



Need to Enforce: Waste Bans in Massachusetts

Zero Waste Massachusetts



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CONTENTS

A – Introduction	3
A.1 Waste in Massachusetts	3
A.2 The Problem	4
B – Four Case Studies	5
B.1 Nantucket	5
B.2 San Francisco	6
B.3 Vermont	8
B.4 Seattle	9
C – Recommendations and Conclusion	11

A – Introduction

A.1 Waste in Massachusetts

Massachusetts faces a host of environmental and public health challenges that will likely take years to solve, require a tremendous amount of resources, and/or cannot be addressed without a regional or even a national approach. But one problem we can clearly solve in the near term is the amount of waste we discard that should be reduced, composted, or recycled. Waste disposal pollutes our environment, hurts public health, and is expensive and unsustainable. We can and must do more to reduce waste in our Commonwealth.

There is no silver bullet; we must deploy several tactics to reduce waste. The goal of this report is to shine a spotlight on the fact that every year in Massachusetts more than 2 million tons of waste (approximately 40% of total waste), which ends up in landfills, incinerators, or as litter,¹ is composed of materials that were banned from disposal long ago by Massachusetts Department of Environmental Protection (MassDEP) regulations.² We hope that with more attention on this problem, MassDEP, with help from Massachusetts cities and towns, can launch an effective effort to eliminate this substantial portion of the waste stream.

Among our recommended solutions are:

- Enforce our laws: Add MassDEP waste ban enforcement staff and hold waste haulers accountable by issuing noncompliance orders and issuing fines to violators.
- Separate our waste from recycling and composting: Provide separate bins for residential and commercial buildings to separate our discarded materials.
- Provide state and local education about waste: State and local governments should educate decision-makers and the public, in multiple languages, about what can and cannot be reduced, reused, recycled, composted, and sent for burial or burning.
- Use clear trash bags.

With a spotlight on this problem, public education, increased resources from MassDEP, better infrastructure, and a commitment from municipalities, state legislators, the Governor, and other decision-makers, we can vastly improve the problem of too much banned waste going to landfills and incinerators. Our recommendations can be found in Section C.

¹ <https://www.mass.gov/doc/class-ii-recycling-program-waste-characterization-study-april-2020-3/download> (see table 3-2 for banned items in the disposal stream).

² 310 CMR 19.017.

A.2 The Problem

- I. We dispose of too much waste in MA (5.5 million tons in 2019).³ We are “feeding the beast” — incinerators and landfills — causing pollution and public health problems. Incinerators are always polluting and becoming increasingly dangerous to run.⁴ The Wheelabrator facility in Saugus, MA is one such example as it has endured four fires in just the past few years. These fires release toxic chemicals into the air, causing harmful pollution that burdens the surrounding communities and results in poor public health outcomes.⁵
- II. Of those 5.5 million tons of waste,⁶ approximately 40% is composed of long-banned materials such as glass and metal containers, ferrous and non-ferrous metals, leaves and yard waste, recyclable paper, cardboard and paperboard, certain plastic containers, wood waste, and tires.⁷ All of these materials can be reduced/reused/recycled, which should be done per MassDEP’s long-standing regulation.⁸
- III. The burning or burying of just about any material is harmful, but it adds insult to injury that 40% of what is buried and burned in MA is composed of banned materials. This causes pollution, undermines regulations, jeopardizes our environment, harms our health, hampers the reuse industry, inhibits progress in reducing waste, and is simply not an acceptable way to manage our systems.
- IV. We lack robust, transparent, comprehensive enforcement of the waste bans. If the MassDEP waste bans were rigorously implemented, we would reduce the waste going to landfills and incinerators by more than 2.2 million tons.

We looked at four locations around the country that have been working to reduce waste via enacting bans, to see what lessons the Commonwealth of Massachusetts can learn and apply. Those four case studies look at three municipalities — Nantucket, MA, Seattle, WA, and San Francisco, CA — and the state of Vermont. It is clear that these four locations could improve

³ <https://www.mass.gov/doc/2030-solid-waste-master-plan-working-together-toward-zero-waste/download> (page 2).

⁴ <https://www.clf.org/blog/aging-incinerators-pose-a-danger/>.

⁵ *Id.*

⁶ <https://www.mass.gov/doc/2030-solid-waste-master-plan-working-together-toward-zero-waste/download> (page 2).

⁷ <https://www.mass.gov/doc/class-ii-recycling-program-waste-characterization-study-april-2020-3/download>

⁸ 310 CMR 19.017.

their waste ban enforcement, and it is worth evaluating what practices have and have not worked in these locations.

B – Four Case Studies

B.1 Nantucket

- I. *Nantucket Bans*: Nantucket developed strict trash waste bans in 1995 in response to high costs for shipping waste back to the mainland and hazardous pollution caused by the overflowing island landfill.⁹ The town banned the disposal of paper and cardboard products, green and brown glass, tin and aluminum, and numbered plastics. It also prohibited grass cuttings, leaves, tires, yard waste, and other material.¹⁰

- II. *Implementation Strategies*: To effectively enforce the bans, Nantucket developed a recycling program to ensure that banned waste items are recycled. It also launched a public education campaign.
 - *Public Education*: The Nantucket Department of Public Works (DPW) distributed infographics to residents about the waste streams and instructed island waste haulers and waste facility staff about the changes.¹¹
 - *Separation of Waste*: Nantucket DPW required residents and waste haulers to separate waste into three main streams — recycling, compost,¹² and nonrecycling noncompost waste — stored in three separate bins,¹³ and they banned traditional curbside trash bins.
 - *Clear Plastic Bag Requirement*: Since the mid-2000s, Nantucket DPW has required all waste to be contained in clear trash bags, which seems to make inspections of disposed waste easier.¹⁴

⁹ <https://www.nytimes.com/2009/10/20/science/earth/20trash.html>.

¹⁰ <https://ecode360.com/11471182>.

¹¹ https://b386363e680359b5cc19-97ec1140354919029c7985d2568f0e82.ssl.cf1.rackcdn.com/ckeditor_assets/attachments/root/224916/Recycling_is_Mandatory_on_Nantucket.pdf.

¹² Materials diverted from the waste stream for composting should not be mixed with sewage sludge because the mixture degrades the final product that is often sold as fertilizer. Ecology Center and Sierra Club, “Sludge in the Garden: Toxic PFAS in Home Fertilizers from Sewage Sludge,” May 2021, [2408_PFAs in the Garden Sludge Report 07.pdf - Google Drive](#).

¹³ <https://www.nantucketlandcouncil.org/nlc-news-nantuckets-new-household-trash-and-recycling-guidelines/>.

¹⁴ <https://www.nantucket-ma.gov/242/Solid-Waste-Recycling>;
<https://www.wastedive.com/news/clear-trash-bags-lead-to-31-waste-decrease-20-recycling-incre>

- *Staff and Hauler Monitoring*: Nantucket Solid Waste, Recycling, and Landfill Facility staff inspect residents' trash bags upon entry into the facility, prohibiting them from disposing of trash bags that are not clear.¹⁵ Additionally, Nantucket waste haulers do not collect trash in bags that are not clear.¹⁶
- *Stricter Waste Hauler Contracts*: The Nantucket Board of Health requires waste haulers to comply with DPW regulations to receive new hauling permits.¹⁷

The effective enforcement of a three-channel waste stream forces haulers and residents to better separate their waste. This allows recyclables to be separated from trash.

- III. *Status of Disposal/Banned Materials*: In 2018, the most recent year for which information is available (which is 23 years after Nantucket enacted its bans), 12% of what ends up in the Nantucket Landfill is mandated recycling items or banned materials.¹⁸ While the goal should be zero percent, Nantucket is a good example of rigorous implementation of waste bans. However, it has more work to do to ensure the quality of compost materials by not diverting discarded food and mixing it with sewage sludge.

B.2 San Francisco

- I. *San Francisco Bans*: San Francisco mandated recycling and composting in 2009 with the goal of keeping many materials out of landfills.¹⁹ The city banned disposal of paper, cardboard, glass bottles, aluminum and tin cans, hard plastics, bundled plastic bags, and thin (film) plastics.

<https://www.reistrucking.net/index.php/information/67-nantucket-recycling-nantucket-landfill-waste-separation-requirements.ase/407967/>; <https://www.wastedive.com/news/clear-trash-bags-lead-to-31-waste-decrease-20-recycling-increase/407967/>;

<https://www.reistrucking.net/index.php/information/67-nantucket-recycling-nantucket-landfill-waste-separation-requirements.ase/407967/>.

¹⁵ <https://www.nantucket-ma.gov/242/Solid-Waste-Recycling>

(bottom of page).

¹⁶ Interview with Myles Res Trucking, August 2022.

¹⁷ <https://www.nantucket-ma.gov/AgendaCenter/ViewFile/Item/3133?fileID=21733> (page 4).

¹⁸ <https://www.nantucket-ma.gov/DocumentCenter/View/27173/Environmental-Leadership-Goal-1> (page 5).

¹⁹

https://sfenvironment.org/sites/default/files/policy/sfe_zw_sf_mandatory_recycling_composting_ord_100-09.pdf (page 1).

- II. *Implementation Strategies*: The city developed an enforcement program with a goal of ensuring that banned waste items are recycled. It also conducted public outreach to educate people on recycling banned items.
- *Separation of Waste*: The San Francisco Department of the Environment (SF Environment) created three separate waste streams — recyclables, compostables, and trash — and residents and businesses are required to have three separate bins. Businesses that do not provide three separate containers are fined.²⁰
 - *Resident Accountability*: Residents are required to subscribe to refuse services and have three different bins to separate materials. The San Francisco Department of Public Health issues a fine if residents do not comply.²¹
 - *Waste Hauler Education*: Haulers are required to tag residents' trash containers if they contain banned items and collectors may refuse to empty the containers for small residential buildings after issuing two tags for banned materials.²² Haulers report violations to the city after four warnings.²³
 - *SF Environment Education*: Haulers and the SF Environment staff communicate what materials must be separated from waste, make the information available in several languages spoken by residents with limited English proficiency, and provide visual resources.²⁴

San Francisco utilizes waste hauler accountability and multilingual education programs to prevent recycling ending up in the trash stream.

- III. *Status of Disposal/Banned Materials*: In 2022, 11 years after San Francisco enacted the bans, more than 50% of what ends up in city landfills is mandated recycling items.²⁵ While the goal should be zero percent, and San Francisco has more work to do, San Francisco is a good example of multilingual resident communication regarding waste

²⁰

https://sfenvironment.org/sites/default/files/policy/sfe_zw_sf_mandatory_recycling_composting_ord_100-09.pdf (pages 8, 16-17).

²¹ *Id.* at 13; <https://www.sfdph.org/dph/eh/refuseliens/default.asp>.

²²

https://sfenvironment.org/sites/default/files/policy/sfe_zw_sf_mandatory_recycling_composting_ord_100-09.pdf (page 11).

²³

https://sfenvironment.org/sites/default/files/policy/sfe_zw_sf_mandatory_recycling_composting_ord_100-09.pdf (page 12).

²⁴ <https://www.recology.com/recology-san-francisco/sorting-guides-signage/>.

²⁵ <https://sfenvironment.org/striving-for-zero-waste>.

bans, and a system for haulers to notify residents of violations through tagging and reporting.

B.3 Vermont

- I. *Vermont Bans*: Vermont mandated recycling in 2012 with its sights set on a zero-waste future; it updated the law in 2018 and 2019.²⁶ The northern New England state banned aluminum cans and glass bottles, polyethylene terephthalate (PET) and high-density polyethylene (HDPE) plastic containers, corrugated cardboard, and paper from disposal.²⁷ Food scraps are also banned.²⁸
- II. *Implementation Strategies*: The state developed an enforcement program with a goal to ensure that banned waste items are recycled. It also works to educate the public about recycling banned items.
 - *Three Waste Streams*: The Vermont Department of Environmental Conservation (VT DEC) established three separate waste streams — recycling, food scraps and yard debris, and trash — and haulers have to ensure pickup services for each stream.²⁹
 - *Waste Hauler Accountability*: Haulers must comply with recycling mandates. They may face enforcement and/or penalties if they bring in contaminated loads or are reportedly not complying.³⁰
 - *Waste Hauler Public Education*: In some Vermont counties, haulers tag bins, educate community members about the mandates, and provide materials, such as multilingual

²⁶

<https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/2018-Leg-Changes-Summary-UR-Bottle-Bill.pdf>;

<https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/2019-Summary-Changes-Solid-Waste-Law.pdf>.

²⁷ Universal Recycling Law, Act 148, [Microsoft Word - GENERAL-#281054-v1-Act No 148 - 2012 - H 485 - establishing universal recycling of solid waste.DOC \(vermont.gov\)](#).

²⁸ https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/Universal-Recycling/Timeline-factsheet_CURRENT.pdf.

²⁹ <https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/Universal-Recycling/2019.Universal.Recycling.Status.Report.pdf> (page 5).

³⁰ The Vermont Agency of Natural Resources has enforcement authority under 10 V.S.A. § 8003(a), and some solid waste management entities may also have enforcement authority under local laws.

fact sheets³¹ and frequently asked questions, developed by the Vermont Agency of Natural Resources.³²

- *Transfer Station Compliance*: Transfer stations are required to accept all recyclable products and collect food scraps and yard debris (the requirement for yard debris only applies to yard debris seasonally between April 1 – December 15).³³

Vermont utilizes waste hauler contracts and defines three separate waste streams to attempt to prevent recycling ending up in the trash stream.

- III. *Status of Disposal/Banned Materials*: In 2018, three years after Vermont’s waste bans became effective, 35% of what ends up in state landfills is mandated recycling items.³⁴ While the goal should be zero percent, the state’s bans are relatively young; ideally, improved enforcement will be a priority for the new VT DEC Commissioner, appointed in July 2022.

B.4 Seattle

- I. *Seattle Bans*: The city of Seattle mandated recycling in 2003,³⁵ with a major update in 2013,³⁶ as part of an effort to create a more sustainable future. The city banned disposal of recyclable paper and cardboard, glass and plastic bottles, as well as aluminum and tin

³¹ <https://dec.vermont.gov/waste-management/solid/product-stewardship>;
<https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/EPR-brochure-for-translation.pdf>.

³² https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/Universal-Recycling/FAQ_Hauler_CURRENT.pdf; 10 V.S.A. § 6604(a)(2)(F),
<https://legislature.vermont.gov/statutes/fullchapter/10/159>.

³³ <https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/Universal-Recycling/2019.Universal.Recycling.Status.Report.pdf> (pages 2, 12).

³⁴

<https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/2018-VT-Waste-Characterization.pdf> (page 12);

<https://dec.vermont.gov/sites/dec/files/wmp/SolidWaste/Documents/2019%20Final%20VT%20MMP.pdf>.

³⁵ <http://clerk.seattle.gov/~scripts/nph-brs.exe?s3=&s4=121372&s5=&s1=&s2=&S6=&Sect4=AND&l=0&Sect2=THESON&Sect3=PLURON&Sect5=CBORY&Sect6=HITOFF&d=ORDF&p=1&u=%2F%7Epublic%2Fcbor1.htm&r=1&f=G>.

³⁶ <https://www.epa.gov/transforming-waste-tool/zero-waste-case-study-seattle>.

cans and newer items to be recycled, including glass bottles and jars, plastic cups, food scraps, and compostable paper.³⁷

II. *Implementation Strategies*: Seattle Public Utilities (SPU) oversees waste ban enforcement.³⁸ It takes the following actions to limit banned waste items ending up in the recycling stream.

- *SPU Resident Education*: SPU disseminates visual aids online, in multiple languages, that detail the different waste streams. It also flags residents' waste bins if prohibited materials are found.³⁹
- *Three Waste Streams*: SPU programming creates three different waste streams and collection services — recycling, discarded food and yard scraps, and trash. All residents pay a garbage disposal fee, and this rate includes recycling services.⁴⁰
- *Curbside Trash Bin Inspections*: Waste haulers, under an SPU agreement, perform visual audits of trash bin contents. If more than 10% are recyclable (i.e., paper or cardboard) or compostable (i.e., food scraps), the hauler flags that container and does not empty it. After a certain number of warnings, the city will issue fines.⁴¹
- *Waste Ban Incentives*: Residents can obtain a bin for food and yard scraps from their local hauler and pay the prescribed fee to have city services come and regularly dispose of the material.⁴² There is a further charge for each additional bag per curbside pickup period, and the potential for fees to be imposed if ongoing waste ban violations are found.⁴³

³⁷ <http://clerk.seattle.gov/~scripts/nph-brs.exe?s3=&s4=121372&s5=&s1=&s2=&S6=&Sect4=AND&l=0&Sect2=THESON&Sect3=PLURON&Sect5=CBORY&Sect6=HITOFF&d=ORDF&p=1&u=%2F%7Epublic%2Fcbor1.htm&r=1&f=G>; http://clerk.seattle.gov/public/meetingrecords/2013/fullcouncil20130930_1.pdf.

³⁸ http://clerk.seattle.gov/public/meetingrecords/2013/fullcouncil20130930_1.pdf.

³⁹ <https://www.seattle.gov/utilities/your-services/collection-and-disposal/ban-of-recyclables-in-garbage>.

⁴⁰ <https://www.seattle.gov/utilities/your-services/accounts-and-payments/rates/collection-and-disposal/garbage-rates>.

⁴¹ <https://www.seattle.gov/utilities/your-services/collection-and-disposal/ban-of-recyclables-in-garbage/ban-ordinance-details>;
https://library.municode.com/wa/seattle/codes/municipal_code?nodeId=TIT21UT_SUBTITLE_I_IISOWA_CH21.36SOWACO_SUBCHAPTER_IISOWACO_21.36.082CORERE.

⁴² <https://www.seattle.gov/utilities/protecting-our-environment/sustainability-tips/landscaping/for-residents/compost-and-soil/buy-compost-bins>.

⁴³ <https://www.seattle.gov/utilities/your-services/collection-and-disposal/ban-of-recyclables-in-garbage>.

SPU's waste inspections, creation of three waste streams, and waste ban incentives enable residents to separate their waste, resulting in more, though not enough, banned items being recycled.

- III. *Status of Disposal/Banned Materials*: In 2020, 17 years after Seattle enacted the bans, 49% of what ends up in Seattle landfills and incinerators is mandated recycling or compostable items.⁴⁴ Seattle, like the Commonwealth of Massachusetts, has much work to do to enforce its bans and reduce waste.

C – Recommendations and Conclusion

With approximately 40% of waste in landfills and incinerators in Massachusetts being long-banned items like paper, cardboard, glass, and more, we can and need to do better. Reducing waste is already one of MassDEP's goals, and allocating more resources to enforcing waste bans will significantly help achieve that goal.

It is evident from these case studies that instituting waste bans is not enough. If the bans are to be successful, they must be followed with rigorous enforcement, robust and continuous public education campaigns, and public infrastructure for reducing, reusing, recycling, and composting.

Educating the public, decision-makers, and municipal officials that this problem exists is step one in solving it. Our recommendations to MassDEP, from looking at other locales with waste bans, include:

- I. Hold waste haulers responsible. Massachusetts needs to require haulers to inspect trash bins and issue warnings and penalties. Having haulers perform inspections and tag residents' containers helps raise public awareness and affects behavior through the associated financial penalties.
- II. Devote more resources to waste ban inspections. MassDEP needs to issue more noncompliance orders to transfer stations and solid waste facilities to further increase awareness, as is done in Vermont. We recommend that MassDEP hire additional waste ban inspectors whose sole job responsibility is to enforce waste bans.
- III. Waste ban inspectors should issue penalties. Most of the waste ban inspections that reveal problems result in noncompliance orders with no financial penalty. MassDEP must issue

44

<https://www.seattle.gov/documents/Departments/SPU/Documents/ExecSummaryResidentialWasteRecyclingStudy2020.pdf> (page 8).

more enforcement orders that dole out financial penalties that are sufficiently high to influence behavior changes.

- IV. Institute waste stream separation. Massachusetts cities and towns should institute three separate waste streams — recycling, discarded food and yard scraps, and trash. In each case study location, the government requires three separate bins for residential and commercial buildings. This requirement makes it easier for individuals, property managers, and companies to separate their waste.
- V. Mandate use of clear trash bags. Massachusetts cities and towns should mandate use of clear trash bags. Nantucket has proved how invaluable they are for inspections and enforcement of disposal bans. It is also appropriate to mandate that waste facilities and haulers cannot accept opaque trash bags.
- VI. Educate the public using multilingual messages. MassDEP, cities, towns, and haulers need clear communication on recycling and waste ban standards with clear visuals and in multiple languages spoken by limited English proficient residents to ensure that all residents understand the MassDEP regulations.
- VII. Reduce the amount of banned materials that haulers can dump in solid waste facilities. In Massachusetts, haulers are permitted to enter landfills and incineration facilities with some banned items in their load.⁴⁵ The practice allows too much banned material to enter waste facilities. Massachusetts must lower this allowance to limit the amount of banned items entering the trash stream for burning or burial.
- VIII. Make waste ban enforcement information readily available and transparent. Information about banned items in waste needs to be more accessible to ensure public accountability. In Massachusetts and in each case study location, data about waste ban enforcement is buried within the depths of unnavigable websites.

Our solid waste crisis requires that Massachusetts, along with the other states and cities mentioned herein, make better progress on reducing waste. Waste bans, properly implemented, reduce the amount of materials sent for burial or burning. Waste bans are a critical tool to help us reduce the air pollution and greenhouse gas emissions associated with landfilling and

⁴⁵ MassDEP Guidance, “Your Business and the Waste Bans: What You Need to Know,” November 2021, <https://www.mass.gov/doc/fact-sheet-your-business-the-waste-bans/download>; MassDEP Guidance, “Haulers and Waste Ban Compliance,” November 2021, <https://www.mass.gov/doc/guidance-brief-haulers-waste-ban-compliance/download>.

incinerating waste, improve public health, and prevent the need to build new solid waste facilities.

The Zero Waste Massachusetts Coalition is eager to support MassDEP and Massachusetts cities and towns to reduce the amount of banned materials going to landfills and incinerators, increase the amount of food and yard waste scraps being composted, and increase recycling rates. The Zero Waste Massachusetts Coalition has been operating since 2008 with a focus on reducing the negative impacts of our waste system and recommending zero-waste solutions that will lead to improved public health, environmental justice, and reduced greenhouse gas emissions.