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### Annual Report of Groton Compost Site

## Overview

In October of 2020, Black Earth Compost began managing all organic waste for the Town of Groton including, leaves, grass, pond skimmings, wood chips, brush, logs and food scraps. To make a nutrient rich compost, we collect and add food scrap to piles of decaying organic matter. We set up food scrap drop off bins at the transfer station so town residents can deposit their kitchen scraps there and not include it in landfill waste. The cost of exporting landfill waste is growing since landfill space is quickly running out. Subtracting the heavy organics from that waste stream means it takes longer to fill up containers destined for landfill and makes the weight significantly less.

Composting food waste comes with its own sets of challenges. Vegetable and fruit scraps consist almost entirely of water which is the main odor challenge with composting and our building is designed to manage. On May 26th 2021 we went door to door (all of Cow Pond Brook Rd, Most of Flavell Rd, All of Hoyt's Wharf Rd and continuing up Old Dunstable Rd.) handing out a card introducing ourselves and which had the odor hotline 978 732 7105 for residents to report any nuisance. We learn and tweak our operation to minimize these odor events in the future. The indoor composting facility will retain liquids and odors released during the beginning phases of composting.

## Construction

Construction on the building is almost complete. Now having all the electrical components in place, we plan to grind the town's brush pile (beginning of November) to build out the biofilter that will capture odor exhausting from the building. We are also putting finishing touches on the constructed building such as making sure it is seamless and entry ways are visible with reflectors.

We had delays waiting for components to arrive, specifically the biofilter blower which took two and a half months to fabricate. This along with other manufacturing and transportation lags felt throughout the country has pushed our operation of the building into the second year of our lease - further than we anticipated.

## Neighbourhood

We have odor complaints from two people, one a house at the transfer station end of Cow Pond Brook Rd. on still mornings. It is important to realize the compost site is a slow moving giant, and it takes about 4 months for material to be worked through the active phase, so there is a lag time between when we realize we need to adjust our recipe or process and when results happen. We have identified two sources of odor after the first year of operations and are making changes to address this. See later in this report for details.

Neighbors of the transfer station were also concerned about traffic increases due to the operation. This was largely due to us bringing in leaves in November, when we stockpile leaves to use

throughout the following year as a carbon amendment. We have not had any reports of traffic issues since Spring, 2021 and have been told our trucks are going the speed limit since we implemented a GPS geo-fence monitoring system.

### Residents

In General residents like the new layout and are thrilled with the compost they are picking up. We have had reports of great growth of vegetables and lawn with the new product. We will post some information at the compost pile about how residents can utilize the compost to feed their trees each year to prevent tree health issues. We are delivering some to the Groton Garden Club for greening the town. After GrotonFest it was clear that we need to get the word out more, because most people had no idea that curbside service was offered now.

We try to accommodate residents while they visit the area, asking if they need help or at least waving from afar with a friendly smile. Beginning to create a sense of community where discussions can occur based on improving local soil and maximizing recycling efforts is what we are after.

Goals for the next 12 months...

- Stockpile leaves differently to prevent odors
- Begin to use our indoor processing facility to minimize odors
- General site improvement grading of areas near police firing range.
- More outreach for residential programs.

## Current Activity

All activity is viewable on the shared document with the town located here...

[https://docs.google.com/spreadsheets/d/1aRUXMerMeP\\_d4Q4\\_ptuFvUx3uU5eehHH1fEJVQguG0w/edit?usp=sharing](https://docs.google.com/spreadsheets/d/1aRUXMerMeP_d4Q4_ptuFvUx3uU5eehHH1fEJVQguG0w/edit?usp=sharing)

### Collection Trucks

There are now five Black Earth Compost collection trucks stationed at the facility with five full-time drivers that go out on routes five days a week. We receive and process fifty tons of food waste collected by these trucks a week.

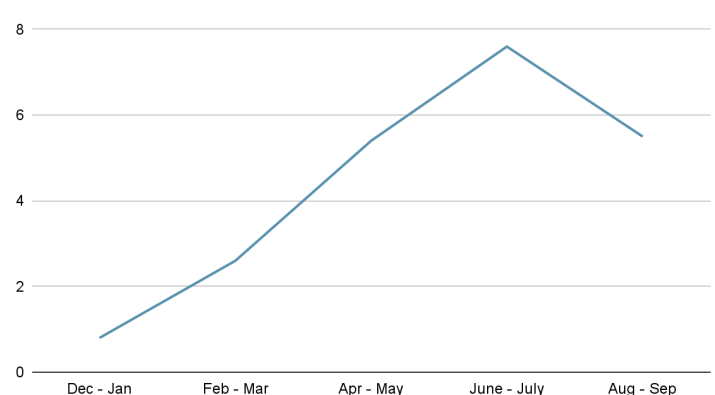
### Tractor Trailers

A higher number of tractor trailer trips was done in the Spring because of the nature of the planting season and soil prep for the upcoming growing season. The same trend happens in the fall when growers prep their soil for winter by applying compost while planting winter cover crops.

### Transfer Station food scrap drop off bins

- Currently we pick up these totes on Tuesday and Friday.
- 3 totes are emptied per pick up.
- This is approximately 120 households per week.

Tons of food waste/month collected at transfer station



## **Textiles**

We are currently dropping off textiles in the Town's transfer station bins, about 400lbs per week. We presume the town is receiving money for these when they are collected.

## **Groton School Collection**

The school has not taken us up on our offer yet that we will provide half off collection service to the schools. We estimate the Groton High school will need 3 totes picked up once per week. This will cost \$25/pickup or about \$950/school year. The first step would be to have our school expert come out and discuss the process with the janitorial staff.

## **Groton Residential Pickup**

We currently have 35 customers in Groton. We want to grow this significantly. We had great response at GrotonFest, many people didn't know we were even in Groton and were excited to sign up. The cost is \$49.99 for 6 months of weekly curbside service. We will pick up yard waste bags or textile bags for a \$5 sticker they can purchase from us. We supply compostable bags when they order from us and we deliver on to their bin during pickup.

## **Traffic Complaints**

We have not had any traffic complaints since we implemented the geofencing. Residents whom we asked said our trucks were driving slower now.

## **Odor Complaints**

This is the largest area that we need to improve upon. We expect with the building completed, after a few months of working material through the system, these will largely diminish. Currently we get complaints from 2 phone numbers on the odor hotline. One person walks in the woods north of the site daily and reports frequently that she detects odors on her walks. The other person is one of the four houses at the transfer station end of Cow Pond Brook rd. and reports odors infrequently.

Next steps on odors....

1st source - the pile of leaves we accumulated in Dec 2020 began to release a fermented sweet odor. This is akin to a feed silage pack on a farm. We have begun to turn the pile to get it aerated which should increase odor temporarily but should improve long term. Going forward when we get leaves in December of this year, we will stockpile and tarp them to prevent moisture from being added to this pile.

2nd source - the initial piles of compost mix exude liquid which has odor. We have been processing food scraps outside while we constructed our indoor processing facility over the last year. These initial piles will be inside the building where the liquid can be captured and reused. These odors should be largely resolved when the building is fully operational. Additionally we want to add more readily available carbon instead of relying solely on leaves which take time to break down. Finer bits of wood chip will absorb more moisture and odor. We will get these when we grind the brush and log pile in about 2 weeks. Once we get into the cycle of grinding and saving the brush, this material will be available consistently for mixing into the initial compost piles.

Image of the odor complaints we have logged through our beginning of processing food in Gorton.  
 You can view the same, up to date log, with all the other town reports we provide.

Log of reports called in on the odor hotline 978-732-7105. Could be traffic or odor reports						
Includes reports from Black Earth						
Date	Time	Type	Location	Observer	Probable Cause	
<b>October 2021</b>						
Thursday, October 7, 2021	8:15 AM	Odor	302 CPBR	Phone: -5260	Still morning	
Thursday, October 7, 2021	7:02 AM	Odor	CPBR Trail	Phone: -1205	Cool air in morning, still	
Wednesday, October 6, 2021	7:18 AM	Odor	302 CPBR	Phone: -5260	Cool air in morning, still	
Sunday, October 3, 2021	8:35 AM	Odor	302 CPBR	Phone: -5260	Still morning	
Saturday, October 2, 2021	7:10 AM	Odor	CPBR Trail	Phone: -1205	Cool air in morning, still	
<b>September 2021</b>						
Wednesday, September 29, 2021	5:30 AM	Odor	302 CPBR	Phone: -5260	Cool air in morning, still	
Tuesday, September 28, 2021	6:28 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
Monday, September 20, 2021	6:30 AM	Odor	302 CPBR	Phone: -5260	Cool air in morning, still	
Tuesday, September 14, 2021	6:42 AM	Odor	302 CPBR	Phone: -5260	Cool air in morning, still	
Saturday, September 4, 2021	6:45 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
<b>August 2021</b>						
Saturday, August 28, 2021	5:53 AM	Odor	Ball fields	Phone: -1205	Stretched early pile day before	
Wednesday, August 25, 2021	6:32 AM	Odor	CPBR Trail	Phone: -1205	Still Day	
Saturday, August 21, 2021	6:37 PM	Odor	Ball fields	Phone: -1205	Turned pile day before, hot waether, storm coming from East	
Tuesday, August 17, 2021	7:00 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
Wednesday, August 4, 2021	7:11 AM	Odor	302 CPBR	Phone: -5260	Still morning	
Tuesday, August 3, 2021	6:16 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
Monday, August 2, 2021	6:34 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
Sunday, August 1, 2021	6:00 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
<b>July 2021</b>						
Monday, July 26, 2021	6:28 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
Saturday, July 24, 2021	7:45 AM	Odor	Backyard of home on CPBR	Phone: -5260	Still morning	
Friday, July 23, 2021	6:29 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
Thursday, July 22, 2021	6:35 AM	Odor	CPBR Trail	Phone: -1205	Still morning	
Tuesday, July 20, 2021	7:42 AM	Odor	Backyard of home on CPBR	Phone: -5260	Still morning	
Tuesday, July 20, 2021	7:12 AM	Odor	Backyard of home on CPBR	Phone: -7105	Still morning	
<b>June 2021</b>						
Wednesday, June 30, 2021	6:22 AM	Odor	Groton Trail head	Phone: -1205	Heat wave air, calm morning	
Sunday, June 13, 2021	6:28 AM	Odor	Groton Trail head	Phone: -1205	Accumulating air under canopy of trees in calm morning	
Friday, June 11, 2021	5:58 AM	Odor	Groton Trail head	Phone: -1205	Lingering air on calm morning	
Monday, June 7, 2021	6:10 AM	Odor	Groton Trail head	Phone: -1205	Still air filling low spot of operation	
Sunday, June 6, 2021	6:09 AM	Odor	Groton Trail head	Phone: -1205	Hot morning air	
Saturday, June 5, 2021	5:48 AM	Odor	Groton Trail head	Phone: -1205	Still mornings with warm air filling area	

<b>May 2021</b>						
<u>5/27/2021 Handed out Odor Hotline on CPBR, Hoyts Warf, Flayell Rd and some of Old Dunstable Road</u>						
May 25th	6:15 AM	Odor	Groton Trail head	Phone: -1205	Heavy dense air in morning	
May 24th	7:20 AM	Odor	"Odor coming down the road"	Nancy (302 CPB Rd.)	Still morning/heavy air and NE wind direction	
<b>April 2021</b>						
April 28th	1:00 PM	Odor	In front of transfer station	Linda	Warm air quickly drying and evaporating damp ground. Other possibility is the Transfer station garbage.	
Week of April 5th		Traffic	Cow Pond Brook Rd.	Linda?	Leaf trailers, 2 at a time	
<b>March 2021</b>						
Unspecified reports of odor from 4 Residential Neighbours.						
March 8th		Odor	DPW Entrance	Black Earth	Heavy air	
<b>February 2021</b>						
Feburary 17th		Odor	DPW Entrance	Black Earth	Heavy morning air	
<b>January 2021</b>						
<b>December 2020</b>						
December 4th		Odor	DPW Entrance	Andrew, Black Earth		
<b>November 2020</b>						
<b>October 2020</b>						
<b>September 2020</b>						

# Policies

All vehicles are reminded to remain at the speed limit of 25MPH on Cow Pond Brook Rd.

## **Black Earth Trucks**

- Our trucks are small, under-CDL trucks that were purchased new and are either gasoline or are Clean Idle compliant diesels with DEF systems.
- Our trucks are leaving around 6am in order to avoid traffic for their collection routes.
- Our trucks return in the afternoon anywhere from 2pm to 6pm typically.
- Our routes are mostly M-F, we currently have 1 or 2 that go out on the weekend.
- Our trucks have GPS monitoring to alert us if they are over 25mph on the geofenced area of Cow Pond Brook Rd.

## **Resident Drop Off/Pickup**

- Residents are separating their yard waste into 3 piles... Brush, Grass and Yard Waste.
- Residents have access to Black Earth Compost. 'All you can shovel' Not for commercial use.
- Residents have access to purchase compostable bags for their counter tops at the transfer station office.
- Residents can take all other resources like wood chip and leaves as a reasonable request.

## **Landscaper Drop Off/Pickup**

- Landscapers are restricted to prevent excess traffic on Cow Pond Brook Rd.
- Landscapers are not allowed to drop off (except any that have always dropped off through the transfer station before we arrived).
- No direct sales to landscapers out of the site.

## **Tractor Trailer/Tri-Axle Drop Off/Pickup**

- We bring in soil from a single-source loam supplier.
- We send out compost on tractor trailers that we hire out.