

Green Dalton Committee's Compost Sub Committee Report
Findings and Recommendations
January, 2024

In 2019, the EPA reported that of the 70 million tons of food waste in the United States, only 5% was composted. Where this waste was sent to landfills, anaerobic (without oxygen) conditions produce methane gas, a climate changing greenhouse gas. In a 2021 report, Municipal Solid Waste (MSW) landfills accounted for 14% of the methane gas produced; the third largest source of human related methane gas emissions. Community composting is becoming popular at the local level to address this pollution, while producing a reusable end product-compost, through an aerobic decomposition process.

The Massachusetts Department of Environmental Protection 2030 Solid Waste Master Plan mandated by MGL Chp 16 Section 21, recommends by 2030 a 30% reduction in solid waste as compared to 2018 levels and a 90% reduction in solid waste by 2050. These goals require a well developed organic waste program that diverts such waste from Dalton's current solid waste program.

Among its many benefits, compost enriches soil, conserves watering, and reduces the use of fertilizers and green house gas emissions.

Models Reviewed by the Subcommittee

Egremont

Egremont is a community of ~1,200 people with a sizable number of second homeowners. The Egremont community composting operation has been in place for over ten years.

Information provided by the site coordinator:

Savings:

Annual MSW tonnage-80 tons saved...20% of the total annual MSW

At \$96/ton-\$7,688 saved

Savings from reduced hauls \$2,100

Total Annual Savings for CY 23-\$9,788

Estimated savings over the past 10 years-Over \$90,000

The Recycling Dividend Program (RDP) in Massachusetts reimburses communities for their recycling efforts based upon points it awards. Egremont's composting program earned 1 point, or \$350.

The initial cost (consisting largely of concrete blocks and signage) for the compost “bin system,” were paid out of annually accruing Sustainable Materials Recycling Program’s (RDP) monies.

Egremont uses a 3-bin recycling composting system. Three contiguous concrete binned areas, each approximately 250 sq. ft., allow for organic material to aerate towards developing the final bin of compost for community use. The material is turned monthly by the towns backhoe operator. No non-organic food scraps and oils are permitted.

Of note, Egremont recycling program includes a Bulky Rigid Plastic container and a Swap Shop.

Two concerns of note: Improper discard of plastic containers and intermittent rodent control.

Williamstown

Williamstown has a population of ~7,500, aside from the college student population.

Their community composting program is concluding its first year as a pilot program involving 75 households. A dedicated shed is provided with several 65 gallon bins and a bin containing sawdust to add to the food waste. The volume of organic waste collected in November, 2023 was 1,958 lbs.. 1,980 lbs. was collected in December, 2023. These weights include the added sawdust to the organic bin. John Petroff, a local organic waste consultant/entrepreneur worked with Williamstown on this project. This method of organic waste does not require DEP permitting. He noted that the added sawdust helps control odor, which in turn reduces and/or eliminates rodent/pest problems. Linda Cernik noted that the shed serves as a deterrent to any bear intrusions.

Participants pay a one time \$25 fee for a color coded MSW container. All household food is deposited and collected by a third party 2-3 times per week for final composting. The participants don't have the use of the compost gratis.

No final figures were procured. However, the site coordinator indicated that each pickup cost \$30-\$35 per pickup; 2-3 pickups per week.

The bin is a wheeled, rigid plastic, 64 covered gallon container. Tommy’s Composting Service is the third party provider.

Great Barrington

Great Barrington is a community of ~6,850 people aside from the Bard college population. Its composting operation began on January 22, 2024. The collection system consists of two standard wheeled rigid plastic covered garbage cans with plastic liners. The containers are in the open and there is no sawdust additive. No evidence of use was noted during the first week of operation. No information is available as to usage. The third party provider is Berkshire Compost.

Greenfield

Greenfield is a city of ~17,800 people in Franklin County. Its organic waste program has been operative for several years and it collects over 1,000 lbs. of organic waste weekly. Organic waste includes dairy, meat, fats, etc.. Greenfield has been experiencing a rodent problem for several years to the point that it recently stopped its program. The operation attracted a number of mice which made their way into large machinery, gnawing engine wire, causing significant damage.

Egremont versus Williamstown, Pros and Cons:

The Egremont model is simpler and allows for a lower initial cost and scalability. The proximity of Dalton's town garage is conducive to turning over the compost. Location of the bin model adjacent to the town's brush/grass disposal area permits these materials to be added, furthering aerobic process.

Pest control is an issue which must be addressed. An attendant should be on hand to ensure proper disposal by the participants.

The Williamstown model permits all food waste to be collected. This model incurs greater initial, continuing and scalability costs given the collection shed(s) and increased household waste; and given third party disposal costs. This sub committee has no cost data regarding the Williamstown pilot composting program at this time. Williamstown participants don't receive compost gratis.

Considerations/Inputs for Dalton's Model

Calendar Year 2023:

MSW processed...372 tons

Hauling rate per ton...\$120

Number of hauls...57

Cost per haul...\$180

Total cost: $372 \times \$120 = \$44,640$ plus $57 \times \$180 = \$10,260$

Total MSW Cost to Dalton...\$54,900

Recycling Dividends Program receipts:

FY22...\$2,450....Expended \$1,620

FY23...\$3,850.....?

Balance...\$4,680

The subcommittee did not obtain data regarding Dalton's revenue for Transfer station stickers, nor the number of bags sold. Projected savings to the town and Dalton participants (based upon the Egremont model of 20% MSW reduction) is unknown at this time.

The Subcommittee has communicated with the Department of Environmental Protection (DEP) at the state and regional level, the Center for Environmental Technology and the compost site coordinators of Egremont and Williamstown. Site visits to Egremont and Williamstown have been conducted. The Center for Environmental Technology indicated that it will provide up to 60 hours of consultation to Dalton at no cost; following Dalton's application to the DEP.

The Subcommittee looks forward to collecting information towards implementation of community composting should the Town Manager and the Highway Superintendent request such input.

Conclusions and Recommendations for Dalton

Best fit for Dalton: Egremont Model-Bin System exclusive of non-organic household waste, oils, meats, and dairy products.

The Egremont model is the simplest, least costly community composting option for Dalton. The current brush/leave compost area provides an opportune location given traffic pattern and the adjacent organic material of brush and/or leaves which could be added to community organic waste.

This model requires minimal investment aside from concrete retaining blocks and possible enclosures. Turning the composted material with a front end loader/backhoe is required.

Pest control is minimized as no non-organic waste is permitted: No meat, fish, bones, dairy products, cooked foods, fats, grease, and oil.

Adding brown feedstock (leaves, etc.) can accelerate the decomposition process in addition to increased turnover/aeration of the material.

Use covers and mesh wiring aprons to discourage and control rodents. Exclude the use of plastic on-site containers which may be compromised by rodents. A 3' cleared perimeter around the organic waste bin/container discourages pests.

The area must be supervised, monitoring the color-coded participant home compost bins material. The site could be supervised two days per week, much like the compost area is now supervised.

The final product is available to the participants.

Alternative: Williamstown Model - Inclusive of non-organic household waste

The Williamstown model allows for more material to be composted. Other than plastic, all household food waste is permitted.

Participants would deposit compost material in 60 gallon bins, contained within a roofed enclosure. Bins containing sawdust would be available to cover over successive layers of compost. The bins would be picked up and composted by a third party.

Additional pest mitigation must be evaluated.

The site must be supervised as described.

Scalability costs are greater than the EgremontEgremont model.

The composted material is not free to the participants.

Holiday Farm has expressed an interest in working with Dalton given this model.

Proposed Next Steps:

That a committee be established to further investigate and develop a plan for community composting for Dalton.

Engage the Center for Environmental Technology to work with the committee to develop a final plan. They are willing to provide 60 hours of consultation at no cost.

If the Egremont model is selected, complete the no cost permit through the DEP. The DEP is supportive of our endeavors.

We appreciate your attention to this matter, and are available to answer any questions.

Thank you.

Green Dalton Committee Subcommittee on Composting