

Nearly 100 Communities Have Taken Action to Reduce Plastic Bag Waste

By BRADFORD VERTER



It usually starts with an individual or a group of people who decide it's time they did something about the problems that we've all been hearing about for years: the plastic refuse that clogs our waste streams, chokes our wildlife, squanders our resources, blights our communities, and poisons our oceans. In Greenfield, it was a group of seniors who took the initiative. In Ipswich, it was a group of high school students. In Lenox, it was the Board of Health. In Framingham, it was Town Meeting. And in Boston, it was the City Council. After a process that depends upon the local political culture, the proposed measure to reduce plastic waste generally passes.

Since 2015, ninety-five communities in Massachusetts have passed bag laws, with the result that one out of every three residents now lives in a city or town that has a bag law. More than a dozen other cities and towns are working on bag laws

right now. The Mass Green Network has made the process easier by making toolkits, sample bylaws and other materials available at www.massgreen.org, and by establishing a communication network for local activists to support each other in their efforts.

Environmental Costs

Americans discard an estimated 100 billion single-use plastic bags each year, according to the Earth Policy Institute at Rutgers University. Without regulations, an estimated 3.6 billion plastic bags would be used annually in Massachusetts alone, including more than 2.1 billion thin-film grocery bags.

A drive along any major thoroughfare will demonstrate that plastic bags—generally used just once—are a primary source of litter. Thanks to their lightweight and aerodynamic qualities, bags end up in trees, gutters, roadsides and waterways.

Approximately eight million metric tons of plastic debris enters the world's oceans each year. A 2016 report by the World Economic Forum concluded that by 2050, the oceans will contain more plastic than fish.

Because they're created from non-renewable resources, plastic bags also contribute to global warming. More than 1.6 billion gallons of oil are used each year just to manufacture plastic bags. The plastic bags that are discarded in Massachusetts have already produced thousands of metric tons of carbon dioxide.

In theory, plastic bags can be recycled. But because they are so cheap to manufacture, recycling them is not cost-effective. It costs \$4,000 to recycle one ton of plastic bags, and yet the recycled product can be sold for only \$32. According to the Clean Air Council, only 5 to 7 percent of plastic bags are recycled each year.

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Economic Costs

Plastic bags don't add to our total at the checkout counter, but they're not free. The plastic bag industry collects billions of dollars per year from U.S. retailers. Without any bag laws, local retailers in Massachusetts would spend about \$150 million per year on plastic bags, including \$31 million for thin-film grocery bags (assuming an average cost of four cents per bag). Naturally, these costs get passed on to consumers.

Plastic bags also waste taxpayer dollars. Each month, Massachusetts produces between 100 and 125 tons of bag waste.

Plastic bags get caught in the separation equipment at material recycling facilities, damaging the conveyors and reducing operational efficiency. Thin film that makes it through the screens contaminates materials that might be recovered and renders them unusable. Thanks to residue from plastic bags, materials that should be recycled are ending up in landfills. Studies in San Francisco and other California municipalities concluded that the cost to taxpayers to subsidize the collection, recycling and disposal of plastic and paper bags amounts to as much as 17 cents per bag. And this does not account for the indirect costs—losses in tourism and the fishing industry, for example.

When a bag law is proposed, local business owners often express concern that it will drive away customers, but there is no credible report of a business losing customers because of a bag law. Multiple studies show that once a bag law is in place, consumers become more conscientious and bring reusable bags. It's worth noting that plastic checkout bags did not become common until thirty or so years ago, and people can quickly grow accustomed to alternatives. Retailers in communities that have enacted bag laws are routinely surprised at how easily their customers adapt to the principle of bringing their own.

The swiftness of this behavior change gives bag laws an impact beyond their weight. Because they affect our daily routines, bag laws encourage us to be more thoughtful about other choices as well.



Paper vs. Plastic

Several years ago, a focus on life cycle analyses led people to think that plastic disposable products were more economically responsible than paper ones. But these analyses did not account for the larger effects of plastic on environmental ecosystems, and they have been roundly debunked. Bottom line: Nothing is as bad as plastic. (For more details, see www.massgreen.org/plastic-is-not-greener-than-paper.html.)

Paper is no panacea, however. Paper does biodegrade, but the entire process of production, distribution and decomposition of any disposable adds significantly to our carbon footprint. Paper bags are also five to ten times more expensive than plastic bags, so simply switching from plastic bags to paper will result in a significant increase in overhead for grocers and retailers, which is likely to drive up prices at brick-and-mortar businesses.

Bag Fees

Charging a fee for paper bags is the best way to change consumer behavior. Without a fee, laws typically reduce bag waste by 60 to 80 percent. With a modest fee, bag laws reduce both plastic and paper by more than 90 percent. (See www.massgreen.org/plastic-bag-impact.html.) An additional benefit is that, once people start bringing their own bags, grocers and retailers save money.

A mandatory minimum fee for paper bags goes to the retailer, not the government. It represents a payment for a

product that a retailer is actually distributing below cost. A nickel or a dime will not fully offset the increased expenditures for businesses, but it will help. The good news is that once people have to spend a nickel or a dime per paper bag, they swiftly start bringing totes.

Under Massachusetts law, only cities can impose *mandatory* minimum fees for paper bags. Cambridge has eliminated thin plastic bags and mandated a ten cent fee for paper bags in 2016. Boston recently implemented a bag fee as well.

A voluntary bag fee—leaving the decision to individual businesses—creates a difficult choice for retailers. If one store charges for paper bags, people might go to the competition. If everyone charges, however, then no business is disadvantaged and people start bringing their reusable totes.

Bag proponents have argued that fees will hurt poor and elderly populations, but this is not the reality. As then-City Councillor Ayanna Pressley argued before casting her vote in support of Boston's bag ordinance in November 2017, disadvantaged communities suffer disproportionately from environmental degradation, so they benefit the most from programs to reduce litter and combat global warming. In addition, reducing the amount of money spent on cleaning bag waste frees municipal funds for much-needed social programs. Reusable supermarket tote bags cost about \$1, and they last a very long time.

Other Concerns

Concerned citizens might ask a number of other questions. What will I use to pick up after my dog? What will I use as liners for the small trash cans in my apartment? Don't reusable bags spread disease?

There are plenty of alternatives to use for dog waste and household trash, ranging from newspaper, produce and bread bags to low-cost biodegradable bags. And

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Scituate's Bag Law Serves as a Model for Others

The Mass Green Network recommends the following bag bylaw, passed in the town of Scituate on November 14, 2018, as a model. Scituate's law was itself based on bylaws passed elsewhere in Massachusetts, and on the statewide bill, so in a sense it represents a crystallization of progress on this issue to date. Annotations identify points to consider when developing a local bylaw or ordinance.

It's worth noting that the bylaw does not use the word "ban," which has negative connotations. "Reduction" is a better, and more accurate, word choice.

Because Scituate is a town, it cannot mandate a minimum fee for paper and other allowable bags. For model language governing bag fees, see ordinances passed by Cambridge and Boston, both available at www.massgreen.org/plastic-bag-legislation.html.

Plastic Bag Reduction Bylaw

1. Purpose and Intent¹

The production and use of thin-film, single-use plastic checkout bags have significant impacts on the environment, including but not limited to: contributing to the potential death of marine animals through ingestion and entanglement; contributing to pollution of the land environment; creating a burden to solid waste collection and recycling facilities (Scituate does not recycle plastic bags); clogging storm drainage systems; requiring the use of millions of barrels of crude oil nationally for their manufacture; and plastic bags are not biodegradable so they gradually disintegrate into minute particles which absorb toxins contaminating the food chain, including the food humans eat.

The goal of this bylaw is to reduce the common use of plastic checkout bags and to encourage the use of reusable bags by consumers, thereby reducing local land and marine pollution, advancing solid waste reduction, protecting the Town's unique natural beauty and irreplaceable natural resources, and improving the quality of life for the citizens of the Town.

2. Definitions

"Checkout Bag" means a bag with or without handles provided to a customer at the check stand, cash register, point of sale or other point of departure that is intended for the purpose of transporting food or merchandise out of the Establishment.

"Single-Use Plastic Checkout Bag"² means a single-use plastic bag, including plastic bags labeled biodegradable, compostable, or photodegradable, provided to a customer by an establishment and used to transport merchandise from the establishment. Plastic carryout bags do not include those plastic bags, typically without handles, used to contain dry cleaning, newspapers, or small bags used to contain fish, meat, produce or other products provided to the consumer, free of charge, to deliver items to the point of sale.³

"Recyclable Paper Bag" means a paper bag that is 100 percent recyclable and contains at least 40 percent post-consumer recycled content, and displays in a visible manner on the outside of the bag (1) the word "recyclable" or a symbol identifying the bag as recyclable, and (2) a label identifying the bag as being made from post-consumer recycled content and the percentage of post-consumer recycled content in the bag.

"Compostable Plastic Bag" means a plastic bag that (1) conforms to the current ASTM D6400 for compostability or ASTM D7081 for biodegradability in the marine environment, (2) is certified as meeting the ASTM D6400 or ASTM D7081 standard specification by a recognized verification entity, or (3) conforms to any other standards deemed acceptable by this section.

"Reusable Bag" means a bag with stitched-on handles that is made solely of, or in a combination of, natural cloths, synthetic fibers, or other washable material other than any type of polyethylene or polyvinyl chloride, and is durable, non-toxic, and specifically designed for multiple reuse (a minimum of 175 uses⁴).

"Product Bag"⁵ means (1) a bag in which loose produce, bulk items, unwrapped baked goods or prepared food, or other products are placed by the consumer to deliver such items to the point of sale or checkout area of the store, or (2) a bag that contains or wraps food to retain moisture or to segregate foods (like meat or ice cream) or other items to prevent contamination or damage when the items are placed together in a Recyclable Bag or Reusable Bag, (3) a bag without handles used to cover clothing such as a dry cleaning bag, or (4) bags used to contain phonebooks, newspapers or magazines.

"Store"⁶ means any commercial enterprise selling goods, food or services directly to the public, whether for or not for profit, including, but not limited to, convenience and grocery stores, markets, restaurants, pharmacies, liquor stores, take-out food purveyors, and merchandise retailers.

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¹ Many other bylaws feature more extensive preambles.

² The definition here does not specify thickness, which means that all plastic checkout bags are disallowed. This is in keeping with the direction of deliberations over the statewide bill, which in recent drafts passed by the Senate disallowed all plastic checkout bags regardless of thickness.

³ Any exclusions are important and often debated. A more stringent law might not exclude newspaper bags or dry cleaning bags, for example. Or it might demand that produce bags be made of paper or compostable film.

⁴ This is one of several different models for gauging durability intended to weed out flimsy bags. Another model is to specify bags that "can carry 25 pounds over a distance of 300 feet."

⁵ This duplicates some of the exclusions in the definition of "Single-Use Plastic Checkout Bag." Here, too, what is excluded is a matter of local choice.

⁶ This definition of "store" includes charities and restaurants. This is standard throughout the state.

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washing reusable bags will kill any germs.

The larger point, however, is that bag laws do not outlaw plastic bags, just the free distribution of them.

Local Laws and Statewide Bill

Some legislators in Massachusetts—Senator Jamie Eldridge and Representative Lori Ehrlich, in particular—have long advocated for a statewide bag law, so why not wait for that to happen? Because the Legislature is unlikely to pass a bill until a critical mass of municipalities does so first. Every city or town, no matter how small, that votes to reduce plastic waste edges the Legislature closer to a decision. A statewide bag law that includes a mandatory minimum fee for paper bags would not only significantly impact the state’s contributions to the global problems of climate change and plastic pollution, but would also generate substantial savings for retailers, consumers and municipal

governments alike. To get there, municipalities must act first.

Designing a Local Law

The Mass Green Network supports all local efforts to pass laws to reduce waste, and does not impose any standards on what those laws should look like. There is a great deal of variety among the current local bag laws in Massachusetts. One reason is that standards have changed over the course of the past several years. For example, the earliest bags laws eliminated only thin grocery bags, while later laws targeted thicker bags as well. Local political culture also influences the shape of bag laws, which tend to reflect the deliberation predicated on balancing values and needs within a community.

Every Massachusetts law regulating bags—including bylaws, ordinances and board of health regulations—is archived at www.massgreen.org/plastic-bag-

[legislation.html](#). It is worth comparing several models to determine which might be the best fit for a given community. Over the years, a number of best practices have emerged. (See related story, page 25.)

Implementation and Enforcement

Now that ninety-three cities and towns have enacted bag laws, there is a wide base of practical knowledge about how to publicize a new law and ensure that retailers are well informed. Cambridge, the first municipality in the state to mandate a minimum fee for paper bags, designed a simple public education sticker for placement in public areas and on or near every cash register.

For more information, local officials are advised to reach out to colleagues in communities that have implemented a bag law, or join the Mass Green Network at www.MassGreen.org. 🌱

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“ASTM D6400” means the American Society for Testing and Materials (ASTM) International “Standard Specification for Compostable Plastics.”

“ASTM D7081”⁷ means ASTM International “Standard Specification for Biodegradable Plastics in the Marine Environment.”

3. Use Regulations

3.1 No Store in the Town shall provide to any customer a Plastic Checkout Bag. Existing stock should be phased out within six months of March 1, 2019, and any remaining stock should be disposed of properly.

3.2 If a Store provides Checkout Bags, they may only provide Reusable, Recyclable or Compostable Bags.

3.3 If a store provides product bags to customers, the bag shall comply with the requirements of being either a Reusable, Recyclable or Compostable bag.

4. Administration and Enforcement

4.1 The enforcement of this law is the responsibility of the Town Administrator/Board of Health, and may be enforced by any Town Police Officer or agent of the Board of Health and other individuals appointed by the Town Administrator.⁸

4.2 A person, individually or by his servant or agent, who violates any provision of this bylaw may be penalized by a non-criminal disposition pursuant to G.L. Chapter 40, Section 21D, and the Town’s non-criminal disposition bylaw. The following penalties⁹ apply:

- First violation: a written warning
- Second violation: \$100 fine
- Third violation: \$200 fine
- Fourth and subsequent violations: \$300 fine
- Each day the violation continues constitutes a separate violation.

5. Effective Date

This bylaw takes effect on March 1, 2019.¹⁰ 🌱

⁷ No plastic currently meets this standard. Including it against the possibility that it may one day be invented does not weaken the law.

⁸ The agent of enforcement varies from one community to another, depending on the municipal structure. Generally, it is the Board of Health that is responsible. In practice, the question is usually moot, since infractions are rare. Once a bag law is passed, business owners are quick to comply.

⁹ The penalty schedule gives the bylaw teeth, but municipalities should not expect it to add significantly to their revenue stream. Scituate’s schedule is on the high end of the scale.

¹⁰ Many communities offer a lead time of six months or more between passage and enforcement.