

WZWC Recommendations Brief

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Detailed Recommendation Submitted to the Town Managers Office in March 2020

I. WZWC

The Winthrop Zero Waste Committee ("WZWC") was formed by the Town Manager, Austin Faison in 2019. The WZWC held its inaugural meeting on October 18th 2019. The committee currently has three members: **Rosie Mott, Charles Southworth and Carol Walker.**

II. WZWC Mission Statement

WZWC will work in partnership with Winthrop's Town leadership to promote community education regarding the reduction of solid waste, research different approaches to waste, assist the Town manager in implementing responsible waste management practices and contracts in the Town of Winthrop, and create actionable plans that enable reduction of the solid waste output of Winthrop Town, citizens, and businesses.

III. Executive Summary

Situation analysis and recommendations focused on cost reduction and service expansions for solid waste municipal services and waste diverting programs. These recommendations are electable as separate parts, but provide greater value and cost reduction if fully adopted and executed. Several items are time sensitive and require that the town council create policy.

(next page)

IV. **Problem Statement & Background**

Winthrop has three municipal waste disposal streams - solid waste, recycling, and the municipally operated compost pile.

Capitol Waste Contract

The existing municipal waste contract with Capitol Waste covers trash and recycling pickup.¹ It was originally signed in 2001, at prevailing rates of the time, and will expire in 2020.

A new contract is likely more expensive. Cost minimization in the new contract is important.

Compost Pile

The Winthrop municipal compost pile costs approximately \$60k per year to maintain as is - haul out costs, grinding services, staffing costs for open hours, and general time spent on operations management. The bulk of this is not used and hauled away, at a further cost to the town.

Local Environment

Many of the positive aspects that every Winthrop resident and visitor enjoys are tied to a clean and refreshing seaside environment. Walking on the beach, boating, sport fishing, sailing, gardening, biking, tennis and many other leisurely activities are far less appealing when trash and debris float or blow into the experience. Creating an awareness and attitude of community responsibility for cleanliness in the town is desirable; this serves the common good.

Changing Market

When the waste disposal contract was last negotiated between Winthrop and Capitol Waste, A large portion of the solid waste stream was sold in the open market to various countries at a profit. More recently this has become unprofitable which drives up the cost of recycling services.

Current Challenges

Cheap production overseas has reduced the durability of consumer goods and packaging. This encouraged consumers to adopt a 'throw away' mentality.

The average volume of solid waste per capita in the US has increased steadily, from 3.6lbs in 1980 to 4.51lbs in 2017 per capita.² This directly impacts the costs for municipal waste removal contracts. Winthrop can expect a sharp increase in the cost of waste removal.

Winthrop is not alone in facing these challenges. Since 1990, the state has made efforts to reduce and divert the solid waste stream.³ This includes recycling programs that have increased statewide recycling of municipal waste from less than 10% to greater than 35% by the year 2006. These programs continue today and provide free and grant based assistance to MA communities for new approaches to waste disposal and creating community engagement programs with the goal of shifting to a more sustainable culture.

¹ CWM Contract Excerpt in appendix

² [National Overview: Facts and Figures on Materials, Wastes and Recycling | US EPA](#)

³ [Overview: Solid Waste Management in Massachusetts](#)

V. Recommendations

The WZWC has assembled **six** overall recommendations for the Town of Winthrop. These fall under the umbrella of reducing our waste output. Several have additional financial and educational benefits which are directly measurable and add value while reducing our waste stream and the associated costs.

- 1) **Secure a 1 YR extension of the waste removal contract with CW**
 - a) During the extension seek to measure waste output, and reduce it (see subsequent recommendations). Then renegotiate or seek other vendors for a reduced load and reduced cost.
- 2) **Zero-waste/waste-reduction public campaign in Winthrop** (Low cost & see #4)
 - a) Active campaign to inform and engage the community.
- 3) **Zero waste/waste-reduction campaign in our schools** (with School Committee & see #4)
 - a) Working with youth is key to household participation.
 - b) Identify key partners for Zero Waste campaign (within the schools, school department, student groups), invite other local organizations to participate. There is no need to reinvent the wheel, examples exist in neighboring communities.
- 4) **Participate in state program and grant funding - SMRP grants with MADEP**
 - a) An [Sustainable Materials Recovery Program](#) Municipal Grant to support a composting program, local recycling, local hazardous waste diversion, reuse, source reduction, etc.
 - b) Grats range from \$2800 to \$260,000 for a specified qualifying project.
 - c) The town must move with great speed to qualify and apply for funding in 2020
 - d) We can apply again in 2021 and subsequent years, for any qualifying project. (organics)
- 5) **Black Earth Composting (BEC)- Manage our Compost pile - Cost Reduction**
 - a) Black earth compost has offered to manage our compost pile at no cost to the town.
 - b) Allow structure to be built at DPW and become a hub for BEC
 - c) Encourage citizens to sign up for BEC collection service and compost
 - i) Educate citizens on organic composting
 - ii) Work with Black Earth to develop a marketing and educational plan about composting options
 - d) This is a DEP qualifying program in addition to reducing cost, it qualifies for grants.
- 6) **Participate in Simple Waste's Textile Recycling Program - Free program**
 - a) Curbside pickup of - Textiles, flatware, and some other re-useable goods.
 - b) Free/no-cost
 - c) This is a DEP qualifying program in addition to reducing cost, it qualifies for grants.
- 7) **Initiate Periodic Waste-specific Events**
 - a) Textile recycling, Hazardous waste, motor oil, Mattresses, Lightbulbs, etc.

- b) Christmas trees, yard waste (may be included with BEC agreement)

VI. Cost Benefit Analysis highlights - (Full details in Managers report)

- 1) **Zero-waste/waste-reduction public campaign in Winthrop**
- 2) **Zero waste/waste-reduction campaign in our schools** (with School Committee)
- 3) **Participate in state program and grant funding**
 - a) **Benefits:** Funding for programs in Winthrop
- 4) **Black Earth Composting (BEC) - Manage our Compost pile**
 - a) **Benefits:**
 - Eliminate \$60k currently spent by DPW
 - Reduce waste removal costs by redirecting food waste
 - Food waste is 21% of the solid waste stream⁴
 - Increase composting open days/hours
 - 2 weekdays and Sat/Sunday
 - Year round(currently we had seasonal operation and limited weekend hours)
 - Signage for recycling provided by BEC
 - High discount for Winthrop residential pickup
 - Reduce edible waste in trash available for vermin
 - Pickup available to businesses & restaurants
 - Education component provided by BEC to schools
 - Qualifies for DEP grant funding
- 5) **Simple Textile Recycling - Participate in program**
 - a) **Costs:** Free
 - b) **Benefits:**
 - Free curbside pickup weekly
 - Reduce waste removal
 - Textiles are 10-15% of the solid waste stream
 - Qualifies for DEP grant funding (for related expenditures)
- 6) **Waste based events - Initiate/implement periodic**
 - a) **Costs:** Minor costs of media, time coordination with faculty/volunteers/youth organizations
 - b) **Benefits:** Support local organizations (Elks, VFW, Rotary, Etc.)

VIII. Summary and Support Statement

We will continue to work with the TM's office to support these recommendations. (In the future, additional collaboration with the Winthrop Public Schools and groups like Winthrop Mothers Out Front and Friends of Belle Isle Marsh is an opportunity.)

⁴ [National Overview: Facts and Figures on Materials, Wastes and Recycling | US EPA](#)

Additional Background Information:

Waste & Pollution

In the United States, the landfill disposal of municipal solid waste is one of the largest contributors of man-made methane gas, a greenhouse gas (Powell et al., 2016). Though some landfill facilities are equipped to collect methane gas, Massachusetts' in-state capacity for waste disposal in landfills has declined significantly in the past decade. Massachusetts has adopted an alternate, in-state strategy: incineration of solid waste. Waste incineration is a major contributor to the emission of greenhouse gases: CO₂ (carbon dioxide) and N₂O (nitrous oxide), as well as the pollutant NO_x (oxides of nitrogen) (Johnke., B. 2000). The state of Mass utilizes seven municipal waste combustors, which are equipped with modern systems for the reduction of air pollution and for the conversion of 'waste-to-energy'.

However, not even the most advanced technologies can completely eliminate the pollution generated by waste combustion. In addition, Wheelabrator's site in Saugus, Massachusetts, where much of Winthrop's trash is sent is currently under scrutiny. The plant has operated since 1989 under a DEP Consent Order and DEP has granted 9 amendments which have allowed it to expand over 20 years beyond its initial closure date of December, 1996. It has been depositing 300 to 500 tons per day of toxic incinerator ash in the landfill, which is unlined even though current standards would not allow this. The ash landfill is located in the Rumney Marsh region, which is an *Area of Critical Environmental Concern* and is unbuffered and within 1/2 mile of people's homes in areas considered to be communities of Environmental Justice. Activists have noted that about 80% of what is being burned is recyclable or compostable. Therefore waste reduction is a valuable tool in reducing the economic and environmental impact of solid waste on EJ communities.

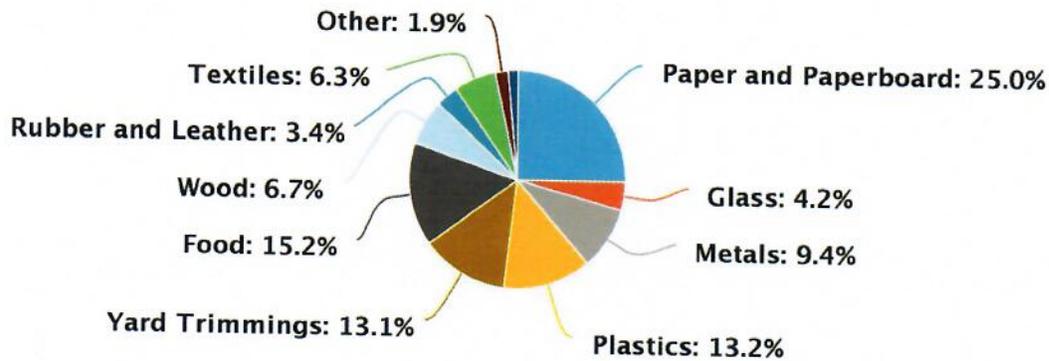
X. References and Resources:

1. Powell, J., Townsend, T. & Zimmerman, J. Estimates of solid waste disposal rates and reduction targets for landfill gas emissions. *Nature Clim Change* 6, 162–165 (2016)
doi:10.1038/nclimate2804
2. Johnke, B., Emissions from waste incineration. IPCC: *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. (2000)
https://www.ipcc-nggip.iges.or.jp/public/gp/bgp/5_3_Waste_Incineration.pdf
3. Solid Waste Management in MA(2009) mass.gov/files/documents/2016/08/xv/swminma.pdf
4. EPA Report National 2017 epa.gov/facts-and-figures...
5. <https://www.nytimes.com/2019/03/16/business/local-recycling-costs.html>
6. EPA Report National 2017 epa.gov/facts-and-figures...
7. School Program Resources:
 - <https://greenschoolsnationalnetwork.org/zero-waste-for-schools/>
 - <http://www.cafeteriaculture.org/zero-waste-cafeterias-and-schools.html>
 - <https://www.jweekly.com/2019/08/26/qa-the-target-is-zero-waste-starting-with-school-supplies/>

Relevant Waste Stream Statistics:

Total MSW Generated by Material, 2017

267.8 million tons



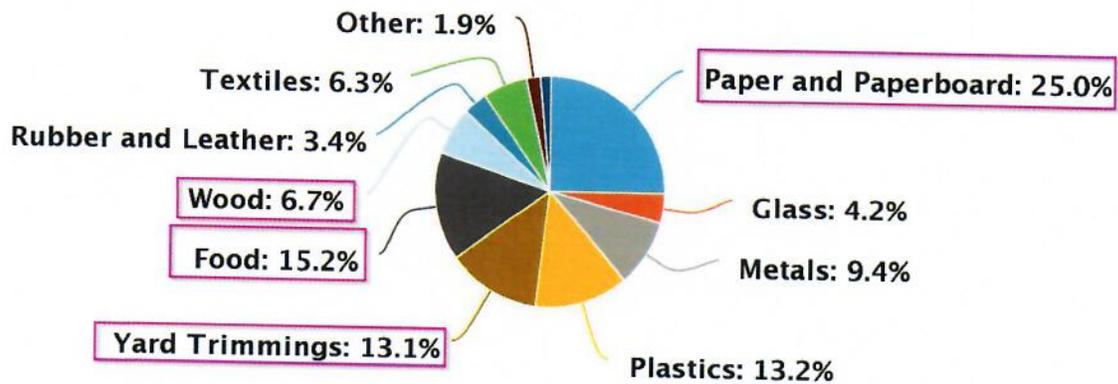
(Source:

<https://www.epa.gov/facts-and-figures-about-materials-waste-and-recycling/national-overview-facts-and-figures-materials>)

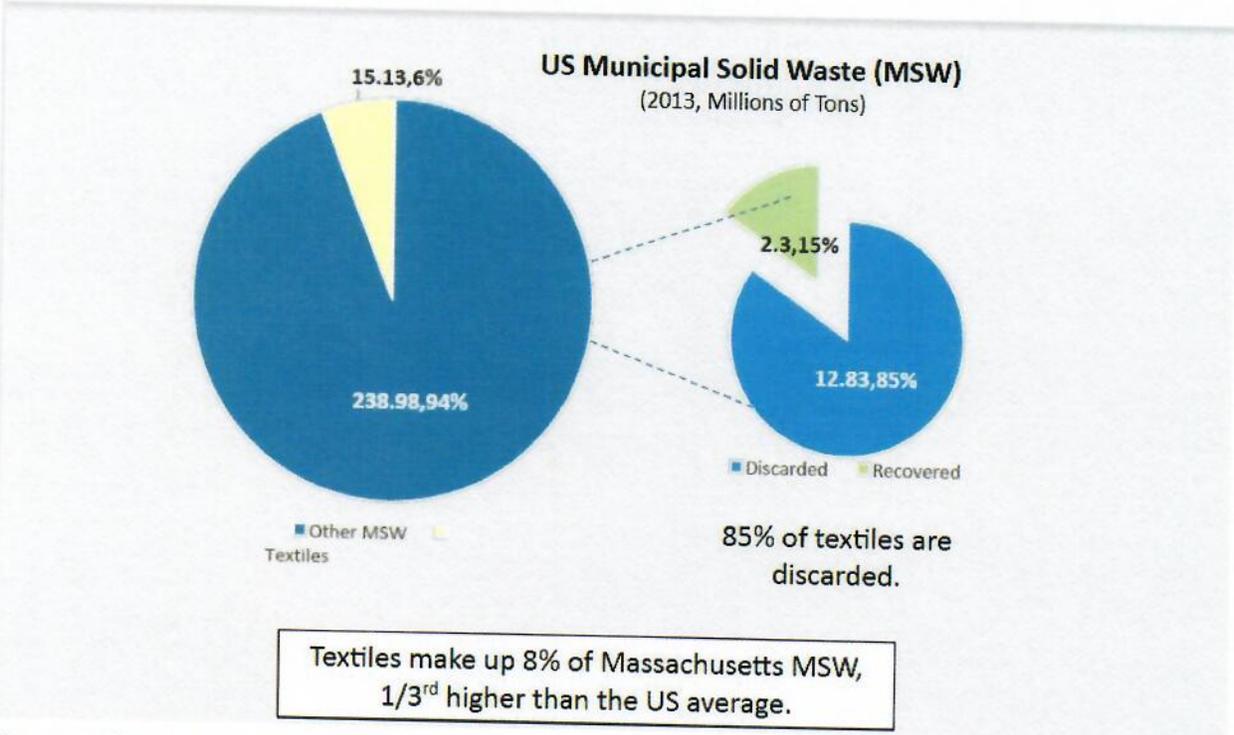
Total MSW Generated by Material, 2017

267.8 million tons

Total Compostable Waste = About 60%



Textiles in the Waste Stream



(Source - Simple Recycling Presentation -

https://docs.google.com/presentation/d/1_W6DxortW9tIGghfjZReCnI6OmZ_WRITnmTVY3aiF2Q/edit?usp=sharing)