Municipal Contracts for Solid Waste and Food Scrap Collection and Composting
Peter Gaskill, Triple T Trucking
Patrick Moreland, City of Brattleboro
Bob Spencer, Windham Solid Waste Management District
Compostable Waste Removal

Triple T collects compostable waste for composting.

Food waste, unrecyclable paper packaging such as frozen food boxes, napkins and paper towels, and untreated wood.
Town of Brattleboro

Curbside Organics Collection
Brattleboro, Vermont

Population
12,000
Demographics of Program

- Curbside program available for all residential properties and multi-unit apartments with four or fewer units.

- Approximately 4,450 eligible housing units participate in Brattleboro’s Curbside Program.

- Approximately 3,500 Structures/Stops

- Curbside organics collection began in late FY13.

- Initially rolled out as a pilot project.
## Brattleboro’s Solid Waste Stream

<table>
<thead>
<tr>
<th></th>
<th>Trash</th>
<th>Recycling</th>
<th>Organics</th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FY18</td>
<td>931</td>
<td>1080</td>
<td>606</td>
<td>2617</td>
<td></td>
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<tr>
<td>FY17</td>
<td>939</td>
<td>842</td>
<td>511</td>
<td>2291</td>
<td>EOW</td>
</tr>
<tr>
<td>FY16</td>
<td>1090</td>
<td>980</td>
<td>449</td>
<td>2519</td>
<td>PAYT</td>
</tr>
<tr>
<td>FY15</td>
<td>2318</td>
<td>926</td>
<td>245</td>
<td>3489</td>
<td></td>
</tr>
<tr>
<td>FY14</td>
<td>2357</td>
<td>840</td>
<td>222</td>
<td>3419</td>
<td></td>
</tr>
</tbody>
</table>
Organics = Cost Savings *

*in Brattleboro

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Organics</td>
<td></td>
</tr>
<tr>
<td>FY18</td>
<td>606</td>
</tr>
<tr>
<td>Organics per Ton</td>
<td>$65.00</td>
</tr>
<tr>
<td></td>
<td>$39,378.30</td>
</tr>
<tr>
<td>Trash per Ton</td>
<td>$110.00</td>
</tr>
<tr>
<td></td>
<td>$66,640.20</td>
</tr>
<tr>
<td>Annual Savings</td>
<td>$27,261.90</td>
</tr>
</tbody>
</table>
Reasons for Success

- Teamwork!
  - Windham Solid Waste Management District
    - Receives Food Waste
    - Generates Valuable Compost
  - TTT Trucking
    - Not Just Another Hauler
    - Creative – Flexible – Willing to Try New Ways of Doing Business
  - Town of Brattleboro
    - Manage Contracts with TTT and WSWMD
  - Citizens
    - Collect Food Scraps
    - Great Track Record – Very Little Contamination
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
<table>
<thead>
<tr>
<th>ALL Food Scraps</th>
<th>Non Recyclable Paper &amp; Cardboard</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Fruits &amp; Vegetables</td>
<td>✓ Damp/ Wet Paper</td>
</tr>
<tr>
<td>✓ Bread/Rolls Crackers</td>
<td>✓ Wax/Parchment paper</td>
</tr>
<tr>
<td>✓ Rice/Pasta/Beans</td>
<td>✓ Soiled or Waxed Cardboard</td>
</tr>
<tr>
<td>✓ Cheese/Dairy Products</td>
<td>✓ Milk/Juice Cartons (remove plastic spout)</td>
</tr>
<tr>
<td>✓ Egg Shells</td>
<td>✓ Paper Towels</td>
</tr>
<tr>
<td>✓ Meat &amp; Fish (Cooked &amp; Raw)</td>
<td>✓ Paper Plates &amp; Cups</td>
</tr>
<tr>
<td>(including bones)</td>
<td>✓ Sugar/Flour Bags (without plastic liners)</td>
</tr>
<tr>
<td>✓ Shellfish</td>
<td>✓ Cardboard Egg Cartons</td>
</tr>
<tr>
<td>✓ Coffee Grounds &amp; Filters</td>
<td>✓ Frozen Food Containers</td>
</tr>
<tr>
<td>✓ Tea Bags</td>
<td>*Also kitty litter and pet waste.</td>
</tr>
</tbody>
</table>
INCREASING TONS OF ORGANICS

- FY 2016- 457 tons of food waste from Brattleboro curbside collection
- FY 2017- 531 tons of food waste from Brattleboro curbside collection
- FY 2018- 604 tons of food waste from Brattleboro curbside collection
- FY 2016- 26 tons of commercial food waste
- FY 2017- 154 tons of commercial food waste
- FY 2018- 315 tons of commercial food waste
- Projected to increase to over 1,000 tons
- Need increasing amounts of wood chips
7-YEAR CONTRACT WITH BRATTLEBORO

- Brattleboro Selectboard approved contract to have residential curbside organics go to WSWMD
- Tip fee $50/ton, with CPI escalator
- Includes leaves and grass which are collected for 2 weeks in the spring, and 2 weeks in the fall
- No tip fee for yard waste
- Brattleboro also has a contract with Triple T Trucking for the same period of time for curbside collection of trash, recycling, and organics
- Weekly collection of single stream recycling and organics
- Every other week collection of trash
Contracts

- TTT is Awarded a 5 year Contract in 2009 – (FY10 – FY14)
  - Weekly Trash and Recycling Collection
  - Includes Option for the Town to add Organics Collection in years 4 and 5
- Amendment 1 in 2012
  - 4 Month Pilot Program in FY13
  - Voluntary Participation
  - Limited to Approximately 150 Households
  - Town wide Organics Collection after the 4 Month Pilot
- Amendment 2 in 2015
  - Adopt Pay-As-You-Throw
  - Acknowledge the Potential for Every Other Week Trash Collection
Contracts - Continued

- Amendment 3 in 2016
  - Adopt Every Other Week trash collection beginning 7/1/17 with a 42% or approximately $96,000 reduction in the cost of trash collection.
  - Extend Contract to include FY15 – FY24
  - Acknowledge the potential for a transition to Single Stream Recycling
    - Must give Notice by 12/31/16

- Amendment 4 in 2016
  - Extend Deadline for Notice to 5/15/2017

- Amendment 5 in 2017
  - Transition to Single Stream Recycling on 7/1/17 with a reduction in recycling collection costs of $24,000
  - Town directs all organics to Windham Solid Waste Management facility and will compensate TTT at a rate of $15 per ton for hauling organics.
Contracts - Continued

- WSWMD
  - All organics to be diverted to WSWMD through FY24
  - All towns in the district shall pay the same tip fee.
  - Tip fee shall increase on July 1 of each year by the percentage increase in CPI for the Northeast as measured in November of the previous year.
  - WSWMD and Town agree to collaborate on additional public education if contamination is found to be an issue in the organics program.
    - So far, so good!
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
Curbside food scrap collection
TRIPLE T TRUCKING CURBSIDE
ORGANICS COLLECTION
TIPPING BREAD AND DOUGH
ELM CITY COMPOST-KEENE, NH

SUBSCRIPTION FOOD SCRAPS COLLECTION
WSWMD CONVENIENCE CENTER
ORGANICS DROP-OFF
BRATTLEBORO CURBSIDE LEAVES
COMPOST RECIPE
LOADER MIXING PILES
BRATTLEGROW COMPOST-3/8”
DONATE COMPOST TO SCHOOLS
“Brattlegrow” compost meets Vt. ANR standards for heavy metals and pathogens
Test compost for agronomic parameters of N, P, K, pH, conductivity, and micro nutrients
Bioassay of compost by UVM to check for persistent herbicides – over 90% germination (not phytotoxic)
Staff measure pile temperatures to confirm pathogen kill temperatures of 131+ F
Staff utilize compost at WSWMD gardens, and at home gardens and lawns
RETAIL DISTRIBUTORS

- D & E Tree Company
  Guilford, VT
- Maple Hill Nursery
  Swanzey, NH
- Renaud Tree & Landscaping
  Dummerston, VT
- Boyd Nursery
  Wilmington, VT
COMPOST SALES

- Retail distributors pay $20 per cubic yard
- They sell to customers for $30 - $40 per cubic yard
- FY 16 compost sales 855 cubic yards; revenue $15,219
- FY 17 compost sales 525 cubic yards; revenue $10,353
- FY 18 compost sales 1,965 cubic yards; revenue $37,831
- Compost used for gardens and lawns
- Compost used for solar project construction
- WSWMD sells directly to buyers of more than 10 cy
- WSWMD also manufactures a compost/soil blend which is sold to distributors for $25 per cubic yard
- Donate compost to towns, community gardens, and schools
WSWMD STAFF COSTS

- FY18 $11,740 of staff time to operate compost facility
- WSWMD front loader with operator mixes incoming organics on a daily basis, approximately $\frac{1}{2}$ hour per day
- Staff measure and record compost pile temperatures
- Hire contractor to operate screen
MONITORING TEMPERATURES
## COMPOSTING OPERATIONS
### FINANCIAL REPORT
#### FY 2017 – FY 2019

<table>
<thead>
<tr>
<th></th>
<th>FY 2017</th>
<th>FY 2018</th>
<th>FY 18 (3/19)</th>
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<tbody>
<tr>
<td>Revenue</td>
<td>$55,402</td>
<td>$113,071</td>
<td>$68,684</td>
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<tr>
<td>Expense</td>
<td>$23,473</td>
<td>$69,325</td>
<td>$42,381</td>
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<tr>
<td>Surplus</td>
<td>$31,929</td>
<td>$43,746</td>
<td>$26,303</td>
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TA-DA!