



BRATTLEGROW COMPOST FACILITY
REACHES PRMITTED CAPACITY:
FOOD SCRAP COMPOSTING SUCCESS

Presentation to NRRA Conference
Manchester, NH
May 17, 2022

By Bob Spencer, Executive Director
Windham Solid Waste Management District
327 Old Ferry Road
Brattleboro, VT 05301
director@windhamsolidwaste.org



- **Workshop A - Composting in VT and NH: Exemplar and Regulatory Updates**
- Hear how the food scrap composting facility at the Windham Solid Waste Management District (WSWMD) has grown over its 10 years of operation, and the challenge WSWMD faces to obtain funding to meet Vermont permit requirements for a larger capacity facility. Also get the latest update to New Hampshire's composting facility rules, which were developed to provide greater clarity and allow all composting facilities to manage meat & dairy food scraps.
- *Vermont* - Bob Spencer, Executive Director, Windham Solid Waste Management District, Brattleboro, VT
- *New Hampshire* - Mike Nork, Supervisor of Materials Management, Education and Planning, NHDES
- Moderator- Roger Guzowski, NRRA Trustee

WINDHAM SOLID
WASTE
MANAGEMENT
DISTRICT
COMPOST FACILITY



Town of
Brattleboro
Curbside Food
Scrap Collection
Logo



Annual
International
Event at
Brattleboro's 90
Meter Harris Hill
Ski Jump





- 13-gallon Orbis carts sold to residents for \$20
- Other types of containers with a lid are acceptable
- Weekly collection of food scraps
- Weekly collection of single stream recyclables
- Every other week trash collection
- PAYT for trash
- Yard waste discouraged since separate collection provided in spring and fall

Brattleboro
Residential
Organics
10 -15 tons per
week
600 tons per
year



BRATTLEBORO CURBSIDE LEAVES



TIPPING BREAD AND DOUGH





Bread Company Egg Shells

- Egg contents automatically sucked out of shells
- Gluten free bread products
- Two compactor loads per week
- Occasional off-spec bread

PERMITTED AS SMALL FOOD WASTE COMPOSTING FACILITY

Up to 2,000 cubic yards per year of food waste

Up to 3,000 cubic yards of yard waste

Also permitted to compost soiled paper and cardboard

Low-tech operation using turned windrows

Batches tracked in weekly piles

Temperature of windrows measured at 1' and 3' depth

WSWMD employees have taken Vermont ANR class to become certified compost facility operators

BRATTLEBORO
CURBSIDE
COLLECTION:
TOTAL TONS
OF FOOD
CRAPS, PAPER,
CARDBOARD

FY 2019- 535 tons

FY 2020- 575 tons

FY 2021- 588 tons

FY 2022 to April- 564 tons

TOTAL TONS OF FOOD SCRAPS, PAPER, CARDBOARD, LEAVES, WOOD CHIPS

FY 2019- 2,762 tons

FY 2020- 2,643 tons

FY 2021- 2,377 tons*

FY 2022 - 2,510 (projected)

*VT Bread Co. closed 4/21 425 ton/yr

*Diverted Keene State College 125 ton/yr

SOURCE SEPERATED ORGANICS FROM:

- Brattleboro Curbside Pickup by Triple T Trucking
 - 2,000+ Residences Served Weekly
 - Up to 4 Unit Apartments
- Commercial/Institutional Collection By Area Haulers
 - Restaurants
 - Bread Manufacturers
 - Vitamin Manufacturer
 - Schools, Colleges
 - Food Coops, Supermarkets
- Transfer Station Drop-Off
 - WSWMD



Estimated Cubic Yards of Organics

WSWMD weighs each load of organics, but since the VT DEC permit is in cubic yards of material, we have estimated the following quantities



the average total cubic yards of input is 126 cy/week, with food scraps 47 cy/week.



If extrapolated to 12 months that is 6,552 cy of total organics, and 2,451 cy of food scraps.



We are exceeding the small food composting facility maximum of 5,000 cy total inputs, and 2,000 cy food waste.



We diverted VT Bread to a farm as animal feed, but then they closed.

LEACHATE COLLECTION, TREATMENT, OR PREVENTION

VT DEC compost regulations
for a medium food waste
composting facility require
collection and treatment of
leachate, or

Enclosure of the active
composting pad to prevent
leachate generation

VERMONT SOLID WASTE REGULATIONS

6-1105. Medium scale categorical composting facility certifications

(a) Applicability. This section applies to composting facilities that:

- (1) have a compost management area of less than 10 acres in size; and
- (2) compost the following materials:
 - (A) more than 10,000 cubic yards per year of leaf and yard waste; or
 - (B) compost 40,000 or less cubic yards per year of total organics any of the following feedstocks:
 - (i) not more than 5,000 cubic yards per year are food residuals or food processing residuals.
 - (ii) not more than 10 tons of animal, animal offal, and butcher waste per month.

VERMONT LEACHATE REGULATIONS

Facilities are required to collect and treat all leachate from the active composting area in a lined pond, swale or lagoon.

Leachate storage areas shall, at all times, maintain a minimum of two feet of freeboard and be isolated from public access with fencing.

Acceptable treatment options include the following:

- (1) Collection and treatment at a permitted wastewater treatment facility;
- (2) Collection and application to active composting piles in a manner approved by the Secretary;
- (3) Treatment on site in a manner approved by the Secretary;

LEACHATE COLLECTION AND TREATMENT COST ESTIMATE

- \$415,000 construction
- \$45,000 - \$63,000 per year for hauling and treatment at wastewater treatment plant
- Possible odor treatment

COVERED ACTIVE COMPOST AREA COST ESTIMATE

- \$320,000
- Fabric building
- Aerated static pile
- 21 days retention