5.00 Entrance fee and still pay \$5.00/bag.

Trash

- No change until new contract.

We already require non-sticker holders to pay an entrance fee for Trash. If they use the purple bags, the Towns costs for that trash is covered. If they do not use purple bags, they pay \$5.00/bag which is 233% higher cost than the largest purple bag. Purple bag price increases could be made without changing this fee, but we should wait to see what our new trash contract is going to look like so we only change it once.

Entrance Fee

- Anyone entering the Transfer Station, for any reason, without a valid Transfer Station Sticker must pay a \$5.00 Entrance Fee, in addition to any other fees for chargeable items.

This would mean that Recycling is no longer free to non-sticker holders. Wellfleet BOH regs would have to be changed to reflect this. We do not want to get involved with weekly, seasonal, or recycling only stickers. It would not be feasible to monitor.

This would likely open the swap shop to non-sticker holders because it is already hard enough to monitor the sticker-less vehicles who say they are only doing recycling but end up trying to go other places on site.

Construction and Demolition

- *Fee for non-sticker holders is \$320/ton (\$50/ton higher than sticker holders)*

Demo area would need to be enlarged and improved (plans already drawn) but could be done by DPW for little money.

- *Make a change so that couches/carpets/upholstered furniture and now to be weighed at the same rate as Demo.*

This would be fairer because of the many different sizes of furniture. Weight is how we are billed for these items. It also redirects many transaction to the Scale window, relieving some traffic through the main entrance. Mattresses and Box springs would remain separate.

Chargeable Items

- *Double the price for chargeable items for non-sticker holders.*

Fees for things like mattresses/couches/tires/stoves/propane tanks/etc are double the price. If sticker holders pay \$20 per mattress, then non-sticker holder pays \$40.

Propane Tanks

- Increase fees on all tanks.

One pounder from \$0.00 to \$1.00 (our cost). Increase twenty pounders from \$3.00 to \$5.00. Greater than 20 lbs is increased to \$40.00.

Tires

- Increase prices on all tires.

Passenger tires increase from \$2.00 to \$6.00. Larger truck tires increase from \$5.00 to \$20.00. Construction equipment tires is an added category and is \$250.00/piece.

Electronics

- Increase fees and add items.

TV's, Computer monitors, laptops increase from \$10.00 to \$15.00. Add printers/scanners/copiers to list of chargeable items.

Refrigeration

-Increase all fees on A/C's, Dehumidifiers, Water Coolers (add language to reqs), and refrigerators from \$10.00 to \$15.00.

Leave and Brush

- Sticker holder fee for Leaves and Brush is ???\$/ton
- Non-Sticker fee for Leaves or Brush is ???\$/ton.
- Commercial sticker holders pay ???\$/ton.

The Town of Dennis charges \$70/ton, however they chip it themselves. Wellfleet hires NER to chip our brush. Last year they charged \$5,565.00 and they increase it a few hundred dollars each year. I would suggest ???\$/ton, using our scale. If cuts down on transactions at the main entrance window and alleviates traffic jams. Given the various types of ways people bring in their brush, I would not advise any “per barrel” or “size of vehicle” rates. To assure that residents could continue to bring in their usual amounts of yard waste free of charge, we would allow four 50 gallon barrels of brush per trip. This takes care of the majority of people in passenger cars and trucks.

Wellfleet BOH regs would have to change to accept leaves and brush from commercial entities.

Other Recommendations

- Make one sticker for the Transfer Station and no combos.

Only the computer record needs to know if the vehicle has a first, second, or third permit. We only need to see, in a easily identifiable way (such as bright color) that it is current. Eastham has done this for decades. They also have a different shape making it even easier.

Things I would not recommend.

- Increases to metal items.

We charge for items like a stove, but not a filing cabinet. This is very arbitrary and confusing. Adding more items to the list increases traffic at the main window. It's a hard sell when everyone knows we make money on the metal.

- *No additional variations on the stickers.*

It is hard enough to see the 1st vehicle, second vehicle, third vehicle, and combination Beach/Transfer stickers as they go by. We have too much traffic to see which week or month a sticker may be valid for.

- *Taking In More Commercial Trash At This Time*

This would be a wonderful revenue source, but we do not have adequate or safe infrastructure to bring back the packers and building it would be costly. *This should be revisited during the PAYT conversations.*