

MOVING FOOD WASTE FORWARD

Policy Recommendations for Next Steps in Massachusetts



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Prepared by the Harvard Law School Food Law and Policy Clinic
For the Massachusetts Food System Collaborative

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Introduction

In the United States, approximately 40% of produced food goes to waste.¹ Wasted food in this country amounts to 63 million tons per year,² of which 10.1 million are left unharvested on farms and 52.4 million end up in landfills.³ As a result, the United States spends \$218 billion per year growing, manufacturing, processing, distributing, and disposing of never-eaten food.⁴ Massachusetts has been on the vanguard of addressing certain aspects of this problem through commitment to food waste reduction practices.⁵ However, there are opportunities for this state to do even more to capitalize on its existing success and encourage further organic waste reduction.

In October of 2016, the Harvard Food Law and Policy Clinic released *Keeping Food Out of the Landfill: Policy Ideas for States and Localities*,⁶ a resource that provides detailed information on how states and local governments can contribute to local food waste reduction. This report applies and refines *Keeping Food Out of the Landfill* to provide information and recommendations specific to Massachusetts stakeholders. In addition to information from other states, this report also references ideas and recommendations that emerged from conversations with food waste experts and stakeholders from around the state. The report covers tax incentives, liability protections, date labels, food safety, school food waste, the Massachusetts organic waste ban, and government support for food waste reduction.

The recommendations in the report reflect prioritization among the methods of food waste reduction. As policymakers consider opportunities to reduce food waste, they should utilize the EPA Food Recovery Hierarchy, which helps to prioritize among food recovery activities.⁷ According to the Hierarchy, food waste reduction is the most important goal, followed by feeding surplus food to people in need, providing food scraps to animals, diverting food waste to industrial uses, and composting. Only food that cannot be diverted through one of those methods should be disposed in a landfill or via incineration. This report reflects the prioritization from the hierarchy in terms of its recommendations.

Massachusetts stakeholders can use the information in this report in order to determine key priorities for next steps in policy change to further reduce the amount of food wasted in the state. The recommendations in this report could be implemented individually or in tandem, or could be combined together into comprehensive state food waste legislation.

Tax Incentives for Food Donations

I. Introduction

Cost is a major barrier to food donation. Businesses and organizations have to bear the cost of harvesting or preparing surplus food for donation, storing it, transporting it, and ensuring it complies with relevant federal, state, and local food safety and labeling laws. Providing a monetary incentive can make donations easier. This is why the federal government offers an enhanced tax deduction for food donation, described below. A tax incentive for food donation is an extremely cost-effective policy. Any money provided through such a program directly incentivizes a farm or food business to donate food by covering part of their costs. If a farm or food business does not donate, they receive no tax benefits and no state money is spent—it's a win-win. In addition to encouraging donations of healthy, wholesome food, tax incentives can support low-margin businesses, like farms, that will be able to recuperate some of the cost invested in producing food that they are unable to sell.

According to the Massachusetts Department of Agricultural Resources (MDAR), there are 7,755 farms in Massachusetts working on over 523,000 acres of land to produce \$492 million in agricultural products.⁸ Massachusetts farms provide employment to nearly 28,000 workers.⁹ Low-margin businesses, like Massachusetts farms may not benefit, or benefit sufficiently, from the federal tax incentives. A state-level tax incentive can be tailored to provide a financial benefit to such low-margin businesses, and simultaneously reduce food waste by incentivizing their food donation.

At the same time, 11.9 percent of all residents and 16.6 percent of children in Massachusetts are food insecure.¹⁰ That



percentage translates to one in eight people who struggle with hunger.¹¹ The investment in increasing food donations can support the food security of the state's residents, particularly those served by emergency food programs, reduce health expenditures, increase residents' productivity, and improve the overall economic well-being of the state.

II. Federal Laws

Federal tax incentives have been extraordinarily successful in incentivizing food donation in the United States. For example, when federal tax incentives for food donations were temporarily expanded to cover more donor businesses in 2005, food donations across the country rose by 137% in the following year.¹² At the federal level, there are two different tax deductions for food donations: a general deduction and an enhanced deduction. The general deduction allows businesses to deduct only the basis value of the donated property—that is, the business' cost of acquiring or producing the property.¹³

In comparison to the general deduction, the enhanced deduction provides a significantly higher financial benefit, allowing businesses to deduct a value for donated food that is almost twice as much as the general deduction.¹⁴ The enhanced deduction increases the amount of the deduction that can be claimed, allowing a business to deduct the smaller of the following two: (a) twice the basis value of the donated food or (b) the basis value of the donated food plus one-half of the food's expected profit margin (fair market value minus basis value).¹⁵ However, certain criteria must be met in order for food donors to receive the enhanced tax deduction. For more information about the federal enhanced tax deduction and how it operates, the Harvard Law School Food Law and Policy Clinic has published *Federal Enhanced Tax Deduction for Food Donation: A Legal Guide*.¹⁶

Although federal tax incentives have been largely successful, they face certain challenges. For example, tax deductions

generally favor large, high-income businesses; low-margin businesses, like farms, struggle to claim a deduction because they do not make enough money. There are also challenges in meeting some of the requirements of the federal enhanced deduction. By contrast, states are better equipped to incentivize the donors that do not benefit, or do not sufficiently benefit, from the federal deductions.

III. State Laws

In order to target farmers and other low-margin food businesses, many states offer tax credits. State tax incentives can be tailored to the nuanced needs of businesses in the state, as well as to the types of donors the state hopes to incentivize, like farmers. Massachusetts does not offer a state-level tax incentive for food donations. Therefore, Massachusetts businesses are only eligible for the federal tax incentives for food donations, and as previously stated, the federal tax incentives do not adequately benefit all types of food donors. A growing number of states are realizing they can spur increased food donation by providing state-level tax incentives that are more tailored to their farms and businesses than the federal tax incentives. Currently, ten states (Arizona, California, Colorado, Iowa, Kentucky, Missouri, Oregon, South Carolina, Virginia and Washington, DC) offer tax incentives specifically targeted at food recovery efforts.¹⁷ Virginia and the District of Columbia are the most recent jurisdictions to offer tax incentives for food donations. In the past two years, Maryland, Massachusetts, New York, Pennsylvania, and West Virginia, among others, all considered legislation to create state tax incentives for food donations.

Each state's food landscape is different, which means tax incentives for food donations vary across state lines. For example, all states except Arizona offer tax credits instead of tax deductions. Additionally, some states offer tax incentives for different types of donors, ranging from farmers, to restaurants, to all taxpayers. California provides one type of tax credit for farmers, and another for all food donors, with the latter targeted at costs associated with the transportation of food donation.¹⁸ Similarly, South Carolina offers a tax credit for the processing of deer meat for donation.¹⁹ Additionally, states vary in the type of donated food eligible for the tax incentive. A majority of states incentivize the donation of agricultural crops, such as grains, fruits, vegetables, whereas others, such as Iowa, incentivize the donation of any apparently wholesome food.²⁰

To further incentivize food donation, as well as help offset the cost of food donation faced by many businesses, Massachusetts should implement a state-level tax incentive for food donations. Massachusetts should consider the below recommendations when crafting a state-level tax incentive for food donations.

IV. Recommendations

1) Offer a tax credit to state businesses, perhaps focusing on farmers.

Federal law offers a tax deduction, rather than a tax credit, for food donations. A tax deduction reduces a taxpayer's taxable income, which is then used to determine the amount of taxes they owe.²¹ To illustrate, if a taxpayer is in the 25% tax bracket, a \$1,000 tax deduction would provide \$250 in tax savings. A tax deduction depends on the business's marginal tax rate, so it favors large, high-income businesses.²² By contrast, a tax credit is a direct dollar-for-dollar subtraction from the amount of taxes the taxpayer owes, and can noticeably benefit any farm or business, even those that sit in relatively low tax brackets.²³ Thus, a \$500 tax credit would reduce the amount of taxes a taxpayer is required to pay by \$500. A tax credit for food donations is therefore more beneficial to most farms, and local or regional restaurants and retailers, which tend to be small to medium-sized businesses. A tax credit can do more than a tax deduction to encourage businesses to donate food. For this reason, most states (except Arizona) offer tax credits for food donation.

2) Place only reasonable limits on the amount that a business can claim through a tax incentive each year.

Massachusetts should conduct an assessment of the amount of surplus food their farms and businesses generate, as well as the financial capacity of the state to provide the tax incentive. It is likely that a cap will be needed to ensure that the state does not overcommit resources to the tax credit. In order to support businesses of all sizes, Massachusetts should consider a cap scalable in relation to the size of the business' income, similar to the federal cap (15% of the business's

taxable income). Providing a progressive tax scale cap can better address the varying sizes of food producers and allow for a benefit that can grow along with the size, and potential surplus food to donate.

- 3) *Tailor the tax incentive to support donations of the types of food, or from the types of entities most applicable to the state. Identify the taxpayers who could benefit most from the tax incentive in order to encourage and offset the costs of their donations.*

In crafting tax incentives, Massachusetts should consider the types of businesses they hope to incentivize and support. For example, many farmers struggle to benefit from federal enhanced tax deduction, which leaves room for states to provide additional incentives that can help to support farms and get more fresh, wholesome food to those in need. For example, Arizona offers two types of tax incentives, one for restaurants with excess prepared food and drink, and another for farmers with surplus agricultural crops.²⁴ Both are structured to incentivize and support the differences between the donors. California and many other states focus exclusively or primarily on farmers for their tax credits. Massachusetts should assess the needs of the state—does Massachusetts lack a certain type of donation (e.g., fresh produce), or is there a type of food entity that does not donate for cost prohibitive reasons (e.g., farmers)? Once the landscape of Massachusetts' food donation is assessed, a tax incentive can be crafted and tailored to meet those needs.

- 4) *Provide tax incentives even when nonprofit food recovery organizations charge needy individuals for food.*

Massachusetts should allow food donors to claim the tax incentive even when the food recovery organization charges a low cost for the food. This can help to support the development of innovative food recovery models that provide opportunities to test new approaches to food recovery. For example, some nonprofit organizations, like Daily Table in Dorchester,²⁵ are following the model of “social supermarkets,” to sell surplus foods in a low-cost grocery.²⁶ Such organizations can fill a need in communities where individuals are food insecure or lack regular food access, but for various reasons are not willing or able to qualify for government assistance or use a food pantry or soup kitchen. Such models also offer the potential for an economically sustainable solution to food recovery because they recognize the labor, storage, and transportation costs of recovering food and allow those costs to be offset by end-user purchases.

To encourage these innovative models, Massachusetts should allow food donors to receive the tax incentive even when they donate to a food recovery organization that charges end recipients, so long as the food recovery organization maintains nonprofit status and distributes its food to those in need. This would match the state liability protection statute (discussed in more detail below), which extends liability protection when a nonprofit food recovery organization charges end recipients an amount sufficient to “cover the cost of handling such food.” Offering the tax incentive even when the nonprofit food recovery organization charges a low cost for the food can help to support the development of innovative food recovery models that provide opportunities to test new approaches to food recovery.

- 5) *Offer additional tax credits for transportation and processing costs associated with donating food.*

The cost of transporting donations from businesses to recipients is a major barrier to food donation. Especially in rural states, farms and other potential donors are often located far from metropolitan areas, meaning transportation costs to food recovery organizations can be substantial. In particular, Massachusetts stakeholders expressed concern about the costs of transporting donated food, whether such costs are borne by the donor or by the food recovery organization. To address a similar challenge, California offers a tax credit specifically intended to offset the transportation costs directly associated with donating agricultural products.²⁷ Transportation is an expensive and very real cost associated with donating food. It is a barrier to donation that is overlooked by the federal tax incentives, so providing a state tax credit to cover the transportation cost is a significant benefit that helps incentivize additional food donation. Other costs of food donation include the costs to process or prepare food for donation, or to transform food scraps into edible products. States can also offer incentives to offset the processing costs associated with labor-intensive donated food. South Carolina, for example, offers a tax credit to defray the processing costs associated with donating deer meat.²⁸ The approaches utilized by California and South Carolina illustrate the possibility of crafting tax incentives that target specific expenses that may have an outsized effect on food recovery practices. Based on preliminary conversations with Massachusetts stakeholders, such costs are real barriers to food donation, and could be addressed by a tailored tax credit.

Liability Protection for Food Donations

I. Introduction

Donating safe, edible food to those in need can significantly reduce the amount of food being sent to landfills and support food security by sending surplus wholesome food to those in need. However, many potential food donors, including grocers and retailers, cite fear of liability as a primary deterrent to donating food.²⁹ The Bill Emerson Good Samaritan Act, enacted in 1996, provides a federal floor of civil and criminal liability protections for food donors and the nonprofits that receive and distribute those donations.³⁰ Yet many businesses fail to donate because they are unaware of the available liability protections, or because they are worried that the protections do not cover their practices.³¹

The Emerson Act provides a federal baseline, which states cannot abridge; however, states can offer additional liability protections. Massachusetts has one of the strongest state-level liability protection; Massachusetts provides civil liability protection to food donors, even when the end recipient pays for the donated food, and explicitly allows the donation of past date food, as long as the food is wholesome, separated from foods that are not past date, and clearly labeled as past date. However, even with such strong protection, there is still room to strengthen and promote awareness of Massachusetts law to enhance food recovery in the state.

II. Federal Law

Many potential food donors, including grocers and retailers, cite fear of liability as a primary deterrent to donating food.³² Congress attempted to address these concerns in 1996 by passing the Bill Emerson Good Samaritan Food Donation Act (Emerson Act) to provide liability protection to a broad range of food donors and recipient nonprofit organizations.³³ The Emerson Act provides a federal floor of civil and criminal liability protections for food donors and the nonprofits that receive and distribute those donations.³⁴ The protections afforded by the Emerson Act are significant and have enabled many food donors to begin donating. The Emerson Act provides liability protection to a broad range of food donors,³⁵ including individuals, businesses, nonprofit food recovery organizations, government entities, and gleaners.³⁶ Donors and food recovery organizations must meet the following four requirements to receive protection under the Emerson Act:

1. The food must be donated to a nonprofit organization in good faith.
2. The food must meet all federal, state, and local quality and labeling requirements, even if not “readily marketable due to appearance, age, freshness, grade, size, surplus, or other conditions.”³⁷
3. The nonprofit organization that receives the donated food must distribute it to needy individuals.³⁸
4. The ultimate recipient must not pay anything of monetary value for the donated food.³⁹

So long as the above requirements are met, the food donor and the nonprofit food recovery organization receiving the food will be shielded from both civil and criminal liability that may arise from the donated food, unless either acts with gross negligence or intentional misconduct.⁴⁰

The Emerson Act’s protections are quite broad, and it is intended to provide blanket protection across the nation in order to encourage food donors of all types to get their food to those in need. However, there are some instances where additional or clearer protection could increase donation of foods in situations that are unclear or unprotected under the current federal law. This leaves room for state legislatures to step in and offer additional liability protection above what Congress provides.

III. Massachusetts State Law

States cannot make laws that remove or reduce the protection created under the Emerson Act, but they are free to enact laws that are even stronger.⁴¹ All 50 states have passed state liability protection acts, and several states, including Massachusetts, have improved upon the protections afforded by the Emerson Act by providing additional liability protection above that offered in the federal law. Massachusetts provides civil liability protection to any person or nonprofit

corporation who donates food.⁴² The state law also clarifies the requirements for nonprofits that accept donated food for distribution. No nonprofit can distribute or serve donated food unless the relevant establishment has been inspected and is in compliance with all inspection or permit requirements.⁴³ It cannot be charged a fee for these permits.⁴⁴ Additionally, Massachusetts provides liability protection to both the food donor and nonprofit food recovery organization even if the food recovery organization charges a fee to individual recipients of the food, so long as the fee only covers the cost of handling the food.⁴⁵ This provision allows for innovative food recovery models, like social supermarkets, which sell surplus foods in a low-cost grocery.

Massachusetts provides civil liability protection to food donors as long as the food is wholesome and any injury resulting from such donation is not the result of “gross negligence, recklessness or intentional misconduct.”⁴⁶ Like the Emerson Act, the state law does not provide guidance on what constitutes gross negligence, recklessness, or intentional misconduct.

In Massachusetts, food is considered “wholesome” if the food is not misbranded or adulterated at the time of donation and has been manufactured, processed, prepared, handled, or stored in compliance with all applicable public health regulations.⁴⁷ This means that donated food must comply with all Massachusetts food safety and date labeling laws to receive liability protection. However, many food labeling rules are not essential to ensure safety, and instead may lead to increased food waste. Often food goes to waste precisely because of a labeling deficiency and the burdensome time and costs required for reconditioning.

Lastly, Massachusetts state law explicitly provides liability protection for the donation of past-date foods.⁴⁸ However, past date food can only be sold in Massachusetts so long as the food is (i) wholesome, (ii) separated from foods that are not past-date, and (iii) clearly labeled past date.⁴⁹ Because food must meet all federal and state quality and labeling laws in order to receive liability protection, these requirements on sale of past-date foods apply to donated food as well in the state, making it difficult to donate past-date foods (See *Date Labels* Section, *infra*, for more information about date labels on foods).

IV. Recommendations

As mentioned above, Massachusetts is a leader in providing strong liability protection to a wide range of food donors and could continue to be a model for other states by strengthening its laws to further incentivize and encourage food recovery.

1) Provide liability protection for food service establishments and retail stores donating directly to final recipients.

Currently, liability protections are only available when food is donated to a nonprofit organization that then distributes that food to needy individuals. Extending protections to direct donations could help increase efficiency and enable timely use of perishable food. If food has to be donated through a food recovery organization, donors may be discouraged from donating certain items, like perishable foods, because the food recovery organization may not have the capacity to get that food to those in need before spoilage. Protection for direct donations by food businesses could allow donors to donate more efficiently and get perishable food to those in need. Additionally, food service establishments and retail stores already comply with food safety training and inspections, therefore mitigating the need for further safety-motivated restrictions on direct donations.

2) Provide liability protection regardless of compliance with non-safety related labeling requirements.

Many food labeling requirements are not essential to food safety, such as the net weight of the item. These requirements impose extraneous burdens on donors and food recovery organizations by forcing them to meet all labeling standards, even when many food labeling rules are not essential to ensure food safety. Often food goes to waste due to a labeling deficiency and the burdensome time and costs required for reconditioning. In order to prevent such unnecessary waste, Massachusetts should eliminate the requirement that food must meet all labeling standards. These requirements do not ensure the safety of the donated food, but rather create barriers to the donation of such food. As an example, California’s liability protection statute applies “regardless of compliance with any laws, regulations, or ordinances regulating the packaging or labeling of food.”⁵⁰

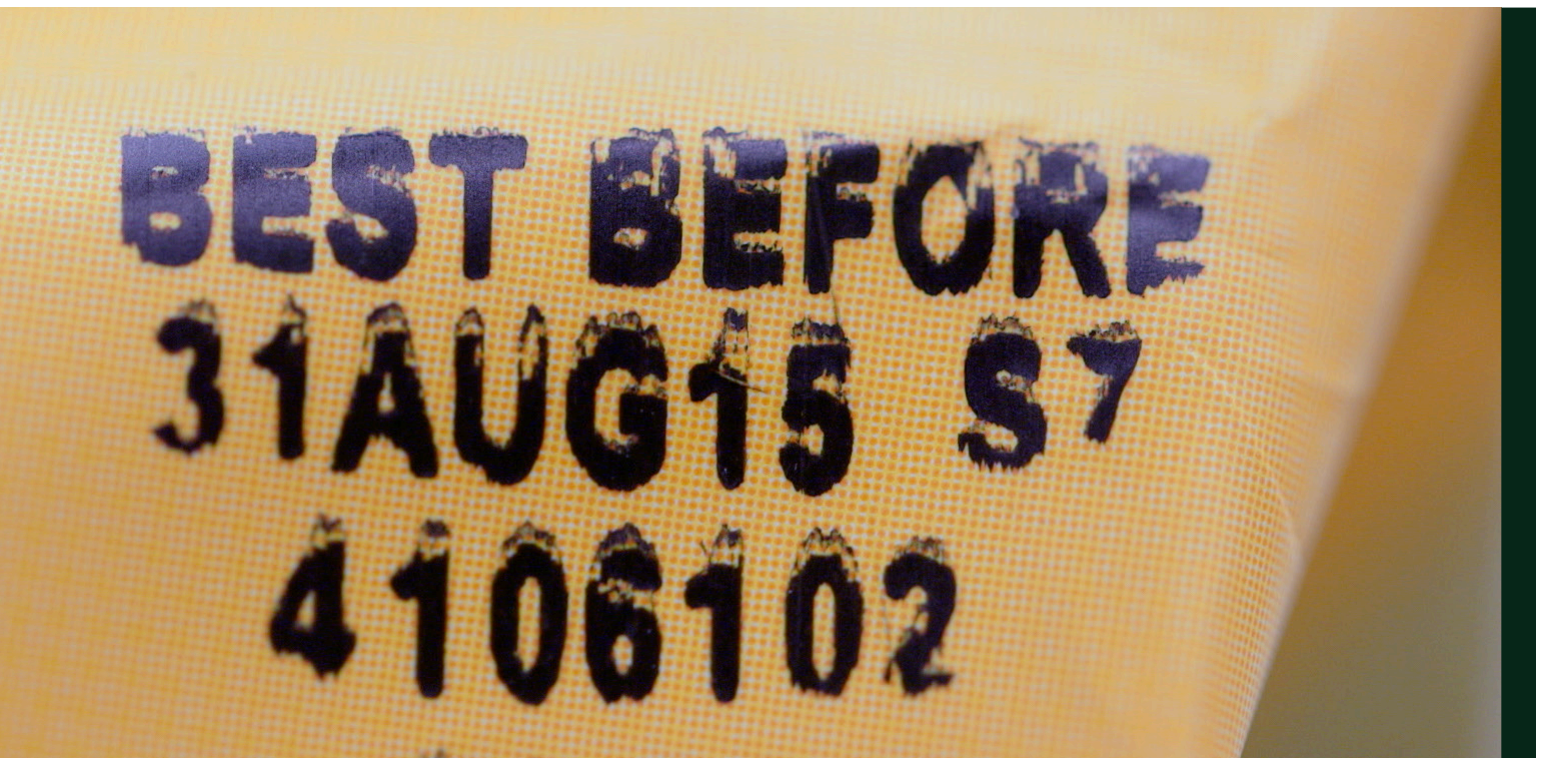
3) *Initiate education and awareness campaigns with other governmental departments.*

Despite the Massachusetts state liability protection statute and the Emerson Act providing protection since 1983 and 1996, respectively, many potential donors are not aware of these protections. The Massachusetts Department of Environmental Protection (Mass DEP) and its RecyclingWorks program provides guidance about protected activities as part of its Best Management Practices for Food Donations. Complemented by flowcharts and answers to FAQs, the best management practices cover a variety of topics related to food donation, including clear descriptions of the federal and state liability protections available to food donors and nonprofit food recovery organizations.⁵¹ However, the Mass DEP does not interface with businesses as often as other governmental departments, which may be a reason some potential donors are unaware of the protections afforded to them. Engaging other departments, like the Department of Public Health (DPH) or the Department of Agricultural Resources (MDAR), in efforts to disseminate information about food donation liability protection could help to bring broader awareness to the key businesses in the state. This could be done by a resolution or other directive from the legislature, or by agency action from key agencies independent of legislation.

Date Labels

I. Introduction

Date labels are the dates stamped onto food items and accompanied by phrases such as “sell by,” “use by,” “expires on,” or “best by.” While the majority of consumers, including those in Massachusetts, believe that eating food past the labeled date constitutes a safety risk,⁵² date labels generally indicate not safety, but quality.⁵³ These dates, set by the food’s manufacturer, are based on nothing more than an estimate of when the food will taste fresh. Date labels can contribute to food waste in Massachusetts, as they are misleading to consumers and often result in safe, wholesome foods being needlessly thrown away. In addition, state law currently makes it needlessly challenging to sell or donate past-date food, leading many food recovery organizations, like Greater Boston Food Bank, to decline to accept such food.⁵⁴



II. Current federal and Massachusetts law

Lack of Federal Date Label Regulations:

There is currently no federal law regulating date labels.⁵⁵ In addition, though Congress has delegated general authority to the FDA and USDA to ensure food safety and protect consumers from deceptive or misleading food labeling,⁵⁶ neither agency has used this authority to create date label standards or regulations (though USDA has guidance that recommends certain date labels be used on products under USDA's regulatory authority; new guidance was proposed in December 2016).⁵⁷ As a result, only infant formula date labels are currently federally regulated.⁵⁸ Because the federal government has developed no standardized regulations for date labels, states and localities, including Massachusetts, have been left to determine their own practices. The result has been widespread variation and inconsistency. For example, Montana requires date labels for milk,⁵⁹ Oklahoma requires date labels for eggs⁶⁰ and shellfish,⁶¹ and New York requires no date labels at all.⁶²

Date Label Requirements in Massachusetts:

Despite the fact that date labels are not related to food safety, Massachusetts date labeling law is among the strictest in the United States. While many states either do not regulate date labels at all or regulate only one or two food items,⁶³ Massachusetts requires all prepackaged “perishable” (a shelf life of 60 days or less) or “semi-perishable” (a shelf life of greater than 60 days but fewer than 90 days) foods to have date labels,⁶⁴ with some exemptions.⁶⁵ Reflecting the variation that results from a lack of federal guidance, Massachusetts's regulations are very different from those in its neighboring states. For example, Connecticut requires date labels on milk and dairy,⁶⁶ Rhode Island requires date labels on packaged bakery products⁶⁷ and shellfish,⁶⁸ and New York has no date label requirements of any sort.⁶⁹

Restrictions on the Sale or Donation of Past-Date Foods in Massachusetts:

Date labels can have a negative impact on the sale and donation of wholesome but past-date food, as many states unnecessarily restrict the sale or donation of these foods. Massachusetts is among these states, imposing requirements that pose a hurdle to the sale and donation of past-date foods despite the fact that the labels do not correspond to safety.

In order to sell or donate a past-date food in Massachusetts, that food must satisfy three criteria:⁷⁰

- It must be “safe for human consumption” and its sensory and physical qualities must not have “significantly diminished”;
- It must be separated from foods that are not past-date; and
- It must be clearly and conspicuously marked as being offered for sale after the labeled date.

The first of these criteria—that food is safe for consumption and its sensory and physical qualities have not been significantly diminished—is reasonable because it corresponds to safety and to visible signs that food will no longer be enjoyable. The two other criteria, however, are overly burdensome because they create onerous requirements for food banks and other donation sites despite their lack of connection to food safety. In order to be in compliance with Massachusetts requirements, a food bank or other organization must expend valuable time and resources to separate past-date foods from others and to label the products accordingly. For organizations already facing resource constraints, such a requirement—when it does not reflect real food safety risk—appears unnecessarily limiting. In certain areas of the state, local health inspectors will not allow the donation of any past-date foods. And, because of the restrictions, some food banks and food recovery organizations, like the Greater Boston Food Bank, choose not to accept past-date food items.⁷¹ Furthermore, separating and labeling past-date foods could contribute to consumers' belief that past-date food is somehow unsafe or less enjoyable, making it less likely that they will accept and consume the food despite its wholesomeness.

The choice to regulate the sale or donation of past-date foods is not universal across states. 20 states and the District of Columbia restrict the sale or donation of foods after the labeled dates,⁷² while the other states do not. Some states require date labels on certain food products but do not regulate past-date sales of those foods. For example, Connecticut and

Vermont require dates on certain foods but do not restrict past-date sale or donation, and New York does not require dates on any foods or restrict any past-date sale or donations.⁷³

III. Recommendations

Because there is no federal law regulating date labels, Massachusetts and other states impose their own standards. Massachusetts has chosen to enact highly-restrictive laws with regard to both date labeling requirements and the sale and donation of past-date foods. These restrictions fail to reflect the fact that date labels are often unrelated to a food's wholesomeness and safety. To address these issues, we recommend standardizing date labels in Massachusetts, eliminating or amending the requirement that perishable and semi-perishable foods be date labeled, removing sale and donation restrictions disconnected from food safety, and supporting date label education.

1) *Standardize date labels.*

Date labels in Massachusetts currently lack uniformity, inevitably resulting in consumer confusion. Creating uniform language for these date labels could address this problem. While most date labels indicate nothing more than food quality, safety risks may increase after the labeled date for some foods (for example, certain ready-to-eat foods, like deli meats and unpasteurized cheeses). A standardized date labeling system should clearly distinguish between quality and safety. Therefore, we recommend a *dual labeling system* that clarifies the important distinction between safety-based and quality-based date labels.

With regard to quality-based date labels, any labeling should be entirely optional. But manufacturers who choose to date-label their products should be required to use a single standardized phrase. According to a survey conducted by the Harvard Law School Food Law and Policy Clinic, the National Consumers League, and the Johns Hopkins Center for a Livable Future, “best if used by” is the phrase most-commonly associated with food quality by consumers.⁷⁴ With regard to the small group of foods that may need a label for safety reasons, the same survey found that “expires on” is the phrase consumers most commonly associate with food safety.⁷⁵ Any food should only bear one or the other of the two labels. As described below, this dual labeling system would impact current Massachusetts date labeling requirements for perishable and semi-perishable foods (see Eliminate or amend requirement that perishable and semi-perishable foods be labeled, *infra*).

Standardizing date labels in a way that clearly distinguishes between safety and quality would help reduce food waste in Massachusetts by increasing consumers’ ability to make informed choices about when to dispose of food. Currently, consumers rely on inaccurate and meaningless date labels—according to the aforementioned survey, 37 percent of consumers always throw away food close to or past the date, and 84 percent throw such food away “at least occasionally,” due to safety concerns.⁷⁶ By requiring clear date labels and educating consumers about their meaning (see Support State-Level Date Label Education, *infra*), Massachusetts can decrease the misinformation that leads to needlessly wasted food.

A recent California bill provides a strong model for Massachusetts legislators. The bill, introduced by Assembly Member David Chiu, would have created a single quality-based food label (“best if used by”) and a single safety-based food label (“expires on”).⁷⁷ Though this bill failed to pass the Assembly Health Committee,⁷⁸ it is a strong model for Massachusetts and other states to address the inconsistencies and confusion arising from prevailing date labeling practices.

It is important to note that there is pending federal legislation that might serve to implement date label standardization nationwide. The Food Date Labeling Act of 2016⁷⁹ would create a national uniform system that distinguishes between quality and safety, ensures that food can be sold and donated after its quality date, and educates purchasers about the new labels’ meaning.⁸⁰ However, as any federal action is uncertain, and food waste is such a pressing issue, Massachusetts should work toward standardizing date labels on the state level.

2) *Eliminate or amend the requirement that perishable and semi-perishable foods be labeled; and remove sale and donation restrictions unrelated to food safety*

Standardizing date labels would affect current Massachusetts date labeling law by requiring the Massachusetts date labeling

requirement for perishable and semi-perishable foods⁸¹ to be amended or eliminated. Because the current regulation requires date labels on perishable and semi-perishable foods without distinguishing between safety and quality concerns, it would be inconsistent with the proposed dual-labeling system. Therefore, DPH should either amend the regulation to require date labels only on those past-date perishable or semi-perishable goods that present a safety risk, or repeal the labeling requirement altogether.

In order to encourage the sale and donation of past-date foods, Massachusetts should remove sale and donation restrictions with no relationship to food safety. These requirements place undue burdens on donors and food recovery organizations, while contributing to the incorrect consumer belief that date labels correspond with anything more than quality. By eliminating these onerous conditions, Massachusetts can help consumers obtain affordable, healthy foods.

Massachusetts can model this change on other states that have either more limited date labeling laws or no date labeling laws at all. For example, New York does not require date labels on any foods or regulate any past-date sale or donation.⁸² New York City used to require dates on milk, even though the state of New York imposes no date labeling requirements on any foods. The city repealed its date labeling requirement for milk in 2010, harmonizing with the regulations of the state.⁸³ The City recognized that its date label requirement was not necessary to protect public health because milk, if handled properly, is still safe to consume even after the date passes (and if handled improperly, the date is irrelevant in any case).

3) Address local laws and regulations that impede food donation.

In addition to the state-level restrictions described above, in Massachusetts, local health departments enforce food safety regulations. Certain local health departments, like the Boston Health Department, ban the donation of all past-date foods.⁸⁴ This type of agency- or local-level ban serves to hinder state efforts at dispelling confusion and creating a fact-based system for labeling, selling, and donating food. The Massachusetts legislature, or DPH, should prevent municipalities and agencies from passing such comprehensive bans on the sale and donation of past-date foods.

The Massachusetts legislature might be able to obtain such a result by passing legislation that, as described above, standardizes date labels to distinguish between safety and quality. Because health departments likely prohibit past-date food donation due to unsubstantiated safety concerns, a clear system that singles out foods that are unsafe after their labeled date could address concerns without needlessly restricting the donation of wholesome foods. Furthermore, the Massachusetts date label legislation could include a provision that prohibits local agencies from promulgating practices and policies inconsistent with the legislation's goal of preventing safe and wholesome food products from being wasted. Even if the state chooses not to standardize date labels along the lines described above, the state could still pass legislation (or state regulations promulgated by DPH) that clarify under state law that no health departments should restrict the sale or donation of past-date foods.

4) Support Date Label Education.

Because confusion and inconsistency are ever-present obstacles in the date labeling sphere, DPH and local health departments should educate Massachusetts consumers, food vendors, donors, and food recovery organizations about the meaning behind these dates. Mass DEP has already made strides toward providing easily-accessible information, demonstrating a commitment to educating the public. For example, Recycling Works, an organization funded by Mass DEP, has created a website offering in-depth guidelines about how to reduce waste and donate food, which includes information on past-date foods.⁸⁵

Other state efforts can serve as models. For example, the Florida Department of Agriculture and Consumer Services disseminated a handout explaining that date labels, generally speaking, are not regulated and do not indicate food safety.⁸⁶ A Massachusetts date labeling fact sheet⁸⁷ is currently available online through Mass DEP and RecyclingWorks, a program affiliated with Mass DEP. This fact sheet could be even more effective if it were widely available in paper format and distributed at relevant agencies, such as the DPH.

Food Safety for Food Donations

I. Introduction

Food donors and food recovery organizations often have trouble figuring out which food safety regulations apply to the food they wish to donate or distribute. First, there is no clear language in the state regulations about the safety measures that need to be followed for donated food. Second, in states like Massachusetts that share regulatory authority with local health departments, donors must seek out and comply with both the local and state regulations. This can be overwhelming for potential donors who operate in multiple locations with varied safety and donation laws that sometimes contradict each other from state to state or city to city. Lack of clear regulations creates a burden for health inspectors as well because they do not have clear guidelines to follow when conducting their safety inspections of businesses. Without clear guidelines, some health inspectors err on the side of caution and discourage food donation altogether, which runs averse to the goals of reducing food waste and food insecurity.

II. Federal Law and Issues

The federal government generally oversees food safety for food that is traveling in interstate commerce. As a result, states are responsible for regulating and enforcing food and safety regulations for food establishments (restaurants and retailers) within their own borders. That said, the Food and Drug Administration puts out the model FDA Food Code, consisting of rules and guidance to control the practices in kitchens that can result in foodborne illnesses.⁸⁸ The FDA Food Code is updated every four years. Many states choose to wholly adopt the FDA Food Code or use it as the foundation for their rules. Unfortunately, however, the FDA Food Code does not specifically address food safety for food donations, so many states do not have a donation-specific section in their state food code either. The Conference for Food Protection, which also creates the FDA Food Code, recently released a *Comprehensive Resource for Food Recovery Programs*, a guidance document that details some food safety procedures and legal issues for food recovery programs.⁸⁹ These guidelines, however, are primarily a resource for food recovery organizations, and are not binding regulations for states, and businesses are not bound to follow them.

III. Massachusetts Law

Like many states, Massachusetts does not have clear food safety regulations for the donation of food. There are no DPH regulations relating to food donation and no state legislation, except the state liability protection which states that food donations are protected from liability so long as they meet safety rules⁹⁰ but does not enumerate any such rules. Massachusetts Recycling Works released Best Management Practices for Donating Food on their website,⁹¹ but there is still no statewide guidance on donation, and as Recycling Works does not have jurisdiction over health inspectors, the best practices do not need to be followed by health inspectors. This is a great start, but could be adopted more broadly under legislation or DPH regulations.

The lack of state regulations or DPH guidance is a problem for both food donors, who do not know how to safely donate food, but also for health inspectors who do not have proper guidance to follow while conducting their inspections. In Massachusetts, health inspections are done by the local governments, and those local governments have the authority to have stricter safety regulations than the state regulations.⁹² According to stakeholder interviews, some local governments discourage the donation of food, citing health and safety concerns. As mentioned above, the only guidance is in the Best Management Practices for Food Donations, found on the Massachusetts Recycling Works website. While that information offers suggestions, it is not binding on health departments or regularly used by them, and many potential donors may not even be aware of its existence of suggestions, as Recycling Works does not regularly interface with businesses in the way that health departments do.

V. Recommendations

- 1) *DPH, either alone, or as part of an interagency task force, should come up with clearer regulations or policy guidance about food safety for food donations.*

DPH should come up with clear, easy to understand regulations that guide food donors and health inspectors. The regulations and guidelines should clearly state what types of food can be donated. For example, Washington state passed regulations that clearly states that wild game animals, baked goods from residential kitchens, and foods prepared in a donor kitchen can be safely donated.⁹³ Additionally, Minnesota has regulations that detail how distressed foods can be salvaged for donation.⁹⁴ While both are more limited examples, they show the value of such laws or regulations. These guidelines can instruct local health departments on how they should treat food donations and encourage health departments to promote food donation. DPH should create literature that can be disseminated across relevant agency websites so that businesses can find the information clearly and quickly. Guidance documents have been effective in a number of states and localities. San Diego County California's "Too Good to Waste!" guide details how to donate food safely and an easy-to-use safe food handling food donation checklist.⁹⁵ Washington County, Oregon's Department of Health and Human Services produced a guidance for restaurants on donating food that includes a list of foods that can and cannot be donated, information for labeling and contact information if donors have questions.⁹⁶ The Massachusetts RecyclingWorks Best Management Practices can serve as a basis for such guidance, and be adapted or adopted by DPH.

- 2) *Health inspectors should serve as ambassadors for safe food donation and be armed with handouts and information that they give to food businesses when they go to conduct inspections.*

Health inspectors should receive training on safe food donation so that they can aid in the dissemination of information about donations. While information is disseminated from Mass DEP and RecyclingWorks to interested potential donors online and via trainings, presentations, and direct technical assistance, more work could be done to ensure a wider audience gets access to the information, since neither Mass DEP or Recycling Works interfaces with potential donors regularly. Health Inspectors can hand out pamphlets with the above suggested state guidance documents when they visit businesses to conduct health inspections. At inspections, they can encourage businesses to start donating food if they do not already, and answer any potential questions donors have. The 2011 Food Donation Policy of the Wyoming Department of Agriculture instructs health inspectors that they "should act as educators and consultants"⁹⁷ and positions them to be advocates for food donation. Training Massachusetts' local health inspectors on food safety for food donation can help businesses work together with agencies to keep food out of the landfill and reduce food insecurity in the state.

School Food Waste

I. Introduction

Reducing school food waste in K-12 schools is important for a variety of reasons. One of the most important reasons to care about school food waste is that wasted food is wasted nutritional value. A large proportion of the food wasted in schools comes from fruits and vegetables.⁹⁸ Reducing the amount of fruits and vegetables wasted can increase nutritional intake.⁹⁹ Another important reason to focus on reducing school food waste is that it will save schools and local governments money. To procure and produce food costs schools money; reducing food waste before it starts and cutting back on foods students do not eat can reduce a school's bottom line, saving the school, and by extension the locality and state, money. Furthermore, school food waste reduction can help educate the next generation of consumers about the importance of reducing food waste. Waste reduction and education programs can help reframe how children think about food, and send the message the food is a valuable resource that is important to conserve and reuse. This is especially important because forty-five percent of national food waste occurs in consumers' homes, and much work is needed to educate consumers and change those habits.¹⁰⁰

While some methods of reducing school food waste are more expensive than others (food audits and chef initiatives being some of the more expensive methods), many methods for reducing school food waste can be implemented at low or no cost for the schools. Such methods include, but are not limited to, banning trays, implementing Offer vs. Serve in all

schools, and allowing students to keep uneaten food.

II. Federal Laws

The federal government plays a role in regulating school foods served under the National School Lunch Program and the School Breakfast Program.¹⁰¹ Both programs reimburse all or a portion of the cost of a qualifying school meal for children who are eligible.¹⁰² The federal government has shown support for food waste reduction measures. The United States Department of Agriculture (USDA) has created several webinars aimed at educating stakeholders to decrease waste.¹⁰³ The webinars give an overview of reducing, recovering and recycling food at the K-12 level; food safety, storage and menu planning tips to reduce food waste, recovering and donating uneaten school food; and composting school food, among other topics.¹⁰⁴ Further, USDA and the Environmental Protection Agency (EPA) jointly launched a U.S. Food Waste Challenge, in which schools can register to publicly declare food waste goals and achievements.¹⁰⁵ EPA has also published a list of resources that can help schools avoid food waste.¹⁰⁶ With regards to donation, the National School Lunch Act explicitly allows schools to donate leftovers from the National School Lunch Program / School Breakfast Program.¹⁰⁷ The Act specifies that schools are able to donate to eligible local food banks or charitable organizations.¹⁰⁸ It also explicitly states that schools are protected by the same food donation liability protections set forth in the federal Bill Emerson Good Samaritan Act.¹⁰⁹

III. Current Massachusetts Initiatives

Massachusetts has taken some steps to address sustainability in schools. For example, the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) and Mass DEP have sponsored the Green Team as an environmental club and educational program that helps schools reduce waste through recycling and composting.¹¹⁰ In addition, schools are technically subject to the 2014 commercial organic waste ban (described in more detail in *Organic Waste Ban* section, below). The ban defines commercial organic material as food and vegetative material from businesses or institutions that dispose of one ton or more of material per week.¹¹¹ On average, schools waste approximately 0.5lbs of food per student per week, and therefore schools with less than 4,000 students serving one meal per day will likely fall below one ton per week waste ban threshold.¹¹² This means that most schools in the state will not be impacted by the ban, but some may. While Massachusetts has taken steps towards sustainability and recycling efforts in schools, there are more efforts Massachusetts could be taking to both stop food from being wasted in the first place, and to recover surplus food for donation.

IV. Recommendations

- 1) *The Department of Elementary and Secondary Education (DESE) can create guidance documents on implementing school food donation programs.*

Donation is a great way schools can recover unopened and uneaten food and get it to those in need. By putting out a guidance document on best practices for school food donation, and language on the DESE website explaining the federal support for school food donation, DESE can help encourage schools to start their own donation programs. For example, the Andover School District has a food donation program for food already served that students decline to eat.¹¹³ Students put the food in ready-marked bins during the lunch hour. The parent volunteers take the food from the bins to needy families.¹¹⁴ This is an easy and cost effective measure that can be implemented across all Massachusetts districts. DESE can put out language on its website letting schools know the federal support for school food donation and offer guidance for creating donation programs. For example, Indiana's Department of Health¹¹⁵ and California's Department of Education¹¹⁶ created guidance documents on food donation best practices. Such guidance can also help provide schools with clearer information on how to utilize "share tables."

- 2) *Partner with local chefs to create menus for school meals that would be more appealing to students and help reduce student food waste.*

Programs that help chefs partner with schools have seen a reduction student food waste partially because the meals

prepared by the chefs are more appealing to students. Project Bread started a Chefs in Schools program with three public schools in Boston in which chefs partnered with the schools to create a food menu, on a public school budget, that would be more appealing to students.¹¹⁷ Due to the Chefs in Schools program, students chose healthier foods and ate larger portions, which reduced the amount of waste the schools produced.¹¹⁸ Students in the pilot ate 36% more of the vegetables they were served than students in the control group.¹¹⁹ Likewise, a follow-up study conducted in 14 elementary and middle schools in Massachusetts found that students receiving chef-prepared meals ate 30.8% more of the vegetables they were served.¹²⁰ This means less vegetables being thrown away. The legislature or DESE could support more funding for chef-prepared meals across the state. This funding would help maintain the longevity of the partnership between the chefs and the schools, increase the number of schools able to participate in the program, and help children eat healthier and waste less.

3) Conduct food waste audits.

A food audit can help schools track and determine how much food they waste. The Massachusetts legislature or DESE could allocate funds to conduct waste audits of each school district and school to reduce waste on a statewide level. There are two types of food waste audits, back of the kitchen waste audits and plate waste audits. Back of the kitchen waste audits track the amount of food wasted before the food is served to students. Plate waste audits track the food wasted once it is served to students. An aggregate plate waste audit can be accomplished by measuring each item from a school menu to determine its mass, and then setting a station near the garbage cans of pre-weighted plastic tubs.¹²¹ Students can be asked to discard individual food items into each tub. The tubs are then weighed to record the total weight; the difference between the tub weight and the (tub + food) weight is recorded as the mass of that individual food that was wasted.¹²² According to the USDA, the best way to minimize school food waste is to produce only the amount of food needed to serve students based on past history.¹²³ Food waste audits help to ensure that the proper amount of food is prepared and learn what items or meals students are least likely to eat. Both back of the kitchen audits and plate waste audits may require funds for proper implementation and materials. With funds from the state supporting audit initiatives, these schools and school districts will have the resources for accurate and efficient audits that lead to a real reduction in food waste.

4) Enact mandatory minimum lunch times or promote longer lunch times.

Studies show that students who have less than 30 minutes to eat lunch waste a significantly larger proportion of food.¹²⁴ Minimum lunch times can be mandated on a state level by the state legislature or by DESE, or DESE can put out guidance documents for individual school districts wishing to modify their schedules. Currently the DESE website says that schools may “cut back” on lunch time to make way for suggested student learning time and implementation time regulations in schools.¹²⁵ This is not good policy if food waste reduction is a priority.

5) Expand Offer Versus Serve to Elementary and Middle Schools.

Individual school districts can expand the federal Offer Versus Serve (OVS) program from high schools (where it is mandatory) to elementary and middle schools. National School Lunch Program meals must consist of five components in order to be reimbursed: fruit, vegetable, whole grain, meat/alternative, and milk.¹²⁶ The OVS policy allows students to decline up to two items, as long as they take a fruit or a vegetable.¹²⁷ By contrast, students in schools without an OVS policy would need to take a tray with of each food component in order for the meal to be considered reimbursable. Federal law requires high schools to use OVS, but it is optional for middle and elementary schools. DESE can make sure that middle and elementary schools are aware of the federal OVS program and encourage more schools to take advantage of this no-cost measure to reduce school food waste. DESE can also put guidance language on its website encouraging adoption of this practice.

6) Switch to Tray-less Dining.

Lastly, Massachusetts should consider switching all middle schools and high schools to tray less dining. Tray-less dining has been shown to reduce food waste. In 2009, University of Massachusetts Amherst removed trays from its dining halls, and as a result students threw away 30% less food.¹²⁸ Trays subconsciously encourage students to take more food than they can eat.¹²⁹ ReFED, a collaboration of over 30 businesses, nonprofits, foundations and government leaders committed

to analyze, educate and reduce food waste in the United States, recommends that restaurants and foodservice use tray less dining to decrease waste,¹³⁰ and that same recommendation can be extended to school cafeterias. Banning trays has the added benefit of reducing the cost associated with purchasing and handling trays, thus saving schools and schools systems more money. Some districts, like Framingham, have switched from disposable trays to reusable trays to increase sustainability;¹³¹ while this is great, banning trays outright is even better. It is a cost-free and effective way of reducing the amount of food students take that they probably will not eat. Tray-less dining can be used effectively in both middle and high schools. While banning trays from elementary schools would help eliminate waste, it might be difficult for younger students to manage in the lunchroom without a tray to help carry their food items. Currently each school district can decide to switch to tray-less dining, but DESE can put out guidance information encouraging the widespread use of this practice.

Organic Waste Ban

I. Introduction

Discarded food items are the single largest component of municipal solid waste in landfills.¹³² In Massachusetts, food waste represents 15% of trash during the fall and winter, and 19% of trash during the summer and spring.¹³³ This presents a problem because food items gradually decompose to release methane, a greenhouse gas with at least 25 times the global warming potential of carbon dioxide.¹³⁴ Furthermore, transporting food waste to landfills is expensive and environmentally damaging, as it increases traffic congestion and gas consumption. Finally, landfills are becoming overcrowded, which has led many states and municipalities to search for ways to reduce the amount of materials ending up in landfills without need.

Banning food waste from landfills offers a solution to these problems. Waste bans can divert organic products from overcrowded landfills, while simultaneously reducing the greenhouse gas emissions that come from decomposing food items. Furthermore, waste bans can encourage businesses to treat excess food as a valuable commodity one that should be donated to those in need or recycled instead.

Five states, including Massachusetts, and several localities have passed waste bans or waste recycling laws geared toward



reducing food waste. Four of these states—Connecticut,¹³⁵ Rhode Island,¹³⁶ Vermont,¹³⁷ and Massachusetts¹³⁸—have organic waste bans. California, on the other hand, has a waste recycling law that requires commercial organic waste generators to compost or anaerobically digest organic waste.¹³⁹ Each of the five states prohibits certain entities from sending food waste to landfills, but state bans vary in the types of generators they cover, how much waste a qualifying generator must produce, and which otherwise-covered generators can be exempted as a result of their distance from a composting facility.¹⁴⁰

II. Current Massachusetts Organic Waste Ban

Since October 1, 2014, Massachusetts businesses and institutions disposing of one ton or more of food waste per week have been subject to a solid waste disposal ban.¹⁴¹ Unlike some states, which exempt waste generators based on their proximity to a composting facility,¹⁴² Massachusetts provides no such distance-based exemptions.¹⁴³ Therefore, all qualifying generators must comply with the ban. The organic waste ban was promulgated by the Mass DEP, which continues to be responsible for much of the ban's operation. The organic waste ban seeks to address a number of concerns, chiefly the fact that Massachusetts is running out of landfill capacity,¹⁴⁴ organic materials represent 25% of the waste stream,¹⁴⁵ and organic waste contributes to dangerous greenhouse gases.¹⁴⁶ Furthermore, Mass DEP hopes that the ban will help Massachusetts achieve its goal of reducing overall waste by 30% by 2020.¹⁴⁷

The Massachusetts organic waste ban is one of many waste bans operating in the state. Other banned items include asphalt pavement, brick, concrete, metal, glass containers, lead acid batteries, leaves and yard waste, recyclable cardboard and paper, and whole tires.¹⁴⁸ Each of these waste bans, including the organic waste ban, is enforced in the same way. First, waste disposal facilities must file a Waste Ban Compliance Plan with Mass DEP.¹⁴⁹ The Compliance Plan must describe how the facility aims to monitor and inspect received waste, and how it will respond when banned items arrive.¹⁵⁰ For example, facilities are required to issue a “failed load notification” (a notice that the load contained prohibited items) to the hauler and generator, and can charge a handling fee for the removal and recycling of banned materials.¹⁵¹ Additionally, Mass DEP has inspectors who can perform waste ban inspections at disposal facilities.¹⁵² If these inspectors encounter waste ban violations, they have the power to take enforcement action against haulers and generators.¹⁵³

After a year in operation, the Massachusetts organic waste ban had diverted approximately 5,020 tons of food scraps from landfills, more than five times what was diverted in the previous twelve months.¹⁵⁴ These numbers, which will soon be updated for 2016, demonstrate the waste ban's potential to reduce landfill overcrowding and resulting greenhouse gas emissions.

The Massachusetts organic waste ban presents an opportunity for qualifying businesses to save on their waste disposal costs, as Massachusetts tip fees are higher for trash than they are for composting. In the United States generally, landfill tipping fees averaged \$44/ton in 2014,¹⁵⁵ while composting tipping fees average \$36/ton.¹⁵⁶ In Massachusetts specifically, data reveals an even greater differential—for example, landfill tipping fees at the Northampton landfill (since closed), the Granby landfill, and the South Hadley landfill averaged \$74/ton in 2010, while composting tipping fees in the area averaged approximately \$45/ton.¹⁵⁷ Similarly, a 2005 handbook on composting practices assumed that Northern New England landfill tipping fees average \$90/ton, while composting tipping fees average \$50/ton.¹⁵⁸

Though arranging for the pick-up of organic waste does impose a collection cost, businesses can nevertheless experience an overall savings if they dispose of their organic waste products with an eye toward scale.¹⁵⁹ For this reason, Mass DEP chose to apply the organic waste ban only to those businesses that dispose of at least one ton of waste per week.¹⁶⁰ Other states have chosen to extend their organic waste bans to smaller generators. For example, though it started with a higher threshold, by 2020 Vermont's law will cover all generators (including individuals) regardless of the amount of waste they produce.¹⁶¹ Phasing in additional, smaller generators has both pros and cons. On the positive side, Massachusetts and its localities could divert more materials by including more generators—45% of the total food waste produced each year comes from individual households.¹⁶² However, this advantage must be balanced against the logistical difficulties of implementing an even broader waste ban and the financial challenges that small generators, which cannot benefit from economies of scale, would face as a result of increased collection costs.

III. Recommendations

Massachusetts's organic waste ban was cutting-edge at the time of adoption, and Massachusetts continues to be one of only five states pursuing organic waste bans and mandated recycling efforts. Therefore, the existence of the waste ban demonstrates the state's steadfast commitment to protecting the environment and decreasing needless waste. The Massachusetts legislature should continue to support and bolster the waste ban to address the state's overflowing landfills and the deleterious environmental effects of decomposing food products. Several actions can be taken to double down on the state's commitment to reduce food waste.

- 1) *The Massachusetts legislature should pass a resolution supporting the organic waste ban, promoting food donation and recovery efforts, and allocating funds to support the ban.*

Because Mass DEP is solely responsible for the organic waste ban's implementation and enforcement,¹⁶³ general knowledge of the ban and resources required by Mass DEP for consistent execution of the ban are limited. By passing a resolution in support of the organic waste ban, the Massachusetts legislature could voice its support for the diversion of organic waste, which could lend the ban additional credibility in the eyes of generators, haulers, and disposal facilities and the general public. Furthermore, a resolution would help show the state's commitment to waste reduction and encourage even those generators not subject to the ban to divert their organic waste.

Furthermore, the resolution could include information on the benefits of food donation and recovery. In 2014, 9.6% of Massachusetts households had difficulty providing food for their families at some point.¹⁶⁴ Furthermore, in some Massachusetts communities, 70% of households are living in poverty. By encouraging food donation and recovery, the Massachusetts legislature could combat this food insecurity. In order to best support sustainability efforts in Massachusetts, generators should be encouraged, when possible, to donate their food as opposed to composting it. This prioritization reflects the Environmental Protection Agency's Food Recovery Hierarchy, which sets the preference order as: food waste reduction at the source, *feeding people in need*, diverting food scraps to animal feed, industrial use, composting, and, lastly, landfill disposal or incineration (emphasis added).¹⁶⁵ By encouraging food donation, the Massachusetts legislature can bolster the organic waste ban while providing more opportunities for low-income consumers to obtain wholesome, affordable foods.

Furthermore, the Massachusetts legislature could allocate state funds to support the waste ban. These funds could be used to hire more inspectors and compliance officers and to provide for increased surprise inspections. With more funding, the waste ban's enforcement process could become more stringent and consistent. This result could increase food waste diversion and decrease the number of banned food products in landfills.

- 2) *Massachusetts and local governments should create incentive programs that discourage small generators from discarding organic waste.*

Though the Massachusetts organic waste ban does not apply to generators disposing under one ton of waste per week, Massachusetts and its localities should make an effort to encourage these smaller generators to compost or donate their excess food. This is because though *individual* small generators do not produce as much waste as their larger counterparts, their *combined* outputs are responsible for much of the waste currently saturating landfills. In fact, 27 of the 63 million tons of food waste produced each year come from individual households, and 25 million come from consumer-facing businesses including not only large supermarkets and distributors, but also smaller restaurants, institutions, and food service organizations.¹⁶⁶ Therefore, encouraging small businesses and individuals to reduce waste could be highly impactful.

To encourage smaller businesses to reduce or donate/recycle their waste, Massachusetts and its localities can develop statewide or local incentive programs that reward businesses achieving food donation or repurposing benchmarks. The Leadership in Energy and Environmental Design Certification Program (LEED)—which certifies resource-efficient buildings—can serve as an effective model for such a program.¹⁶⁷ Massachusetts was recently ranked 5th in Nation for LEED Certified Buildings.¹⁶⁸ In the LEED program, businesses are ranked into different levels based on their energy use. The different levels are green, gold and platinum. The green level requires a building's performance in a variety of areas to exceed the

Massachusetts Energy Code by the following specified amounts: 20% for energy, 50% for water consumption, and 20% for indoor water consumption.¹⁶⁹ 70% of buildings in the LEED certification program have energy performance levels better than that, however, and are on a Gold or Platinum level.¹⁷⁰ Massachusetts could design a similar tiered system for food waste reduction and recovery targets for businesses. Such a program would reward food waste prevention, as well as the recovery of wasted food. This will increase small generators' motivation to reduce their waste, and could encourage them to donate or compost. Small generators could compost more cost-effectively by teaming up with other generators to aggregate waste. This would allow a number of businesses to share hauling costs in a way that benefits smaller generators that might not otherwise be able to afford collection fees.

The Town of Lenox, Massachusetts demonstrates the potential benefits of encouraging small businesses to aggregate their waste. In Lenox, RecyclingWorks worked with eight local restaurants to foster the aggregation of food waste for composting.¹⁷¹ Though none of the eight restaurants produced a ton of food waste per week individually, their combined outputs exceeded this amount.¹⁷² After RecyclingWorks educated the owners of Lenox's small restaurants about the benefits of composting and provided them with easy-to-use composting bins, the restaurants were able to work together efficiently.¹⁷³ Because they signed up for composting collection services as a unit, the restaurants were able to pay 10-15% less for food waste hauling.¹⁷⁴ Furthermore, the town of Lenox encouraged restaurants to compost by developing the "Lenox Green: Table to Farm" certification program, which awards displayable stickers to businesses participating in compost efforts. Other localities can emulate Lenox by working with RecyclingWorks to encourage composting and developing effective incentives like the "Lenox Green" program. Massachusetts could also implement a similar certification program statewide.

In order to encourage individuals and households to compost their organic waste materials, the Massachusetts legislature could also consider supporting local curbside composting efforts, such as the Curbside Compost Pilot in Cambridge, Massachusetts. This program, which provides free weekly compost collection, reduced trash by 35% over the course of a year and saw a 95% satisfaction rate.¹⁷⁵

3) Other agencies should team up with Mass DEP to support the waste ban.

Though Mass DEP has worked with DPH, some local public health departments, MDAR, and the Department of Energy Resources in some capacity, the entirety of the ban's implementation and enforcement currently lies in the hands of Mass DEP.¹⁷⁶ This creates a heavy load for a single agency. Therefore, creating an organic waste ban compliance council composed of a number of interested agencies (including, for example, Mass DEP, DPH, and MDAR) could lighten the implementation and enforcement burden on Mass DEP, increase the education of various stakeholders, and increase the ban's effectiveness and reduce waste.

The compliance council could work together to implement and enforce the organic waste ban. For example, representatives from the council could team up with inspectors to monitor compliance at disposal facilities or, if resources allow, at generator sites themselves. Bringing other agencies into the waste ban sphere could also increase public knowledge of the ban's existence and effects. Because DPH interacts with businesses more directly, it has powerful potential to spread awareness and thereby increase compliance and voluntary waste reduction by non-covered generators. Furthermore, local health inspectors could serve as important information-providers if they educated food establishments about the organic waste ban during inspections. Finally, MDAR could educate local farms about the organic waste ban and the merits of food recovery efforts.

Government Support for Food Waste Reduction

I. Introduction

While businesses may be willing to participate in food waste and recovery efforts, the financial burdens for businesses and organizations to donate food is often a deterrent to their participation. Further, lack of knowledge about the importance

of reducing food waste or about the protections and incentives available for food donation pose barriers to increased donation. Massachusetts should make a commitment to invest in food waste reduction and recovery initiatives from the state level, as additional resources can greatly alleviate the financial burden on individual businesses. Massachusetts already recognizes the environmental dangers (including methane risks) of abundant food in the landfill, and has taken steps to reduce this with its commercial organic waste ban. Further, food donation has the added benefit of supporting food insecure individuals. Therefore, the state should invest funding to make food recovery efforts more feasible for businesses and other willing donors. The state can further promote food recovery through a food recovery certification program, public education campaign and incentives for successful food recovery endeavors.

II. Current Massachusetts Funding

Massachusetts has several grants that help support recycling, efficient resource management, and anaerobic digestion. Mass DEP, Massachusetts Clean Energy Center and Massachusetts Department of Energy Resources offer a variety of grant and loan programs to financially and technically assist with anaerobic digestion initiatives.¹⁷⁷ The Sustainable Materials Recovery Program (SMRP) Municipal Grants offered by the Massachusetts EEA has grants targeted towards recycling and waste reduction broadly, including solid and household waste, not just organic waste. The grants offer funding to cities, towns and regional entities—as well as certain non-profit organizations that provide services to them—for recycling, composting, reuse and source reduction activities that will increase diversion of municipal solid waste and household hazardous waste from disposal.¹⁷⁸ Grants are available for recycling and composting equipment; mattress recycling; Pay-As-You-Throw programs; waste reduction enforcement; school recycling; and organics capacity development projects. Created by state legislation in 2014, the Massachusetts Food Trust provides loans, grants and technical assistance to new and expanding healthy food retailers and local food growers in low and moderate-income communities.¹⁷⁹ While this program, and the grants offered by EEA intersect with some areas of need for food recovery, neither explicitly focuses on food recovery or donation.

On a city level, the City of Cambridge, through its participatory budgeting process, provided funds to the local food recovery organization Food for Free, which delivers food through the Prepared Food Rescue Program.¹⁸⁰ The Prepared Food Rescue program takes nutritious, healthy prepared foods and distributes it to over 100 food programs in the greater Boston area.¹⁸¹ The money went to the purchase of refrigerated trucks for the company.¹⁸²

Despite some resources, current initiatives place focus entirely on sustainability, without any targeted focus on food recovery and rescue. Furthermore, food recovery and rescue initiatives do not qualify for most state-wide grant programs.

III. Recommendations

- 1) *Broaden the language of SMRP grants to explicitly include food rescue and food recovery infrastructure as well as equipment such as trucks, donation bins, refrigerators and freezers etc.*

Currently, SMRP grants only apply to sustainability and recycling efforts, but do not provide funding to businesses interested in participating in food rescue or recovery efforts. According to stakeholders, high costs of food rescue equipment and infrastructure prevent some businesses and organizations from participating in these endeavors. Specifically, local partners have mentioned that transportation costs are a place that grant and state direct funding could be directed. Oftentimes a barrier to recovering food is as simple as getting food from the food donor (local retailer, institution, restaurant), to the food recovery organization (food bank, distributor, food pantry). Depending on the type of food and distance and time it will be in transit, food might need to be transported in a refrigerated truck. Refrigeration and storage may also be necessary at the food donors' business or at the food recovery organization. State funding could provide grants to offset these costs. Grants could also fund innovations that create efficiency in the food recovery process, for example by supporting technological innovations that make it easier to match businesses with excess food to food-scarce individuals quicker, or for processing food to turn it into items that can more easily be shared with food insecure families.

- 2) *Create a state-wide food waste challenge.*

Massachusetts should incentivize businesses to reduce the amount of food they waste by providing rewards for businesses

that make significant reduction in their food waste. These challenges can call on businesses to take steps publicly to meet a target waste reduction goal. Food waste challenges have been successful in nearby New York City and neighboring Rhode Island. New York City's Food Waste Challenge diverted over 2,500 tons of food waste from landfills due to participation by restaurants.¹⁸³ A state-wide food waste challenge, run through MDAR, or the Massachusetts EEA could have similar positive results in reducing the amount of organic waste in the landfill.

3) Broaden and expand public education regarding food waste, food recovery and its importance.

Various Massachusetts state agencies should disseminate information about food waste and recovery. State agencies can disseminate education on food donation and recovery efforts on various websites, not just on the Mass DEP and Recycling Works website, especially since many businesses might not know to look on those websites for this information. This food waste and recovery education effort should involve agencies that interface with the public on a more consistent and daily basis to ensure that information is touching the necessary partners in a food recovery initiative.

Massachusetts EEA and Mass DEP should create a public education campaign for consumers. Most consumers are unaware of the amount of food being wasted. State and local governments can disseminate information about food waste and donation by publishing on their websites, hosting educational seminars and conferences, providing training sessions and running media campaigns. A public education, such as the "Don't Waste Food S.C." educational campaign run by the South Carolina Department of Agriculture and South Carolina Department of Health and Environmental Control, helps get information out in front of consumers to change the consumer end of food waste.¹⁸⁴ The state could also partner with outside business or nonprofit organizations to run such a campaign. For example, the Natural Resources Defense Council partnered with the Ad Council to create the Save the Food campaign, which uses bold images and relatable statistics to combat food waste.¹⁸⁵ The state could partner with Save the Food to utilize some of its learnings and resources in a state campaign. Massachusetts should directly allocate funds for these educational campaigns, workshops and training sessions to try to turn the tide of consumer food waste.

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