

Organics Subcommittee Update



John Fischer
Solid Waste Advisory Committee
October 24, 2019

Organics Subcommittee Meetings

- Held 5 meetings
 - December 2018
 - March 2019
 - April 2019
 - May 2019
 - September 2019
- Discussions
 - Progress to date - capacity
 - Reduced ban threshold – from 1 ton to $\frac{1}{2}$ ton/week
 - Generator data

Updated Food Waste Data

Processing Type	2016 Tonnages	2017 Tonnages	2018 Tonnages
Compost	80,000	53,000	44,000
Animal Feed	26,000	27,000	40,000
Anaerobic Digestion	48,000	88,000	160,000
Other	14,000	13,000	8,000
Food Donation	23,000	26,000	26,000
Total	190,000	206,000	278,000

- 2017 reporting errors (composting)
- Does not include via wastewater
- Understates animal feed
- Source reduction
 - 145 businesses
 - >1,000 tons/year reduction
- 70% increase in businesses diverting (+1,000)
- 56 NONs + 6 penalties
 - $\frac{3}{4}$ since start of 2018

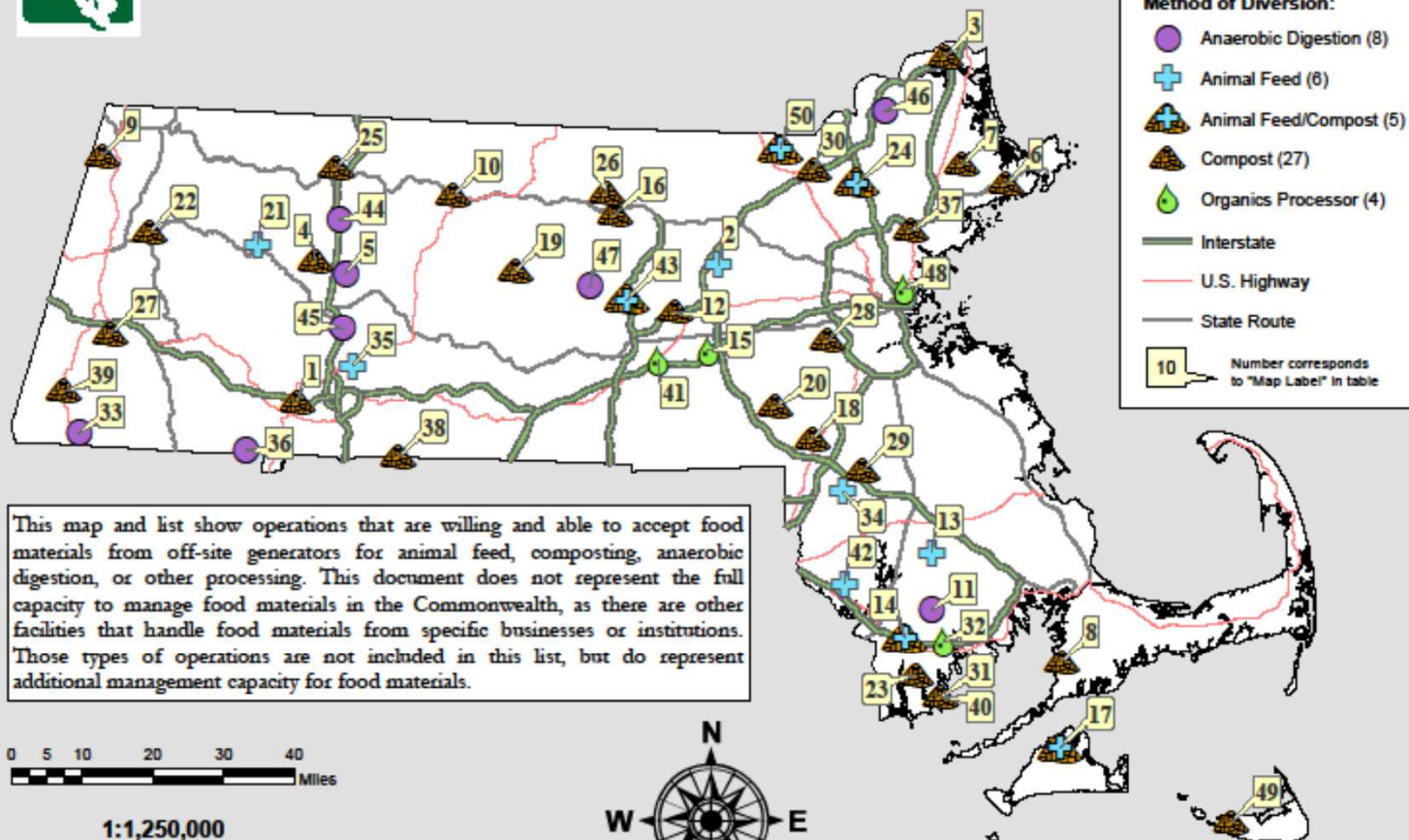


Organics Capacity

- Reduction – potential to reduce by > 50%
- Donation – opportunity to continue to grow
- Animal Feed – unclear, but > current data show
- Compost – permitted >150K tons, but not operating at that level
- Anaerobic digestion - >600K TPY operational or under development
- De-packaging - 8 operations – 1 more under development



Sites Accepting Diverted Food Material



This map and list show operations that are willing and able to accept food materials from off-site generators for animal feed, composting, anaerobic digestion, or other processing. This document does not represent the full capacity to manage food materials in the Commonwealth, as there are other facilities that handle food materials from specific businesses or institutions. Those types of operations are not included in this list, but do represent additional management capacity for food materials.

0 5 10 20 30 40
Miles

1:1,250,000



DATA SOURCES:
- Major Roads: MassDOT OTP, MassGIS, June 2014
- Food Material Diverters: MassDEP BAW, June 2019

Map Updated June 2019
MassDEP, BAW, J Cook



Waste Characterization Data

- Food waste 26% of trash at waste combustors (2016)
- Statewide MSW total = 4,470,000 tons
- Think this is slightly high – likely more bulky waste at landfills & transfer stations
- But if apply across the board = 1,160,000 tons of food waste disposed in trash/year
- About 55% commercial = 640 K tons
- About 45% residential = 520K tons



“Generation” vs. Disposal

- Commercial generation estimates much higher
- About 1.3 mill. tons generation vs. 640K tons disposal
 - 280k tons diverted
 - Additional managed through wastewater, rendering, other byproducts
 - Some uncertainty with generation estimates
 - Esp. for manufacturers/processors



2014 Regulation Estimates

- 600 K tons of business food waste disposed in trash
- Could capture 1/3 through ban & supporting strategies
 - 200K tons




Total Businesses in Analysis

Sector	Total #
Hospitals	262
Nursing Homes and Residential Facilities	920
Full service Restaurants	10,003
Limited service Restaurants	1,901
Supermarkets	4,832
Warehouse Clubs & Supercenters	37
Hotels	1,634
Correctional Facilities (Inmates)	17
Schools, Colleges, and Universities (Students)	91
Manufacturers & Processors	1,006
Distributors & Wholesalers	506
Primary & secondary schools	1,785




Generation by Size Category

Size Category (tons per week)	Number Generators	% of Generators	Total Est. Generation (tons per year)	% of Total Generation
>2	955	4%	265,657	21%
1-1.99	1,942	8%	734,961	57%
0.5-0.99	1,872	8%	94,547	7%
<0.5	18,204	79%	196,395	15%
Totals	22,973	100%	1,291,561	100%



Sector	Businesses generating over 1 ton of food waste/week	Businesses generating over ½ ton of food waste/week	Percent of business sector subject to proposed waste ban
Hospitals	77	158	60%
Nursing Homes and Residential Facilities	8	39	4%
Full Service Restaurants	850	1,659	17%
Limited Service Restaurants	111	622	33%
Supermarkets	468	583	12%
Warehouse Clubs and Supercenters	31	31	84%
Hotels	137	229	14%
Correctional Facilities	10	13	76%
Schools, Colleges, and Universities	70	79	87%
Manufacturers and Processors	774	897	89%
Distributors and Wholesalers	355	430	85%
Primary and Secondary Schools	0	29	2%
Total	2,891	4,769	



Sector	Annual sector-wide tonnage subject to current ban	Annual sector-wide tonnage subject to proposed ban
Hospitals	20,747	23,528
Nursing Homes and Residential Facilities	985	2,177
Full Service Restaurants	91,158	120,000
Limited Service Restaurants	7,180	25,813
Supermarkets	101,672	105,677
Warehouse Clubs and Supercenters	7,533	7,533
Hotels	17,357	20,507
Correctional Facilities	1,455	1,560
Schools, Colleges, and Universities	28,793	29,116
Manufacturers and Processors	614,848	649,006
Distributors and Wholesalers	66,944	70,663
Primary and Secondary Schools	0	867
Total	958,670	1,056,445



Process & Schedule

- MassDEP developing comprehensive set of solid waste regulation revisions later in 2020
- May carve out waste ban regulations to proceed sooner
- Organics SC proposed effective date reduced ban threshold from 1 ton to ½ ton/week
 - October 2021
- Update Organics Action Plan
- Implement supporting programs
 - Outreach
 - Compliance assistance



For more information

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