NEW YORK STATE

NEW YORK STATE PLASTIC BAG TASK FORCE REPORT:

An Analysis of the Impact of Single-Use Plastic Bags

Options for New York State Plastic Bag Legislation

1/13/2018

Table of Contents

Introduction

Throughout New York State, plastic bags have become a ubiquitous sight on the landscape. They can be seen stuck in trees, as litter in our neighborhoods, floating in our waterways and as a general aesthetic eyesore of our environment. Single-use plastic bags are a detriment to the health of communities and the environment alike. From the significant recycling and disposal issues they pose as litter and the harm they create to wildlife, their negative impacts can be seen daily. These problems with single-use plastic bags are not only a statewide problem but a national as well as international issue of concern.

It is important to reduce waste regardless of where it comes from, and despite efforts by New York State to require recycling of these single-use plastic bags by certain stores, the problems have persisted. Absent any federal action or leadership on this issue, it is time for New York State to take more decisive action to expand our efforts to reduce the use of single-use plastic bags by consumers and keep as much plastic as possible from the waste stream.

Due to the problems associated with single-use plastic bags and following signing of legislation related to plastic bags[1], Governor Cuomo convened the New York State Plastic Bag Task Force in February 2017 to develop a report and proposed legislation to address the detrimental impact of plastic bags on the state's environment.

> "New York has led the nation by taking bold action to protect our environment – and this task force marks another step forward in that effort," Governor Cuomo said. "The costly and negative impact of plastic bags on New York's natural resources is a statewide issue that demands a statewide solution. This diverse coalition of experts will bring the experience and knowledge necessary to tackle this problem and safeguard New York's environment for future generations."[2]

The Task Force is led by state Department of Environmental Conservation Commissioner Basil Seggos along with co-chairs Senator Thomas O'Mara and Assemblyman Steve Englebright. Members also include Stephen Acquario, Executive Director of New York State Association of Counties; Marcia Bystryn, President of the New York League of Conservation Voters; and Michael Rosen, President and CEO of the Food Industry Alliance. Specifically, the Task Force worked to develop a unique and equitable statewide plan to address the problem of single-use plastic bags. Starting in March and going through the end of the year, the Task Force met six times to discuss the report and develop a comprehensive solution. One of the meetings was a roundtable discussion with various stakeholders in October 2017 to gather information that contributed to the report.[3]

This report provides an overview of the problems caused by single-use plastic bags, and it reviews single-use plastic bag reduction measures undertaken in New York State, nationwide, and internationally. These measures have included plastic bag fees, plastic bag bans, a combination of fees and bans, manufacturer responsibility programs, and education and outreach initiatives to consumers at both the municipal and statewide level.

[1] Approval message 1, Chapter 7 of the Laws of 2017, see Appendix A.
[2] Governor's Press Release March 12, 2017, https://www.governor.ny.gov/news/governor-cuomo-announces-launch-statewide-plastic-bag-task-force
[3] List of stakeholders at Plastic Bag Task Force Roundtable Meeting, see Appendix B.

Background

The Problem

Plastic bags present a number of problems. They are:

- Derived from fossil fuels
- A source of litter on land and in waterways
- A source of avoidable excess packaging waste used for mere minutes
- Harmful to marine habitats and wildlife
- Problematic, creating tangles and jams in recycling and waste water processing equipment
- Costly for municipalities and recycling centers in terms of time and money to manage

The United States Environmental Protection Agency (EPA) estimates that 80% of plastic pollution in the ocean originates as land-based trash[4], which includes plastic bags. In 2010, approximately 4 to 12 million metric tons (Mt) of plastics found their way into aquatic environments[5]. It is estimated that by 2050, there will be more plastic by weight in the world's oceans than fish[6]. Plastic bags also interfere with wastewater treatment plants, pose a threat to fish and wildlife, and break down into microplastics. These microplastics, which can be millimeters to micrometers in size[7], can absorb toxins and leach chemicals. When ingested by wildlife, these chemicals and toxins bioaccumulate up the food chain to humans. Pieces of plastic bags and microplastics have been found in the water and in wildlife as far away as the Midway Atoll in the North Pacific Ocean. According to a study by the Ellen MacArthur Foundation, five trillion pieces of plastic already exist in the world's oceans[8]. The EPA has found that nearly every type of plastic appears in our oceans and waterways, but polyethylene is one of the most prevalent, which can partly be attributed to widespread use of single-use plastic bags. Not only do single-use plastic bags cause environmental problems, but NBC News reported in 2016 that purchasing single-use plastic bags costs American businesses up to $4 billion each year[9].

Over the last 65 years, the increase in plastics production has been faster than that of any other manufactured material with an estimated 8.3 billion Mts of plastics being produced as of 2015[10]. Single-use plastic bags are widely used in the retail industry to provide a convenient method to bring purchased goods home from stores. These plastic bags are usually made from either high-density polyethylene (HDPE), low density polyethylene (LDPE), or a combination of the two – all of which are fossil fuel derivatives. According to one study[11], in 2014, approximately 100 billion single-use plastic shopping bags

[4] "Toxicological Threats of Plastic." *EPA*. https://www.epa.gov/trash-free-waters/toxicological-threats-plastic
[5] "Production, use, and fate of all plastics ever made". Geyer, R., Jambeck. J, Law. K. 18 July 2017.
[6] "By 2050, There Will Be More Plastic Than Fish in the World's Oceans, Study Says". *The Washington Post*. 20 Jan 2016. https://www.washingtonpost.com/news/morning-mix/wp/2016/01/20/by-2050-there-will-be-more-plastic-than-fish-in-the-worlds-oceans-study-says/?utm_term=.5ee926d56f9d
[7] "Production, use, and fate of all plastics ever made". Geyer, R., Jambeck. J, Law. K. 18 July 2017.
[8] "Plastic Island – How Our Throwaway Culture is Turning Paradise Into a Graveyard." *CNN*. http://www.cnn.com/interactive/2016/12/world/midway-plastic-island/
[9] "Ban the Bag? Why Plastic Bag Taxes and Bans Don't Always Work." *NBC News*. May 2016. http://www.nbcnews.com/business/business-news/ban-bag-why-plastic-bag-taxes-bans-don-t-always-n580926
[10] "Production, use, and fate of all plastics ever made". Geyer, R., Jambeck. J, Law. K. 18 July 2017.
[11] "Reducing Single-Use Plastic Shopping Bags in the USA." Wagner, Travis P. *Waste Management* 70 (2017): 3-12.

were used in the U.S., with other estimates suggesting the same [12],[13]. In addition, the average American family uses 1,500 single-use plastic bags each year[14],[15]. It has been cited that 12 million barrels of oil are required to meet this single-use plastic bag production demand. The American Progressive Bag Alliance recently stated as a clarification that many plastic bags are made from ethane (derived from natural gas) and not oil[16]. Regardless of the fossil fuel source of single-use plastic bags, they are only used for an average of 12 minutes each, and the environmental impacts of their production, distribution, and use leave a lasting effect.

Although HDPE and LDPE are two of the most recyclable plastics in production, the film versions of these plastics used to produce single-use plastic bags cannot be readily recycled in the same manner as HDPE and LDPE containers. Containers made from HDPE and LDPE can be placed in standard curbside recycling bins along with other recyclable materials and sent to a recyclables handling recovery facility (RHRF), commonly referred to as a materials recovery facility (MRF), where a combination of equipment and hand-sorting from conveyors separate the mixed recyclables into their individual recyclable components of various types of paper, metals, plastic, etc. Plastic bags and film plastics are considered a major "contaminant" by MRFs. Plastic bags that end up in curbside recycling bins pose significant problems with processing mixed recyclables. Plastic bags and other film plastic easily become tangled or jammed in processing equipment at a MRF, creating costly operational issues. These types of operational issues have the potential to shut down a MRF for hours or even days as they clear the equipment of entangled plastic bags.

Before California's statewide plastic bag ban went into effect, it cost the City of San Jose $1 million each year to fix machinery jams at recycling facilities that were caused by plastic bags[17]. Several RHRFs in New York State were surveyed by New York State Department of Environmental Conservation (DEC) staff regarding extra operational costs as a result of single-use plastic bag contamination. These RHRF's reported a range of costs between $300,000 to $1 million. One RHRF in New York State cited that plastic bags cost them more than $300,000 per year for reasons that include screen cleaning, employee time spent fixing jams, and wear on parts. Another RHRF in New York State reiterated that employee time spent fixing jams and cleaning machinery is costly and can take two employees at least one hour each shift to correct issues. A third RHRF in the state estimated that between $500,000-$750,000 of their yearly budget is spent on maintenance and cleaning due to plastic bags. The same RHRF estimated that, in addition to the maintenance and cleanup costs, time spent on plastic bag and other film plastic cleanup in order to remove the material from other recyclables costs an additional $250,000-$300,000 each year, for a total in excess of $1 million per year. In addition to creating operational issues, plastic bags that enter a MRF are very dirty, and viable markets do not exist for dirty and contaminated plastic bags[18]. These contaminated bags are baled at MRFs, but this process, along with paying to manage or dispose of the material, causes MRFs to incur additional costs in an already difficult market. For efficient recycling,

[12] "Single-use plastic bag facts." *The Center for Biological Diversity.* *http://www.biologicaldiversity.org/programs/population_and_sustainability/expect_more_bag_less/facts.html*
[13] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[14] "NRDC Lauds Passage of New York City Council Legislation Requiring Groceries, Retailers to Provide Plastic Bag Recycling for Consumers". *NRDC.* 9 Jan 2008. https://www.nrdc.org/media/2008/080109
[15] "Ikea to Charge U.S. Customers for Plastic Bags". https://www.reuters.com/article/us-environment-usa-ikea/ikea-to-charge-u-s-customers-for-plastic-bags-idUSN2131088920070222. 22 Feb 2007.
[16] "American Progressive Bag Alliance Launches California Campaign Correcting The Record On Plastic Bags." PR Newswire. Apr. 2016. https://www.prnewswire.com/news-releases/american-progressive-bag-alliance-launches-california-campaign-correcting-the-record-on-plastic-bags-203240411.html
[17] "Why Ban Single-Use Plastic Bags in California?". *Clean Water Action*. http://www.cleanwateraction.org/sites/default/files/CA_Fact%20Sheet_final.pdf
[18] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.

single-use plastic bags must be collected and recycled through a separate and distinct recovery program and process.

Due to the difficulties of recycling single-use plastic bags and the challenges of educating consumers on their recyclability, proper collection methods and proper preparation of the bags before collection, all too often, these single-use plastic bags are disposed of as waste or become litter. Prior to California's statewide single-use plastic bag ban, the City of San Diego consumed 500 million single-use plastic bags each year[19]. Approximately 95% of these ended up in landfills and cost the people of California $25 million per year to manage. A 2013 study reported that of the 100 billion single-use plastic bags that Americans use each year, nearly 50 million end up as litter nationwide.[20] The study also indicated that residents in coastal areas pay almost $15 per resident in overall litter cleanup costs[21]. According to a draft proposal in 2017 for a single-use plastic bag ban in Madison County, NY, it was noted that the county "expends significant sums of money to control and pick up litter.[22]" In NYC alone, single-use, carry-out bags account for 1,700 tons of residential garbage each week, which equates to 91,000 tons of plastic and paper carry-out bags each year and presently costs the City $12.5 million annually to dispose of this material outside the city.[23]

A major plastic bag and plastic packaging manufacturer conducted a limited study in January 2016 on the theoretical recyclability of plastic bags that enter the Sims New York City RHRF as an intermixed contaminant with the collected curbside recyclables. This limited study showed that is it possible for polyethylene retail plastic bags to be pulled and sorted, processed, and re-manufactured into market grade post-consumer resin pellets[24]. However, although these materials conceptually can be recovered and recycled, MRF contaminant retail plastic bags are not as desirable as source-separated streams and are not a practical feedstock, primarily due to the amount of cleaning involved in the process. Washing is a very costly phase in the process and few recyclers have a wash capacity[25]. After the limited study at the Sims New York City RHRF was conducted and it was proven by a plastic bag manufacturer that products could be made from MRF contaminant film plastic, the manufacturer itself declined to purchase Sims' materials as a feedstock in favor of more desirable feedstocks.

Unlike dirty or contaminated plastic bags and film plastics, clean, dry, and uncontaminated plastic bags and film plastics that are placed in separate proper plastic bag and film plastic collection containers for recycling can be recycled and manufactured into new products. Most recovered plastic bags and film

---

[19] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

[20] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

[21] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

[22] "Madison County – Proposed Local Law No. 3 of 2017 – A Local Law to Ban the Use of Plastic Carryout Bags." Apr.2017.https://www.madisoncounty.ny.gov/sites/default/files/publicinformation/proposed_mc_local_law_3_of_2017_banning_plastic_bags.pdf

[23] "Testimony of Kathryn Garcia, Commissioner of the New York City Department of Sanitation, Before the New York City Council Committee on Sanitation and Solid Waste Management, Intro No. 209 – A Local Law to Amend the Administrative Code of the City of New York, in Relation to Reducing the Use of Carryout Bags". 19 Nov. 2014. http://legistar.council.nyc.gov/View.ashx?M=F&ID=3386792&GUID=5E00AFAF-8A25-481C-BD84-16AB695BBC78

[24] "Novolex: Review results from January 6 test run – film scrap bales from New York City curbside recycling." Mar. 2016.

[25] "2015 National Post-Consumer Plastic Bag & Film Recycling Report. *Moore Recycling Associates, Inc. https://plastics.americanchemistry.com/2015-National-Post-Consumer-Plastic-Bag-and-Film-Recycling-Report.pdf.* Mar. 2017.

plastic are clean LDPE and HDPE. Clean LDPE and HDPE can be made into new products without washing. These new products primarily include plastic lumber and other film and sheet products[26]. For example, recycled bags can be made into new bags. In terms of capabilities for handling plastic bag and film plastic recycling and processing, the U.S. has an approximately 870-million-pound-per-year capacity[27]. However, with only approximately 12% of post-consumer plastic bags and other film plastics being recovered for recycling each year in the U.S.[28], education efforts alone to promote current store take-back programs are not a practicable solution due to the consistently low participation rates realized from solely educational efforts in a voluntary take-back or collection program for any recyclable. Education and outreach has only been shown to achieve a 5% reduction in the use of single-use plastic bags[29]. It is important to reduce waste regardless of where it comes from, and this data highlights that a combination of education and the current store take-back programs are not sufficient to minimize the waste generation of single-use plastic bags and reduce their use significantly enough to address the plastic bag issues and concerns in New York State.

Current Policy

To help address environmental issues identified in the introduction, New York State instituted the New York State Plastic Bag Reduction, Reuse, and Recycling Act (Act) in 2009, which requires certain retailers to collect plastic bags for recycling. Through public education and outreach, DEC encourages the use of reusable bags and the proper recycling of plastic bags and film plastics.

The Act, which has been in effect since January 1, 2009, initially required certain stores to collect certain single-use plastic bags for recycling[30]. Effective March 1, 2015, in an effort to minimize waste generation and increase recycling, the law was expanded to include the collection and recycling of certain film plastics (i.e., uncontaminated non-rigid film plastic packaging products composed of plastic resins, which include, but are not limited to, newspaper bags, dry cleaning bags and shrink-wrap). The Act requires stores with 10,000 square feet or more of retail space and retail chains which operate five or more stores with greater than 5,000 square feet of retail space, and which provide single-use plastic carryout bags to customers, to establish an in-store plastic bag and film plastics recycling program. These stores must make collection bins for the recycling of plastic bags and film plastic available to customers in a visible, easily accessible location. The owner of an enclosed shopping mall is required to place recycling bins at reasonable intervals throughout the mall. Large shopping mall stores (50,000 square feet or more of retail space) are required to establish their own single-use plastic bag and film plastic recycling programs.

All stores covered under the Act are required to recycle the plastic bags and film plastics collected and are prohibited from disposing of the collected plastics as solid waste. Any bags distributed in affected stores must print on the bag the phrase "Please Return to a Participating Store for Recycling," or a similar message approved by the DEC. Stores are required to maintain records describing the collection, transport and recycling of plastic bags and film plastics for three years. The records must include the weight of plastics collected and where they were recycled. Stores are also required to offer reusable bags to their customers for purchase and allow the use of reusable shopping bags. A reusable bag is defined in the

[26] "2015 National Post-Consumer Plastic Bag & Film Recycling Report. *Moore Recycling Associates, Inc. https://plastics.americanchemistry.com/2015-National-Post-Consumer-Plastic-Bag-and-Film-Recycling-Report.pdf.* Mar. 2017.
[27] "2015 National Post-Consumer Plastic Bag & Film Recycling Report. *Moore Recycling Associates, Inc. https://plastics.americanchemistry.com/2015-National-Post-Consumer-Plastic-Bag-and-Film-Recycling-Report.pdf.* Mar. 2017.
[28] EPA. https://www.epa.gov/sites/production/files/2016-11/documents/2014_smm_tablesfigures_508.pdf
[29] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[30] Environmental Conservation Law (ECL) § 27-2701.

statute as a bag "made of cloth or other machine washable fabric that has handles or is a durable plastic bag with handles made for multiple use."[31]

Compliance with the law is currently tracked through consumer complaints. Consumers who wish to recycle their plastic bags and film plastic at a store subject to the Act and have complaints report this information to DEC. The store information is recorded and store managers are contacted by telephone by DEC staff. During the telephone call, DEC staff provide the store managers with a full verbal description of the Act and the store's requirements under the Act as well as technical assistance on how to find a transporter and recycling markets. All complaints are tracked, and individual stores receive three courtesy educational telephone calls in response to complaints before receiving a notice of violation from the DEC. If stores still do not comply with the requirements of the Act and complaints continue to be received, DEC will initiate a formal enforcement action. Under the Act, stores are not required to submit any type of documentation or reporting to DEC, but are required to provide any records that are mandated under the Act to DEC upon request.

Upon recent requests from DEC, several large chain stores submitted their plastic bag and film plastic recycling data for their New York stores. The 2016 plastic bag and film plastic recycling tonnages for these stores are listed in the chart below. However, it is unclear how this recycling data compares to the number of bags provided by stores in New York each year, as stores are not required to disclose that information. For Retail Chain #1, the data reflected is chain-wide and is a combination of what is generated at warehouses, stores and what consumers return with the majority of the weight coming from what consumers return. For Retail Chain #2, the data reflects a combination of what is generated at warehouses and stores and what consumers return and is the combined weights of plastic bags and film plastics for New York-based stores. It has been noted to DEC for Retail Chain #2 that the majority of the weight is from single-use plastic bags. Retail Chain #3's data was calculated based on plastic bag and film plastic recycling data that they have for all of their stores in a certain region, which is then applied to the number of stores they have in New York. Unlike Retail Chain #1 and Retail Chain #2, Retail Chain #4 estimates that 3-4% of their total weight is single-use plastic bags and the rest is other film plastics but did not specify if the tonnage is from warehouses, stores, or consumers.

Retail Chain Name	Tonnage Reported
Retail Chain #1	1,030
Retail Chain #2	850
Retail Chain #3	449
Retail Chain #4	1,739
Retail Chain #5	670

However, as previously mentioned, while store take-back programs are critical to the recovery system, education and outreach is only shown to achieve a 5% reduction in the use of single-use plastic bags[32]. Wider compliance and recovery will require a much broader program. While retailers are required to offer reusable bags for sale to their consumers, the root excess waste generation of a single-use packaging product is not directly addressed, as the current law only requires collection for recycling and has no

[31] Environmental Conservation Law (ECL) § 27-2701(5).
[32] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

incentive for consumers to reduce single-use plastic bag use. Significant enforcement challenges also exist with the current law. For example, stores are not required to routinely report their plastic bag and film plastic recycling data to DEC, so there is no way of knowing if stores are actually recycling the material or disposing of it as waste. Compliance in large metropolitan areas is difficult because of the widespread reports from many retailers in those areas that their collection containers become very contaminated with non-plastic bag and plastic film waste, so they simply eliminate placing collection containers out altogether.

In addition, waste minimization is important regardless of the source of the waste, and improving upon the current law would not achieve the desired reduction in this area. Conversely, although there are issues with the current law and improving up on it, it remains an important option for low and fixed income populations, as it provides free bags for transportation of purchases.

Other Background Information

The U.S. Department of Commerce's 2012 Economic Census of Manufacturing for New York State reports that in 2011, there were 69 manufacturing plants in New York producing plastic packaging materials and unlaminated films. The census reports that these businesses:[33]

- employed 3,660 individuals
- had annual payroll of $160.47 million
- had shipments totaling over $1 billion
- purchased $559 million in materials from suppliers
- spent $21.1 million on structures and equipment

Of the 69 businesses, the census reports that 30 were primarily engaged in plastic bag and pouch manufacturing. These 30 New York businesses reported employing 1,491 individuals, with an annual payroll of $63.7 million. They purchased $231.3 million in materials and spent $7.2 million on structures and equipment from suppliers[34]. The American Progressive Bag Alliance has stated that the plastic bag industry employs about 3,000 people in New York State.

After single-use plastic bag ordinances began taking effect in California, Los Angeles County reported that reusable bag companies began emerging to take advantage of the market[35]. Of the reusable plastic bags compliant with the law that are available for purchase in California, about 80-90% are from U.S.-based reusable bag manufacturers and the rest are imports.

Plastic bag manufacturers have stated that equipment upgrades and/or changes need to be made in order to make bags that comply with plastic bag laws, and funding should be provided to them for these changes. However, under California's reusable bag certification system, there are currently 51 certified bag producers that comply with California's reusable bag standards. The financial provisions of California's statewide legislation can be found in Appendix C.

In terms of paper bags, the American Forest and Paper Association[36]:

- employs 30,274 people in New York State
- as of January 2017 had an annual payroll income of $1.68 million

[33] Received from New York State Department of Tax and Finance. 9 Nov. 2017.
[34] Received from New York State Department of Tax and Finance. 9 Nov. 2017.
[35] "Announcements – What is Proposition 67 and How Does It Impact Los Angeles County's Bag Ban?" *Department of Public Works – Los Angeles County.* Oct. 2016. http://dpw.lacounty.gov/epd/aboutthebag/announcements.cfm
[36] "State Industry Economic Impact – New York". *American Forest & Paper Association*. Jan 2017.

- includes 263 manufacturing facilities
- has industry shipments that are valued at $7.68 million

Gathering exact-cost information per bag was difficult, as reusable bag manufacturers do not readily disclose manufacturer cost information. Anecdotal information suggests this number is in the 10-25 cent range per bag, depending on the type and grade of bag. A New York-based bag manufacturer would not disclose this information but gave an estimate of 85 cents to $2, depending on the type of bag, quantity ordered, etc. These specific bags are imported, and the estimate includes shipping and customs fees as well.

Grocery stores also do not disclose the wholesale prices they pay for their bags, making it difficult to accurately estimate the manufacturing costs. One retailer has stated that the wholesale cost of bags to each of their different retailers is confidential business information that retailers and manufacturers are contractually bound to not disclose. They did report, though, that the cost of paper bags and 2.25 mil flexible plastic bags that qualify as reusable in many plastic bag ban areas, including California, cost grocery stores about five times the amount of standard thin flexible single-use plastic bags. In terms of retail reusable bags of various materials, this particular retailer's profit margins are very low. When freight costs are factored in, sometimes their retail reusable bags sell with little to no profit margin. A second retailer provided estimates of wholesale costs for both flexible reusable plastic and woven plastic reusable bags, with flexible reusable plastic bags costing about five cents per bag and woven plastic reusable bags about 50 cents per bag. This store reported that they sell their woven plastic reusable bags for 99 cents. Another retailer did not disclose their wholesale costs but stated that the cost to the customer for woven plastic reusable bags is in the $1-$3 range, depending on whether or not they are insulated.

The estimated cost of thin flexible single-use plastic bags to retailers is 1-1.5 cents, paper bags 5-6 cents, paper bags with a handle 7-10 cents, and heavy reusable plastic bags (e.g., Re-PET, non-woven polypropylene, woven propylene) fall between 50-70 cents. Other information suggests that thin flexible plastic bags cost grocers one cent per bag, while paper bags with handles and a 40% post-consumer recycled content cost grocers 10 cents per bag, and thicker flexible plastic bags determined to be reusable in many bag-ban areas also cost grocers 10 cents per bag[37]. Cotton bags are cited to be ten times more costly than heavy woven plastic reusable bags and retail for $5-$6 each.

When researching paper bags, it was found that paper bags require a significant quantity of water to produce and take up more space than single-use plastic bags during shipping. Due to the increased energy required for both the production and transportation of paper bags, they have been found to have a greater carbon footprint than single-use plastic bags[38]. Many municipalities report an increase in paper bag use after plastic bag bans go into effect. This is important to consider due to the amount of water required to produce paper bags[39].

Life cycle and energy consumption costs for various bag types can be found in Appendix D.

[37] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[38] "Banning Plastic Bags is Great for the World, Right? Not So Fast". *Wired*. 10 June 2016. https://www.wired.com/2016/06/banning-plastic-bags-great-world-right-not-fast/
[39] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

Analysis of Single-Use Bag Reduction Measures

Municipalities within New York State, across the United States, and around the world have implemented single-use plastic bag reduction measures in a variety of forms. On a worldwide scale, more than 75 countries have taken steps to reduce the consumption of single-use plastic bags. About one-third of these have instituted bans, approximately one-third have instituted fees, and the remaining one-third have taken the approaches listed below that differ from an outright ban or fee. As of March 2017, bans on the distribution of single-use plastic bags existed in nearly 100 cities, towns, and municipalities across the country, and fees existed in almost 30. Of the existing single-use bag fees, at least half are used in combination with a bag ban. In these instances, plastic bags are banned and the fees exist on other types of single-use carry out bags such as paper and compostable plastic. Most programs across the United States, for either a ban or a fee, include an exemption for certain bags such as produce and meat bags, prescription bags, dry cleaning bags, and newspaper bags.

In New York State, ten cities, towns or villages have enacted plastic bag bans and one municipality has a plastic bag ban with a fee on single-use paper bags and bags that qualify as reusable, including 2.25 mil flexible plastic bags. The City of Long Beach has a single-use plastic bag fee in place and Suffolk County's single-use plastic bag fee is scheduled to take effect January 1, 2018. Additionally, the City of New York enacted a carryout bag fee in early 2017 with the State Legislature subsequently passing legislation which prevented it from being implemented.

A summary of the identified single-use plastic bag reduction measures across the United States and worldwide is included in Appendix E.

The wide range of variations in single-use plastic bag reduction measures on a statewide, national, and international level include the following:

- plastic bag bans
- plastic bag and paper bag bans
- plastic bag bans with a fee on paper bags
- a ban on any type of single-use bags including compostable bags
- plastic bag fees only
- fees on plastic and paper bags
- a transaction fee on any type of carryout bag available at a retail store (plastic, compostable plastic, paper, or reusable)
- manufacturer responsibility for plastic bags
- manufacturer responsibility for plastic bags with an added fee for consumers at checkout
- a voluntary monetary consumer incentive at checkout for a consumer bringing their own bag.

Around the world

On an international level, bag fees have resulted in a reduction in single-use plastic bag use ranging from 50%-90%. The reported 90% decreases occurred in South Africa with a 50-cent bag fee, Ireland with a 21-cent bag fee and in the Channel Islands with an 8-cent bag fee. Ireland now has established a maximum fee of 70 cents per bag. A combination of efforts was instituted in Belgium (tax on plastic bag producers, voluntary fee by retailers, voluntary bag reduction initiative by the retail sector), leading to an 86% reduction in plastic bag use. A 14-cent tax and a manufacturer responsibility program for the recovery and recycling of the plastic bags was instituted in Estonia. Manufacturers must also pay a tax if they miss plastic bag recovery and recycling targets. This type of program was also used in Germany in combination with a voluntary charge at grocery stores. This decreased single-use plastic bag consumption

in Germany by 1 billion bags per year. In Latvia, retailers must pay for the disposal of single-use plastic bags, and consumers have to pay a fee at checkout as well[40].

Around the country

As noted above, plastic bag bans are the most prevalent single-use plastic bag reduction measure implemented. Over 75 percent of the programs in the United States are bans. In New York State, bans for single-use plastic bags exist in 11 cities, towns or villages, with one of those 11 municipalities also having a fee. Most these bans identify reusable bags and recyclable paper bags as allowable alternatives. Most areas within the U.S. that have enacted bans have some combination of reusable bags, compostable plastic bags, or recyclable paper bags as allowable alternatives. They also include specifications for what qualifies as a single-use plastic bag and a reusable bag. One municipality in New York State has a fee on all single-use carryout bags and one municipality has a fee on paper and plastic set to take effect on January 1, 2018.

In the U. S., the largest use of bag fees is in the western states. However, these fees are most often combined with a plastic bag ban with the fees being excised on paper bags. In most instances of bag fees, the fees are either 5 cents or cannot be less than 5 cents, and the money collected is retained by the retailer. In most instances, local jurisdictions do not have the right to impose taxes, and therefore, the local government can't retain the fee. A few programs exist in which some or all of the money is allocated to a dedicated environmental fund. These funds range in nature from river cleanup and protection funds to general municipal environmental funds or waste reduction funds. For example, in the District of Columbia (DC), 3 cents out of the 5-cent bag fee goes to the Anacostia River Clean Up and Protection Fund. This resulted in $10 million being allocated to the fund over a five-year span[41].

According to an NBC news article[42], the DC fee on single-use plastic and paper bags has also resulted in a 50% decrease in single-use bag usage. A 2013 *OpinionWorks* study of DC's residents and businesses completed after the bag fee had been in place for three years found that 80% of residents reduced their single-use bag usage and the average household went from using ten single-use bags per week to four per week. The majority of residents also reported seeing fewer plastic bags as litter since the fee had gone into effect[43]. This same study found that the number of customers using their own reusable bags increased by 40% and 68% of businesses saw fewer plastic bags as litter around their businesses. After the fee went into effect, businesses estimated that 82% of customers were bringing their own bags as compared to 42% prior to the law[44]. Since the DC bag fee began in 2010, 79% of businesses saw disposable bag distribution to customers decrease by an average of 50%. The bag fee has had mixed reactions from customers, with businesses reporting that their customer reactions are 40% as negative, 30% as positive and 17% as mixed[45].

---

[40] Plastic Bag Regulations Worldwide. *Earth Policy Institute*. https://www.google.com/maps/d/viewer?mid=1EtryW26jj76KN7b6oTBCsVPkjFw&hl=en_US&ll=-24.653257887871952%2C25.9112548828125&z=8

[41] "Is D.C.'s Five Cent Fee for Plastic Bags Actually Serving its Purpose?." *Washington Post*. May 2015. https://www.washingtonpost.com/investigations/nickel-by-nickel-is-the-dc-bag-fee-actually-saving-the-anacostia-river/2015/05/09/d63868d2-8a18-11e4-8ff4-fb93129c9c8b_story.html?utm_term=.d60e0dff972f

[42] "Ban the Bag? Why Plastic Bag Taxes and Bans Don't Always Work." *NBC News*. May 2016. http://www.nbcnews.com/business/business-news/ban-bag-why-plastic-bag-taxes-bans-don-t-always-n580926

[43] "DDOE/ Alice Ferguson Foundation - DC Resident and Business Bag Use Surveys." *OpinionWorks, LLC*. Oct. 2013.

[44] "DDOE/ Alice Ferguson Foundation - DC Resident and Business Bag Use Surveys." *OpinionWorks, LLC*. Oct. 2013.

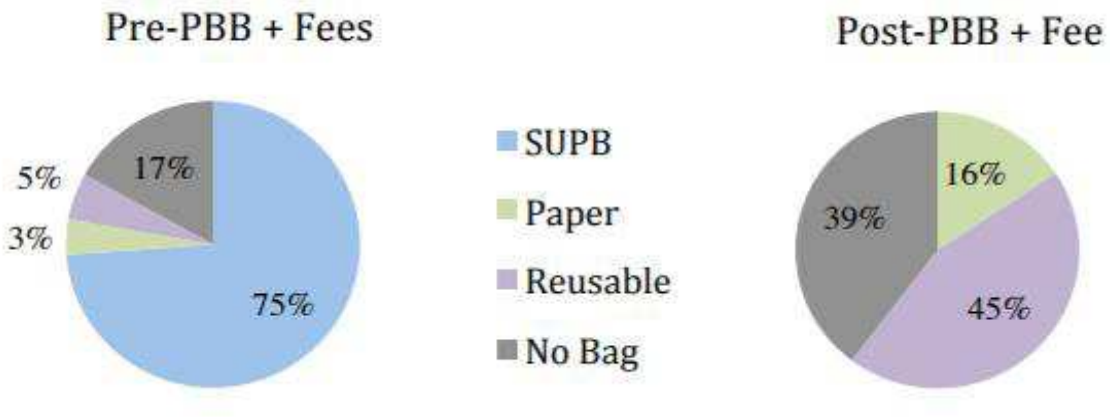
[45] "DDOE/ Alice Ferguson Foundation - DC Resident and Business Bag Use Surveys." *OpinionWorks, LLC*. Oct. 2013.

Many consumers that have reusable bags often forget them either at home or in their vehicle. The DC *OpinionWorks* survey found that 48% of residents that had used at least one disposable bag prior to the week the survey was done said that it was because they forgot to bring their reusable bag with them when they shopped[46]. One possible solution to help consumers remember their reusable bags would be for retail stores to provide incentives for consumers bringing their own bags. Retail stores could subtract money from the total bill for each reusable bag used or they could have a type of punch card system that establishes a reward system. Once consumers fill the card, they could then receive either a certain amount or percent of money from their bill that day or another type of reward. Stores of a certain size could also do reusable bag giveaways, which could especially help in low-income areas.

The City of Chicago has a 7-cent per bag fee on both single-use plastic and paper bags, which resulted in a 42% decrease in bag use within the first month of the fee. In this case, the retailer retains two cents of the fee and Chicago receives five cents. The fee is projected to generate $9.2 million for the City of Chicago and $3.7 million for retailers in 2017 alone[47]. The success of Chicago's fee came after they repealed their plastic bag ban in late 2016[48], which had been in effect for 16 months. Their original plastic bag ordinance was specific to banning plastic bags of a certain thickness, so stores simply purchased thicker plastic bags and the original ordinance failed to reduce the number of single-use bags used. For the same reason, the City of Honolulu, Hawaii switched from a ban on plastic bags to a fee on plastic bags[49].

Prior to California's current statewide hybrid single-use plastic bag legislation (a ban on single-use plastic bags with a fee on the allowable alternatives), several individual municipal ordinances were in place throughout the state, which changed numerous times over many years and covered 44% of the state's population[50]. In November 2010, Los Angeles County passed a ban on single-use plastic bags with a 10-cent fee on recyclable paper bags. This ordinance resulted in a 94% reduction in single-use bag use and the per resident economic impact was estimated to be less than $4.00 per year [51]. The City of San Jose saw an 89% reduction in plastic bags in their storm drain system, a 60% reduction of plastic bag litter in their creeks and rivers, and a 59% reduction in plastic bag litter in neighborhoods after instituting its plastic bag ban and fee on the allowable alternatives[52] [53]. Changes in single-use plastic bag consumption as a result of bag ordinances in the City of San Jose, City of Santa Monica, and Los Angeles County are shown below.

[46] "DDOE/ Alice Ferguson Foundation - DC Resident and Business Bag Use Surveys." *OpinionWorks, LLC*. Oct. 2013.
[47] "New Chicago Tax Leaves Shoppers Holding the Bag". *Chicago Tribune*. 28 Nov 2016. http://www.chicagotribune.com/business/ct-chicago-bag-tax-1127-biz-20161122-story.html
[48] "Chicago Plastic Bag Ban Ends in 2017; New Bag Tax Delayed Until February." 29 Dec 2016. http://chicago.cbslocal.com/2016/12/29/chicago-plastic-bag-ban-ends-in-2017-new-bag-tax-delayed-until-february/
[49] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[50] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[51] "Implementation of the County of Los Angeles Plastic and Paper Carryout Bag Ordinance."
[52] "Do Plastic Bag Bans Work?". *Scientific American.* https://www.scientificamerican.com/article/do-plastic-bag-bans-work/
[53] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf



- SUPB – Single-use Plastic Bag
- PBB – Plastic Bag Ban

These ordinances were instituted prior to California's current statewide law[54]. Since California's statewide plastic bag ban with fees on the allowable alternatives went into effect in November 2016, California beaches are cleaner and MRFs have fewer plastic bag entanglement issues with their machinery. California's requirements for reusable bag certification under their current statewide law can be found in Appendix F.

Prior to California's statewide hybrid legislation, plastic bags accounted for 7.4% of beach litter in 2010. During their 2017 Coastal Cleanup Day, this was down to 3.1%[55]. Prior to California's bag ban, the City of San Diego spent about $160,000 per year on litter cleanup costs, particularly at Miramar Landfill[56]. Before the statewide ban, it cost the City of San Francisco $8.5 million each year to manage plastic bag litter[57]. Overall, litter costs Americans about $11 billion each year, and it costs New York taxpayers $2.5 million each year to take care of litter on Long Island's roads[58] [59]. Cost studies related to the litter cleanup that is associated with plastic bags is not available for municipalities in New York State.

According to the Equinox Center, single-use plastic bag bans that are used in combination with fees on other single-use bags are successful in changing bag-use behavior. Plastic bag bans with fees showed single-use bag use reduction in the City of Seattle, Washington and the City of Portland, Oregon. Estimates from 2013 indicate that, at the time, if the City of San Diego instituted a plastic bag ban and 10

[54] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[55] "It's Been a Year Since California Banned Single-Use Plastic Bags. The World Didn't End. *Waste Advantage*. Nov. 2017. https://wasteadvantagemag.com/its-been-a-year-since-california-banned-single-use-plastic-bags-the-world-didnt-end/?utm_source=November+120+2017+Industry+Update&utm_campaign=Weekly+Newsletters+11%2F20%2F2017&utm_medium=email
[56] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[57] "Frequently Asked Questions on City of LA Bag Proposal". *Heal the Bay*. https://www.healthebay.org/sites/default/files/pdf/fact-sheets/faq-cityofla-plasticbags.pdf
[58] "Litter Season is Upon Us". *Democrat and Chronicle*. 4 Apr. 2017. http://www.democratandchronicle.com/story/opinion/editorials/2017/04/04/litter-season-upon-us/100016936/
[59] "Litter Bugs are Costing Taxpayers Millions to Clean State Roads on Long Island". *CBS New York*. 22 Apr. 2016. http://newyork.cbslocal.com/2016/04/22/long-island-litter/

cent fee on the allowable alternatives, single-use bag consumption would decrease by 86%[60]. When the City of San Jose had a plastic bag ban in combination with a fee on the allowable alternatives, reusable bag use increased from 4% to 62%[61]. In this instance, reusable bags were bags with handles and were made of cloth or other machine-washable fabric or were flexible plastic of at least 2.25 mil thick. For plastic bag bans with fees on paper, costs increased by $7.68 per household in the first year due to reusable bags costing more than paper bags. However, the switch to reusable bags saved consumers money in the long run because they didn't have to continually pay fees on single-use paper bags[62].

Around New York

In August 2017, a survey was conducted by DEC staff of all 13 municipalities in New York State with plastic bag laws. Individuals surveyed played a role in plastic bag legislation in their specific municipality and/or in surrounding municipalities with bag laws. Between one to three people were surveyed for each municipality. The complete survey results can be found in Appendix G. Through the survey, it was found that:

- Reusable bags were used more frequently after legislation was in place.
- Areas with plastic bag bans (without a fee on alternatives) have seen an increase in paper bag use.
- Ban legislation has been most frequently used because it is seen as the easiest to implement, and some areas wanted single-use plastic bags eliminated altogether.
- Bans generally have support of consumers after an adjustment period, while retailers have mixed reactions.
- The main concern of retailers is the existing supply of bags – and they need time (normally 4-6 months) to clear them out.
- Conducting educational campaigns before, during, and after the ordinance is enacted is helpful.
- It would be helpful to stores to provide a list of vendors that offer compliant bags.

Public Input to New York State

As part of the New York State Plastic Bag Task Force efforts, DEC offered the opportunity for the public to provide comments on the use of plastic bags via an email inbox set up specifically for input on this topic. Public comments received were evaluated and a summary of responses is below. A total of 558 responses were received through December 18, 2017. For the majority of comments received, most people gave more than one preference in their response. In terms of how to manage plastic bags in New York State, people most frequently chose a hybrid or fee option as outlined below. A chart detailing the public comments can be found in Appendix H.

- Hybrid A (ban on plastic/ fee on paper) – 325
- Fee on both single-use plastic bags and paper bags – 88
- Hybrid B (ban on plastic/fee on all allowable alternatives, including paper) - 64
- Fee on all carryout bags (plastic, paper, thicker plastic bags that qualify as reusable, compostable) – 61
- Ban on single-use plastic bags - 54
- Fee on single-use plastic bags - 14
- No position given/general complaint about plastic bags - 8
- Incentive/discount for bring your own bag - 4
- Ban on both single-use plastic and paper bags - 3

[60] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[61] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[62] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

- Replace single-use plastic bags with paper bags and reusable totes - 3
- Reinforce reusable bag policy - 2
- Address all bag types but method not fully stated - 1
- Fee - bag type not specified - 1
- Remove single use plastics of all kinds - 1

Legislative Options

Based on the results of policies that have been instituted in other jurisdictions in New York State, the country and internationally, the state has several options to consider to address the numerous detrimental environmental effects and negative impacts related to the use and management of plastic bags.

Option 1. Strengthen and Enforce Existing New York State Plastic Bag Reduction, Reuse and Recycling Act – Continue implementation of the existing New York State Plastic Bag Reduction, Reuse and Recycling Act but increase education, enforcement and reporting requirements.

Pros

- An existing voluntary plastic bag take-back law is in place.
- The law established a collection/management program for other film plastics in addition to plastic bags and requires retailers to offer consumers the opportunity to purchase reusable bags.
- Provides a free bag to consumers, which is helpful and important to low and fixed income populations that will still need to transport their goods.
- Increases education, enforcement and reporting requirements of existing law.
- Provides a free bag to consumers, which is helpful and important to low and fixed income populations that will still need to transport their goods.

Cons

- Environmental impacts are reduced, but only slightly.
  - Waste generation and disposal of single-use plastic bags continue but at a slightly reduced rate.
  - Litter and improper disposal of single-use plastic bags continue but at a slightly reduced rate.
  - No reduction in waste generation of single-use paper bags, which have their own environmental impacts.
- The vast majority of single-use plastic bags are likely to continue to be discarded as litter or disposed.
  - In NYC alone, single use carry-out bags account for 1,700 tons of residential garbage each week[63].
- Significant education and enforcement efforts would have to be undertaken by DEC in order to address the significant non-compliance by retailers.
  - Implementation challenges:
    - Additional technical assistance and enforcement by DEC staff will be required to implement this new education and enforcement program.
    - Stores will incur fines for non-compliance.
    - Stores will be required to report their plastic bag and film plastic recycling data to DEC and will incur additional administrative costs to comply with these new reporting requirements.

[63]"Testimony of Kathryn Garcia, Commissioner of the New York City Department of Sanitation, Before the New York City Council Committee on Sanitation and Solid Waste Management, Intro No. 209 – A Local Law to Amend the Administrative Code of the City of New York, in Relation to Reducing the Use of Carryout Bags". 19 Nov. 2014. http://legistar.council.nyc.gov/View.ashx?M=F&ID=3386792&GUID=5E00AFAF-8A25-481C-BD84-16AB695BBC78

- The current law only requires collection for recycling and has no incentive for consumers to reduce plastic bag use.
- There is a higher potential for stolen goods when shoppers use reusable bags, which is a concern for any store.
- Many consumers mistakenly assume that single-use plastic bags can be put in the curbside recycling bin with their routine household recyclable containers and paper materials.
- Stores have contamination problems with their collection containers, especially in NYC.
- Stores must find their own transporter and recycling market, which can be a confusing and difficult process. They are directed by DEC staff to websites such as the Wrap Recycling Action Program sponsored by the American Chemistry Council to help them find a transporter or set up a partnership.
- Significant additional education and outreach initiatives to both the public and stores are needed in order to significantly increase plastic bag and film plastic recycling and reduce the use of single use plastic bags. However, education and outreach is only shown to achieve a 5% reduction in the use of single-use plastic bags[64].

Option 2. Manufacturer Responsibility for Recycling of Single-Use Plastic Bags – Require manufacturers to fund and implement a program for the collection and recycling of single-use plastic bags.

Pros

- Places responsibility of collection for recycling and implementation of the program with the manufacturer.
- Leverages the fiscal resources of the manufactures to subsidize the program and the continued use of their single-use plastic bag products.
- Helps incentivize manufacturers to develop more sustainable products.
- This method has been used successfully, at least in part of an overall program in Estonia and Germany and to a certain extent in Latvia.
- Provides a free bag to consumers, which is helpful and important to low and fixed income populations that will still need to transport their goods.

Cons

- The current plastic bag and plastic film law will need to remain in place to provide for collection of non-covered plastic bags and plastic film.
- Environmental impacts are not further reduced or addressed.
  - Waste generation and disposal of single-use plastic bags continues at the current rate.
  - Litter and improper disposal of single-use plastic bags continues at the current rate.
  - No reduction in waste generation of single-use paper bags which have their own environmental impacts.
- The vast majority of single-use plastic bags are still discarded as litter or disposed.
  - In NYC alone, single use carry-out bags account for 1,700 tons of residential garbage each week[65].

[64] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

[65] "Testimony of Kathryn Garcia, Commissioner of the New York City Department of Sanitation, Before the New York City Council Committee on Sanitation and Solid Waste Management, Intro No. 209 – A Local Law to Amend the Administrative Code of the City of New York, in Relation to Reducing the Use of Carryout Bags". 19 Nov. 2014. http://legistar.council.nyc.gov/View.ashx?M=F&ID=3386792&GUID=5E00AFAF-8A25-481C-BD84-16AB695BBC78

- Significant enforcement challenges that currently exist will remain in place.
  - Enforcement challenges:
    - Consumer complaints are tracked and stores are contacted; however verifying that stores are continually in compliance is challenging.
    - Stores are not required to report their plastic bag and film plastic recycling data to DEC, so there is no way to know if they are actually recycling the material or disposing of it as waste.
    - Difficult to get stores in the NYC area to comply because their collection containers become very contaminated with non-plastic bag and plastic film waste, so they simply eliminate placing collection containers out altogether.
- The current law only requires collection for recycling and has no incentive for consumers to reduce plastic bag use.
- Some stores that are not currently covered under the law are not allowing customers to use reusable bags.
- There is a higher potential for stolen goods when shoppers use reusable bags, which is a concern for any store.
- Many consumers mistakenly assume that single-use plastic bags can be put in the curbside recycling bin with their routine household recyclable containers and paper materials.
- Stores have contamination problems with their collection containers, especially in NYC.
- Significant tracking and enforcement efforts would have to be undertaken by DEC in order to implement and monitor this manufacturer-responsibility program to ensure compliance. address the significant non-compliance by retailers.
    - Implementation challenges:
      - Additional technical assistance and enforcement by DEC staff will be required to implement
      - New regulations will need to be developed and administered by DEC to ensure the program is implemented and complied with by the manufacturers.
      - Manufacturers of plastic bags will be subject to fines and enforcement action.

Option 3. Fee on Single-Use Plastic Bags – Institute a fee on single-use plastic bags.

Pros

- Evidence has shown a fee-per-bag system results in a reduction in plastic bag use[66] [67].
- Plastic bag reduction further translates to reductions in the raw material and natural resources used to make, transport, and recycle the bags.
- A decreased number of bags given away at checkout could result in decreased recycling and disposal costs for municipalities and MRFs.
- The addition of a fee at the point of purchase helps raise awareness and empowers consumers to make targeted financial decisions related to their bag use.
- Fewer negative environmental impacts result commensurate with fewer bags produced, transported and managed.
- The cost for point-of-sale system upgrades to larger stores or stores using the Retail Council's credit card processing system is minimal. However, there is a cost associated with collecting and remitting a fee to the state.
  - To help defer this cost, retailers have asked to retain an administrative fee.

[66] "95% Reduction in Plastic Bag Usage". *Irish Examiner*. 27 June 2014. http://www.irishexaminer.com/ireland/95-reduction-in-plastic-bag-usage-273500.html

[67] Plastic Bag Regulations Worldwide. *Earth Policy Institute*. https://www.google.com/maps/d/viewer?mid=1EtryW26jj76KN7b6oTBCsVPkjFw&hl=en_US&ll=-24.653257887871952%2C25.9112548828125&z=8

- Retailers have seen some customer complaints with fees when they are first implemented, but customers generally become accustomed to it.
- Stores would not have to purchase different bags from what they already have.

Cons

- Fees could adversely impact low and fixed income individuals and families, as expressed by representatives of these communities, such as The Black Institute[68].
- The current plastic bag and plastic film law will need to remain in place to provide for collection of non-covered plastic bags and plastic film.
- No reduction in waste generation of single-use paper bags, which have their own environmental impacts.
- Only provides a partial financial incentive for using reusable bags as single-use paper bags will still be allowed.
- Costs to retailers will increase as paper bags will still be expected to be offered as an option to consumers and the cost to retailers for paper bags is three to five times as much as single-use plastic bags. Alternatively, retailers would be put in the position of electing to charge customers the extra cost, which could place them at a competitive disadvantage.
- If stores do not retain a portion of the fee, cost of goods could increase so that stores can recover some of the costs of purchasing qualifying reusable and paper bags, which are more expensive than single-use plastic bags.
- Bag use reduction rate has generally been shown to be proportional to the amount of the fee so a high fee is necessary to have a high reduction in use rate.
- The use or disposition of fees collected is challenging and potentially contentious. There will be a need to determine the disposition of fees and how the funds will be used, reported and audited.
- In DC, revenue from the fee on carryout bags has increased each year[69].
  - In order to incentivize reduction in use, the fee should be more than five cents.
- There is a higher potential for stolen goods when shoppers use reusable bags, which is a concern for any store.

Option 4. Fee per Transaction for Single-Use Bags – Under this scheme, rather than a fee per bag, a single fee is imposed for the use of single-use bags (i.e., a ten-cent fee is assessed whether you receive one bag or ten bags).

Pros:

- Same pros as single-use per bag fee in Option 3.
- Reduces impacts to low and fixed income individuals and families.

Cons:

- There is still an impact on low and fixed income individuals and families.
- Same cons as single-use per bag fee in Option 3.
- Studies are not available on this type of bag legislation.
- Will not provide the same level of bag use reduction as fee per bag option.
- Waste generation and litter will likely be at a higher level than a fee per bag system.

[68] Lewis, Bertha – The Black Institute. "Re: Letter Regarding the NYS Plastic Bag Task Force". Received by Kayla Montanye. 28 June 2017.
[69] "Carryout Bag Talking Points". *American Forest & Paper Association*. Nov. 2017.

Option 5. Fee on Single-Use Plastic and Paper Bags

Pros:

- Same pros as single-use per-bag fee in Option 3.
- Could result in reduction across all single-use bag types.
- Reductions have been seen in DC and Chicago with this system.
  - The DC fee has resulted in a 50% decrease in single-use bag usage[70].
  - Chicago has a 7-cent per bag fee, which resulted in a 42% decrease in bag use within the first month of the fee[71].
- A store reported that they have seen a 50% reduction in bag use where fees have been established.
- On an international level, per-bag fees have resulted in a reduction in plastic bag use ranging from 50%-90%[72].
- A per-bag fee system is reported to decrease single-use bag use about 60-70% and items per bag increase from 3.7 to 11.4.

Cons:

- Fees could adversely impact low and fixed income individuals and families, as expressed by representatives of these communities, such as The Black Institute[73].
- The current plastic bag and plastic film law will need to remain in place to provide for collection of non-covered plastic bags and plastic film.
- Bag use reduction rate has generally been shown to be proportional to the amount of the fee, so a high fee is necessary to have a high reduction in use rate.
- If stores do not retain a portion of the fee, cost of goods could increase so that stores can recover some of the costs of purchasing qualifying reusable and paper bags, which are more expensive than single-use plastic bags.
- The use or disposition of fees collected is challenging and potentially contentious. There will be a need to determine the disposition of fees and how the funds will be used, reported and audited.
- In DC, revenue from the fee on carryout bags has increased each year[74].
  - In order to incentivize reduction in use, the fee should be more than 5 cents.

Option 6. Ban Single-Use Plastic Bags – Implement a ban on the sale and use of single-use plastic bags.

Pros:

- Retailers have seen some customer complaints with fees when they are first implemented.
- Stores would not have to purchase different bags from what they already have.
- Evidence has shown a bag ban-system results in a reduction in plastic bag use.

---

[70] "Ban the Bag? Why Plastic Bag Taxes and Bans Don't Always Work." *NBC News*, May. 2016. http://www.nbcnews.com/business/business-news/ban-bag-why-plastic-bag-taxes-bans-don-t-always-n580926

[71] "Chicago Plastic Bag Ban Ends in 2017; New Bag Tax Delayed Until February." 29 Dec. 2016. http://chicago.cbslocal.com/2016/12/29/chicago-plastic-bag-ban-ends-in-2017-new-bag-tax-delayed-until-february/

[72] Plastic Bag Regulations Worldwide. *Earth Policy Institute*. https://www.google.com/maps/d/viewer?mid=1EtryW26jj76KN7b6oTBCsVPkjFw&hl=en_US&ll=-24.653257887871952%2C25.9112548828125&z=8

[73] Lewis, Bertha – The Black Institute. "Re: Letter Regarding the NYS Plastic Bag Task Force". Received by Kayla Montanye. 28 June 2017.

[74] "Carryout Bag Talking Points". *American Forest & Paper Association*. Nov. 2017.

- Plastic bag reduction further translates to reductions in the raw material and natural resources used to make, transport, and recycle the bags.
- A decreased number of bags given away at checkout could result in decreased recycling and disposal costs for municipalities and MRFs.
- A bag ban eliminates the significant environmental impacts of generation, transportation and management of single-use plastic bags.
- Fewer negative environmental impacts commensurate with fewer bags produced, transported and managed.
- Program implementation of a bag ban is easier than a fee-based system.
- One report stated that consumers who were not in favor of a ban were more in favor of it after it went into effect and that people who bring reusable bags to a store are more likely to buy environmentally preferable products[75].

Cons:

- The current plastic bag and plastic film law will need to remain in place to provide for collection of non-covered plastic bags and plastic film.
- No reduction in waste generation of single-use paper bags, which have their own environmental impacts.
- Only provides a partial incentive for using reusable bags as single-use paper bags will still be allowed.
- Does not incentivize reducing single-use paper bag use.
- Costs to retailers will increase as paper bags will still be expected to be offered as an option for consumers and the cost to retailers of paper bags is three to five times as much as single-use plastic bags. Alternatively, retailers would be put in the position of electing to charge customers the extra cost which could place them at a competitive disadvantage.
- Consumers must use alternative containers for product transportation which, if not offered for free, is an additional cost to consumers and could adversely impact low and fixed income consumers.
- Many municipalities report an increase in paper bag use after plastic bag bans go into effect and therefore, the allowable alternatives should be an environmentally preferable and sustainable options.
- Definitions in the law for acceptable reusable bags become highly critical for proper implementation.
    - Reusable bags that meet the minimum thickness requirements specified in laws have generally been a thicker version of a single-use plastic bag (up to 5 times the amount of a commonly distributed thin single-use plastic bag), and as with thin single-use plastic bags, are often not used again for transportation of goods from a store but instead as a homeowner's waste basket liner for trash and simply disposed after perhaps only one additional use.
- Definitions in the law for acceptable biodegradable and/or compostable bags becomes highly critical for proper implementation.
    - It has been suggested that bag laws should not include biodegradable bags as an allowable alterative because standards and regulations do not exist regarding the term biodegradable[76].

[75] "Scientific Support for a Plastic Bag Reduction Law". *Scientist Action Advocacy Network*. Nov. 2017.
[76] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.

    - It has also been suggested that compostable bags should only be included as an allowable alternative if they meet the ASTM D6400 standard for commercial compostability; however ASTM D6400 compostable bags should not be included as an allowable alternative in areas that do not have access to commercial composting because these bags will simply end up being landfilled and will not break down[77].
- There will be a need to continue to implement a recycling system for non-covered bag plastic film. This is important, as More Recycling Associates reported in March 2017 at least 1.2 billion pounds of post-consumer film was diverted from the waste stream and recycled in 2015[78].
- The American Progressive Bag Alliance has stated that bag manufacturing employs approximately 3,000 people in New York State.
- Retail associations oppose straight bans because the allowable alternatives cost stores more money[79].
- There is a higher potential for stolen goods when shoppers use reusable bags, which is a concern for any store.
- Plastic bag bans do not always equate to reduction in plastic bag use. In many areas, bans include bags that are less than a certain thickness. A common thickness in single-use plastic bag laws is 2.25 mils of flexible plastic. Retailers end up purchasing plastic bags that are over the minimum thickness that qualify as reusable and hand them out at checkout for free. In these cases, there is not an actual reduction in single-use plastic bag use[80] and the increased thickness of the bag can result in the same or potentially increased amount by weight of plastic.
    - Areas with plastic bag bans also see an increase in paper bag use, which could potentially be a less environmentally preferable option.
    - When the City of San Jose had a straight single-use plastic bag ban without a fee on the allowable alternatives, reusable flexible plastic bags were available at checkout for free and distribution doubled. San Jose then proposed a minimum 10-cent fee on these reusable bags[81].
    - The success of Chicago's fee came after they repealed their single-use plastic bag ban. Their original single-use plastic bag ordinance was specific to banning single-use plastic bags of a certain thickness, so stores simply purchased the thicker 2.25 mil or greater flexible plastic bags and the original ordinance failed to reduce the number of single-use bags being used and increased the amount of plastic being disposed.
        - This same issue is why the City of Honolulu, Hawaii switched from a ban on single-use plastic bags to a fee on single-use plastic bags[82].

[77] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[78] "2015 National Post-consumer Plastic Bag & Film Recycling Report. *Moore Recycling Associates, Inc. https://plastics.americanchemistry.com/2015-National-Post-Consumer-Plastic-Bag-and-Film-Recycling-Report.pdf.* Mar. 2017.
[79] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[80] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[81] "Addendum to the Final Environmental Impact Report: Single-Use Carryout Bag Ordinance". *City of San Jose*. www.sanjoseca.gov/DocumentCenter/View/20209..July2013.
[82] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.

- Single-use plastic bag bans that do not include fees on single-use alternatives have been met with lawsuits from the plastics industry. In these lawsuits, the plastics industry states that Environmental Impact Studies must be completed due to the environmental impacts of the allowable alternatives[83].
    - The Food Industry Alliance sued the Village of Hastings-on-Hudson in a lawsuit that claimed single-use paper bags are worse for the environment than single-use plastic bags[84].

Option 7. Hybrid – Ban On Plastic Bags With A Fee On The Allowable Alternatives

Pros:

- Same pros as single-use per bag fee in Option 3 and ban single-use plastic bags in Option 6.
- Hybrid legislation results in reduction across all single-use bag types[85].
- Los Angeles County saw a 94% reduction with this type of legislation at an annual per resident cost of $4.00[86].
- Los Angeles County found that businesses were only minimally impacted by this legislation. It cost retailers approximately $6,400 per year for paper bags but this cost was offset by the fee charged at checkout[87].
- The City of San Jose saw an 89% reduction in plastic bags in their storm drain system, a 60% reduction of plastic bag litter in their creeks and rivers, and a 59% reduction in plastic bag litter in neighborhoods after instituting its plastic bag ban and fee on the allowable alternatives[88] [89].
- Reusable bag use also increased from 4% to 62%[90].
    - In this instance, reusable bags were bags with handles were made of either cloth or other machine washable fabric or were flexible plastic of at least 2.25 mil thick.
- In some areas, hybrid legislation has resulted in an increase in reusable bag usage by 40%[91].
- Hybrid legislation led to fewer lawsuits from the plastics industry and grocer associations[92].
- Since California's statewide plastic bag ban with fees on the allowable alternatives that went into effect in November 2016, California beaches are cleaner and MRFs have less plastic bag entanglement issues with their machinery.
- Prior to California's statewide hybrid legislation, plastic bags accounted for 7.4% of beach litter in 2010. During their 2017 Coastal Cleanup Day, this was down to 3.1%[93].

---

[83] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[84] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[85] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[86] "Implementation of the County of Los Angeles Plastic and Paper Carryout Bag Ordinance".
[87] "Implementation of the County of Los Angeles Plastic and Paper Carryout Bag Ordinance".
[88] "Do Plastic Bag Bans Work?". *Scientific American.* https://www.scientificamerican.com/article/do-plastic-bag-bans-work/
[89] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[90] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[91] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[92] Romer, Jennie. "Plastic Carryout Bag Legislation" webinar. 18 July 2017.
[93] "It's Been a Year Since California Banned Single-Use Plastic Bags. The World Didn't End. *Waste Advantage*. Nov. 2017. https://wasteadvantagemag.com/its-been-a-year-since-california-banned-single-use-plastic-bags-the-world-didnt-end/?utm_source=November+120+2017+Industry+Update&utm_campaign=Weekly+Newsletters+11%2F20%2F2017&utm_medium=email

- According to the American Forest and Paper Association, the recovery rate for paper has been at or above 63% for the past seven years and 67.2% of all paper consumed in the U.S. in 2016 was recovered for recycling[94].

Cons:

- Same cons as single-use per bag fee in Option 4 and ban single-use plastic bags in Option 6.

Option 8. Continue Existing Policies – Continue implementation of the existing New York State Plastic Bag Reduction, Reuse and Recycling Act.

Pros

- Same Pros as option 1.

Cons

- Environmental impacts are not further reduced or addressed.
  - Waste generation and disposal of single-use plastic bags continues at the current rate.
  - Litter and improper disposal of single-use plastic bags continues at the current rate.
  - No reduction in waste generation of single-use paper bags, which have their own environmental impacts.
- The vast majority of single-use plastic bags are still discarded as litter or disposed.
  - In NYC alone, single use carry-out bags account for 1,700 tons of residential garbage each week[95].
- Significant enforcement challenges that currently exist will remain in place.
  - Enforcement challenges:
    - Consumer complaints are tracked and stores are contacted; however verifying that stores are continually in compliance is challenging.
    - Stores are not required to report their plastic bag and film plastic recycling data to DEC, so there is no way to know if they are actually recycling the material or disposing of it as waste.
    - Difficult to get stores in the NYC area to comply because their collection containers become very contaminated with non-plastic bag and plastic film waste, so they simply eliminate placing collection containers out altogether.
- The enforcement programs allowed by the law are ineffective.
- The current law only requires collection for recycling and has no incentive for consumers to reduce plastic bag use.
- Some stores that are not currently covered under the law are not allowing customers to use reusable bags.
- There is a higher potential for stolen goods when shoppers use reusable bags, which is a concern for any store.
- Based on complaints DEC receives, many store owners or store managers in NYC and Eastern Long Island do not take compliance seriously.
- Many consumers mistakenly assume that single-use plastic bags can be put in the curbside recycling bin with their routine household recyclable containers and paper materials.
- Stores have contamination problems with their collection containers, especially in NYC.

---

[94] "State Industry Economic Impact – New York". *American Forest & Paper Association*. Jan 2017.

[95] "Testimony of Kathryn Garcia, Commissioner of the New York City Department of Sanitation, Before the New York City Council Committee on Sanitation and Solid Waste Management, Intro No. 209 – A Local Law to Amend the Administrative Code of the City of New York, in Relation to Reducing the Use of Carryout Bags". 19 Nov. 2014. http://legistar.council.nyc.gov/View.ashx?M=F&ID=3386792&GUID=5E00AFAF-8A25-481C-BD84-16AB695BBC78

- Stores must find their own transporter and recycling market, which can be a confusing and difficult process. They are directed by DEC staff to websites such as the Wrap Recycling Action Program sponsored by the American Chemistry Council to help them find a transporter or set up a partnership.

Overall

The following are baseline considerations regardless of approach taken:

- Educational campaign:
  - Institute a statewide educational campaign to bring awareness to single-use plastic and paper bag issues and requirements.
  - Provide a free reusable bag to consumers across New York State as part of the initial education campaign, with emphasis on distribution to low and fixed income communities prior to the law going into effect.
  - Develop a public service announcement (PSA) for the education campaign. Coordinate PSA messaging with signage requirements to form a cohesive outreach campaign to consumers about using reusable bags.
- Litter and base use assessment:
  - Require the performance of a pre- and post-statutory impact study to assess litter composition and bag use profiles to assess performance[96].
- Plastic bag recycling:
  - Continue to require retail establishments which fall under the collection requirements of the current law to continue collection of non-covered plastic bags and film plastic.
- Statewide consistency:
  - Ensure that plastic bag requirements are consistent statewide.
- Disposition of fees:
  - Any funds received by the state should be directed to the state's Environmental Protection Fund (EPF).
- Exemptions:
  - If fees are assessed, customers using the New York State Supplemental Nutritional Assistance Program (SNAP), New York State Special Supplemental Nutrition Program for Women, Infants and Children (WIC), or any successor programs, as full or partial payment toward the items purchased should be exempt.
- Phase-in period:
  - Incorporate a phase-in period of not less than eight months to allow enough time to educate consumers, establish any required administrative systems, and if a ban is implemented, to enable retailers to phase out their existing stock of plastic bags.

[96] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf

Appendix A

Approval Message 1, Chapter 7 of the Laws of 2017

MEMORANDUM filed with Senate Bill Number 4158, entitled:

"AN ACT to establish a moratorium on the adoption or implementation of any local law, ordinance, rule or regulation relating to charging a fee for carryout merchandise bags or a fee of similar effect; and providing for the repeal of such provisions upon expiration thereof"

APPROVED

New York State has proudly led this nation's environmental movement from its inception, fostering the early conservationist principles of Theodore Roosevelt, and birthing modern environmentalism at Storm King. Today, we are leading once again with the highest renewable energy standard in the nation, and in the development of off-shore wind and solar power; we are protecting the State's precious natural resources like the Hudson River and the Adirondack Park; we are dedicating billions of dollars to ensuring clean drinking water for all New Yorkers; and after decades of discussion, we have finally made an agreement to close the Indian Point nuclear power plant. Combined, all of these policies lead the way in protecting New York's air, land, and water.

New York, like the rest of the nation is currently struggling with the environmental impact of plastic and paper bag waste, particularly with a focus on plastic bags. Plastic bags are convenient, but not without financial and environmental costs. The New York City Department of Sanitation estimates that it collects an average of 1,700 tons of plastic bags per week, costing $12.5 million annually in disposal costs.

Statewide, New Yorkers use an estimated 23 billion plastic bags annually. The impact of this usage results in the significant expense of cleaning up this plastic through litter collection programs and beach and ocean cleanup efforts.

A number of state and local governments across the country have attempted to address this problem with varying degrees of success, using fees and bans on plastic and paper bags. Most recently, New York City passed a local law that would impose a fee of at least 5 cents on all carryout merchandise bags. The bill passed 28-20, the closest of any vote taken in the last several years. Since the bill's passage, the State Legislature moved swiftly and overwhelmingly to impose a moratorium on that local law, with a total of 165 members voting in support and 32 against.

While there are no doubt institutional political issues at play, and while New York City's law is an earnest attempt at a real solution, it is also undeniable that the City's bill is deeply flawed. Most objectionable is that the law was drafted so that merchants keep the 5-cent fee as profit, instead of the money being used to solve the problem of plastic bags' environmental impact essentially amounting to a $100 million per year windfall to merchants. There are two possible rationales for New York City's bill providing the fee to profit the merchants: political expediency or legal impossibility. If the Council needed the political support of the merchants to pass the bill, a $100 million price was too high a cost to pay. If the City was not empowered to allow a fee to go to a government entity as it exceeds its legal authority, then that necessitates state action. In either case, the windfall profit to private entities is unjustifiable and unnecessary.

The very first bottle deposit law in the 1980s had a similar flaw. It allowed a windfall to retailers initiating the deposit, costing the State roughly $1.6 billion in revenue. In 2008, the State finally admitted the error and developed the political will to change the law which was amended; now, 80% of the deposit goes to the State to protect and improve the environment. We should not repeat that mistake.

I understand the political process to pass a bill can require placating potential opposition but a $100 million bonus to private companies is beyond the absurd. Likewise, the bill exempts certain businesses with no apparent rationale. Liquor stores, delivery people, food trucks are all exempted. Legislation often requires compromise but not capitulation. There is no need to pass an overly compromised bill we can and should promulgate the best policy in the country. That is the New York way.

At the same time, the impact of plastic and paper waste on our environment is not a local issue. As a New Yorker, I have reeled in numerous plastic bags while fishing in the Hudson and off Long Island. I have seen plastic bags in the trees while hiking in the Adirondacks and driving down the Grand Concourse in the Bronx. It is a statewide challenge.

As such, a statewide solution is the most appropriate way to address this issue. Questions as to what the statewide solution should be are very much in debate: should the State ban paper and plastic carry-out products? Is a tax the best approach? If so, at what level and who should be the beneficiary? Should the State be obligated to supply reusable bags for a period of time during a transition so that low-income consumers are not unduly financially burdened through the process?

These questions must be answered, and those answers must be based on the experience of other states and cities, as well as feedback from our constituents. California, District of Columbia, and Chicago all have data and experience. To that end, today I am establishing a statewide task force to develop a uniform State plan for addressing the plastic bag problem. This Task Force will be different than usual as this matter requires expeditious action. I will ask the Senate and the Assembly to appoint Co-Chairs with me so that the recommendations can be quickly legislated. Local governments and stakeholders will also be included. By the end of this year, this Task Force will conclude with a report and proposed legislation. I look forward to New York State leading the way on this issue.

The bill is approved. (signed) ANDREW M. CUOMO

Appendix B

List of Stakeholders at Plastic Bag Task Force Roundtable Meeting
Wednesday, October 11, 2017

Venetia Lannon, Governor's Office
Basil Seggos, Commissioner, DEC
Steve Englebright, Assembly
Thomas O'Mara, Senate
Michael Rosen, Food Industry Alliance of NY, Inc.
Marcia Bystryn, New York League of Conservation Voters
Julie Tighe, DEC
Martin Brand, DEC
David Vitale, DEC
Kayla Montanye, DEC
Jeshica Patel, DEC
Melissa O'Connor, Retail Council of NYS
James Zecca, Madison County Solid Waste Department
Eric Goldstein, Natural Resources Defense Council
Adrienne Esposito, Citizens Campaign for the Environment
Jennie Romer, Sustainability Consultant
Bertha Lewis, The Black Institute
Pat Lynch, Patricia Lynch Associates

Appendix C

California's Financial Provisions for Bag Manufacturers

Article 6. Financial Provisions
42288.

(a) Notwithstanding Section 42023.2, the sum of two million dollars ($2,000,000) is hereby appropriated from the Recycling Market Development Revolving Loan Subaccount in the Integrated Waste Management Account to the department for the purposes of providing loans for the creation and retention of jobs and economic activity in this state for the manufacture and recycling of plastic reusable grocery bags that use recycled content, including postconsumer recycled material.

(b) The department may expend, if there are applicants eligible for funding from the Recycling Market Development Revolving Loan Subaccount, the funds appropriated pursuant to this section to provide loans for both of the following:

(1) Development and conversion of machinery and facilities for the manufacture of single-use plastic bags into machinery and facilities for the manufacturer of durable reusable grocery bags that, at a minimum, meet the requirements of Section 42281.

(2) Development of equipment for the manufacture of reusable grocery bags, that, at a minimum, meet the requirements of Section 42281.

(c) A recipient of a loan authorized by this section shall agree, as a condition of receiving the loan, to retain and retrain existing employees for the manufacturing of reusable grocery bags that, at a minimum, meet the requirements of Section 42281.

(d) Any moneys appropriated pursuant to this section not expended by the end of the 2015–16 fiscal year shall revert to the Recycling Market Development Revolving Loan Subaccount for expenditure pursuant to Article 3 (commencing with Section 42010) of Chapter 1.

(e) Applicants for funding under this section may also apply for funding or benefits from other economic development programs for which they may be eligible, including, but not limited to, both of the following:

(1) An income tax credit, as described in Sections 17059.2 and 23689 of the Revenue and Taxation Code.

(2) A tax exemption pursuant to Section 6377.1 of the Revenue and Taxation Code.

Appendix D

Lifecycle and Energy Consumption Costs for Various Bag Alternatives

Reports that offer information on the most environmentally beneficial carryout bag option are conflicting in their results. Overall, reusable bags are said to have lower environmental impacts than single-use plastic bags with those that contain recycled content having even less environmental impact. The end-of-life management is important when considering allowable alternatives under the law, as the ability to recycle the allowable alternatives leads to increased environmental savings[97]. A summary of information from studies that were researched is below.

An Australian study found reusable non-woven plastic polypropylene bags to have the lowest environmental impact[98]. However, when standard single-use plastic HDPE bags were compared to alternatives in a UK study published in 2011, it was found that an HDPE single-use plastic bag with no secondary reuse had a lower global warming potential than paper, LDPE plastic, non-woven polypropylene, and cotton bags[99]. In addition, a study by the Progressive Bag Alliance found single-use PET bags to have the lowest gross fossil fuel usage when compared to compostable bags and paper bags made with at least 30% recycled fibers[100]. Contradictory to the studies mentioned above, a Swiss study found LDPE bags that contained recycled content (percent recycled content not specified) to have the lowest environmental impacts when compared to single-use plastic bags, polyethylene bags made from renewable materials, biodegradable bags, paper bags, and reusable cotton bags[101].

The table below from the Swiss *EMPA* study compares how many times different types of bags would need to be used in order to have the same environmental benefit as an LDPE bag containing recycled content (% recycled content not specified).

	Climate change	Eutro-phication	Freshwater ecotoxicity	Seawater ecotoxicity	Human toxicity
primary plastic	1.8	2.1	0.9	0.9	0.0
ECOLOOP	**1.0**	**1.0**	**1.0**	**1.0**	**1.0**
I'm green	0.4	0.5	2.1	1.2	1.6
biolog. Degradable	4.3	5.2	0.9	0.8	3.5
paper	1.0	1.1	0.5	0.5	3.5
cotton	28.3	34.1	16.2	8.4	57.3

[102]

- "ECOLOOP" is a LDPE bag containing recycled content
- "I'm green" is a polyethylene bags made from renewable materials

[97] "Comparison of Existing Life Cycle Analysis of Shopping Bag Alternatives". *Sustainability Victoria*. 18 April 2017.
[98] "Comparison of Existing Life Cycle Analysis of Shopping Bag Alternatives". *Sustainability Victoria*. 18 April 2017.
[99] "Life Cycle Assessment of Supermarket Carrier Bags: A Review of the Bags Available in 2006. Feb. 2011.
[100] "Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable; Biodegradable Plastic; and Recycled, Recyclable Paper. *Progressive Bag Alliance*. 2007.
[101] "Life Cycle Assessment of Shopping Bags out of Bioplastics – and its Comparison With Other Shopping Bags". *EMPA*. 13 Jan 2012.
[102] "Life Cycle Assessment of Shopping Bags out of Bioplastics – and its Comparison With Other Shopping Bags". *EMPA*. 13 Jan 2012.

The table below compares the environmental impacts of single-use plastic bags, paper bags, and reusable LDPE bags composed of 40% post-consumer recycled material[103]. The study did not specify whether the paper bags were made from virgin materials or if they contained recycled content. Although it takes more total energy to create Re-PET bags, this equates to the total energy required to make a single-use plastic bag after about just six uses.

Environmental Impact	SUPB	Paper	Re-PE
Total energy (MJ)	0.50867	2.62000	2.94500
GHG emissions (tons CO2 equiv.)	0.00003	0.00008	0.00018
Solid waste (kg)	0.00467	0.03400	0.03410
Fresh water consumption (gallons)	0.03867	1.00000	0.25000

[104]

- SUPB: Single-use plastic bag
- Re-PE: Reusable low-density polyethylene bag made of 40% post-consumer recycled content

When researching paper bags, it was found that paper bags require a significant quantity of water to produce and take up more space than single-use plastic bags during shipping. Due to the increased energy required for both the production and transportation of paper bags, they have been found to have a greater carbon footprint than single-use plastic bags[105]. Many municipalities report an increase in paper bag use after plastic bag bans go into effect. This is important to consider due to the amount of water required to produce paper bags[106].

Cotton bags are contentious alternatives to single-use plastic bags due to the quantity of pesticides and water required to produce the crop. It takes over 5,000 gallons of water to produce one pound of cotton and although it only accounts for 2.4% of global croplands, cotton occupies 24% of the insecticide and 11% of the pesticide market[107]. Cotton bags would need to be used nearly 400 times in order to be below the global warming potential of HDPE single-use plastic bags that are reused a total of three times[108]. Other aspects of cotton bag lifecycle analyses are also poor and, similar to paper bags, cotton bags present a transportation issue due to the amount of space they occupy during shipping.

Consideration should also be given to the different types of reusable plastic bags that are available as allowable alternatives. Presently, most retailers have reusable plastic bags made out of woven and non-woven polypropylene or recycled PET. However, due to single-use bags being available for free, the sale of these bags is low. Recycled-PET bags come exclusively from Asia, cannot be end of life recycled and can contain a maximum of about 50%-60% recycled content. These bags require a lamination on the outside of the bag for printing/labeling but can be machine washed. Non-woven polypropylene bags do not need an added lamination on the outside of the bag but are not as easy for retailers to add their labels

[103] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[104] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013.
[105] "Banning Plastic Bags is Great for the World, Right? Not So Fast". *Wired*. 10 June 2016. https://www.wired.com/2016/06/banning-plastic-bags-great-world-right-not-fast/
[106] "Plastic Bag Bans: Analysis of Economic and Environmental Impacts". *Equinox Center*. Oct. 2013. https://energycenter.org/sites/default/files/Plastic-Bag-Ban-Web-Version-10-22-13-CK.pdf
[107] "Cotton Farming". *World Wildlife Fund*. http://wwf.panda.org/about_our_earth/about_freshwater/freshwater_problems/thirsty_crops/cotton/
[108] "Life Cycle Assessment of Supermarket Carrier Bags: A Review of the Bags Available in 2006. *Environment* Agency. Feb. 2011.

or more sophisticated graphics to. In bag-ban areas, there is typically at least one type of lower cost reusable plastic bag for retail and at least one more expensive option as well. The lower cost bags are typically a wave top or soft loop and the more expensive bags are most often a woven polypropylene, non-woven polypropylene or recycled polyethylene.

Table 8.1 The amount of primary use required to take reusable bags below the global warming potential of HDPE bags with and without secondary reuse.

	HDPE bag (No secondary reuse)	HDPE bag (40.3% reused as bin liners)	HDPE bag (100% reused as bin liners)	HDPE bag (Used 3 times)
Paper bag	3	4	7	9
LDPE bag	4	5	9	12
Non-woven PP bag	11	14	26	33
Cotton bag	131	173	327	393

[109]

	Impact Summary of Various Bag Types (Carrying Capacity Equivalent to 1000 Paper Bags)		
	Paper (30% Recycled Fiber)	Compostable Plastic	Polyethylene
Total Enegy Usage (MJ)	2622	2070	763
Fossil Fuel Use (kg)	23.2	41.5	14.9
Municipal Solid Waste (kg)	33.9	19.2	7.0
Greenhouse Gas Emissions (CO_2 Equiv. Tons)	0.08	0.18	0.04
Fresh Water Usage (Gal)	1004	1017	58

[110]

[109] "Life Cycle Assessment of Supermarket Carrier Bags: A Review of the Bags Available in 2006. *Environment* Agency. Feb. 2011.

[110] "Life Cycle Assessment for Three Types of Grocery Bags – Recyclable Plastic; Compostable; Biodegradable Plastic; and Recycled, Recyclable Paper. *Progressive Bag Alliance*. 2007.

Table 3-1 Shopping bag types for assessment

Bag type	Features	Manufacturing process	Weight (g)	Relative capacity[1]	Expected life	Bags per year[2]
Single use plastic (HDPE) bag	Light, strong, durable, effective when wet, recyclable	Production of HDPE film from ethylene, a by-product of gas or oil refining	7	1	single trip	520
Single use plastic (HDPE) bag with 100% recycled content	Light, strong, durable, effective when wet, contains recycled content, recyclable	Production of HDPE film	7	1	single trip	520
Single use 'boutique' plastic (LDPE) bag	Light, strong, durable, effective when wet	Production of LDPE film from ethylene, a by-product of gas or oil refining	18.1	0.8	single trip	650
Single use kraft paper bag	Convenient, recyclable though the current kerbside system, manufactured from renewable resources	Production of paper bags	42.6	0.9	single trip	578
Single use kraft paper bag with 100% recycled content	Convenient, contains recycled content, recyclable though the current kerbside system, manufactured from renewable resources	Production of paper bags	42.6	0.9	single trip	578
Reusable kraft paper bag (2 trips)	Convenient, recyclable though the current kerbside system, manufactured from renewable resources	Production of paper bags	42.6	0.9	two trips	289
Reusable kraft paper bag with 100% recycled content (2 trips)	Convenient, contains recycled content, recyclable though the current kerbside system, manufactured from renewable resources	Production of paper bags	42.6	0.9	two trips	289
Reusable non-woven plastic (polypropylene) "Green Bag"	Strong, durable, effective when wet, reusable	Production of PP film from propylene gas, a by-product of oil refining	95 [2]	1.1	104 trips (2 years)	4.55
Reusable calico bag	Light, flexible, washable, reusable, reusable manufactured from renewable resources	Cotton processing	85	1.1	104 trips (2 years)	4.55
Single use degradable starch-polyester blend bag (e.g. Mater-Bi)	Light, strong, compostable, biodegradable, manufactured from renewable resources	Maize growing based upon data related to growing maize in the Netherlands. PCL is produced from cyclohexanone (95%) and acetic acid (5%) [7].	8.1	1	single trip	520
Single use oxo-biodegradable bag (e.g. TDPA-EPI)	Light, strong, degradable	Additive modelled as stearic acid and small amount of cobalt metal to represent the presence of cobalt stearate.	6	1	single trip	520

[1] A relative capacity of 1 = 6-8 items per bag. For the purposes of this study, 7 items to a bag for a relative capacity of one was used.

[2] Quantity of shopping bags used to carry 70 grocery items home from the supermarket each week for 52 weeks in relation to relative capacity and adjusted in relation to expected life

[3] Comprises a 65g bag and 30g base

111

4 Results

The following table summarises the findings of the streamlined environmental assessment of shopping bag alternatives. A rating of one to five was used to show the diversity of impacts for each criteria, with one being the lowest impact. In some cases at the high impact end, the impact value of the bag fell outside the rating scale. Impacts cannot be added together to produce an overall bag rating.

Table 4-4 Environmental impacts of single use HDPE shopping bags and their potential alternatives over the full life cycle of the bag

Bag type	Example	Material consumption (kg)	Global warming (kg CO_2 eq)	Energy consumption (MJ)	Water use (kL H_2O)	Litter marine biodiversity (kg.y)	Litter aesthetics (m^2.y)	Disposal options
Reusable non-woven plastic (polypropylene) "Green Bag"		♠	♠	♠	♠	♠	♠	Recycle at major supermarkets
Reusable calico bag		♠	♠	♠	♠♠♠♠♠	♠	♠	No recycling, dispose to landfill
Reusable kraft paper bag with 100% recycled content (2 trips)	Photo unavailable	♠♠♠♠♠	♠♠♠	♠♠	♠	♠	♠	Recycle in household recycling bin
Single use oxo-biodegradable bag (e.g. TDPA-EPI)		♠♠♠	♠♠	♠♠♠	♠	♠♠♠	♠♠	Reuse as a garbage bin liner (disintegrates over several years)
Single use plastic (HDPE) bag with 100% recycled content		♠♠♠	♠	♠	♠♠	♠♠♠♠♠	♠♠♠♠♠	Recycle at major supermarkets Reuse as a garbage bin liner

111 "Comparison of Existing Life Cycle Analysis of Shopping Bag Alternatives". *Sustainability Victoria*. 18 April 2017.

Bag type	Example	Material consumption (kg)	Global warming (kg CO_2 eq)	Energy consumption (MJ)	Water use (kL H_2O)	Litter marine biodiversity (kg.y)	Litter aesthetics (m^2.y)	Disposal options
Reusable kraft paper bag (2 trips)		♠♠♠♠♠	♠♠♠♠	♠♠♠	♠	♠	♠	Recycle in household recycling bin
Single use compostable starch-polyester blend bag (e.g. Mater-Bi)	Photo unavailable	♠♠♠♠	♠	♠	♠♠♠♠♠	♠	♠♠	Compost (degrades within six months) Reuse as a garbage bin liner
Single use plastic (HDPE) bag		♠♠♠	♠♠	♠♠♠♠	♠	♠♠♠♠♠	♠♠♠♠♠	Recycle at major supermarkets Reuse as a garbage bin liner
Single use kraft paper bag with 100% recycled content	Photo unavailable	♠♠♠♠♠	♠♠♠♠♠	♠♠♠♠	♠	♠	♠♠	Recycle in household recycling bin
Single use kraft paper bag		♠♠♠♠♠	♠♠♠♠♠	♠♠♠♠♠	♠♠	♠	♠♠	Recycle in household recycling bin
Single use 'boutique' plastic (LDPE) bag		♠♠♠♠♠	♠♠♠♠♠	♠♠♠♠♠	♠	♠♠♠♠♠	♠♠♠♠♠	No recycling, reuse as a garbage bin liner

[112]

[112] "Comparison of Existing Life Cycle Analysis of Shopping Bag Alternatives". *Sustainability Victoria*. 18 April 2017.

Appendix E

Summary of U.S. Fee Ordinances

EASTERN REGION					
Jurisdiction	**Mechanism**	**Amount**	**Bag Type Fee is Charged On**	**Disposition of Funds**	**Notes**
Washington, DC	Fee	0.05	Plastic and Paper	0.01-0.02 to retailers 0.04 to Anacostia River Clean Up and Protection Fund	
Cambridge, MA	Fee	0.1	Plastic and Paper		
Falmouth (T), Maine	Fee	0.05	Plastic and Paper	Retailers	
Freeport (T), Maine	Fee	0.05	Paper	Retailers	
Portland (C), Maine	Fee	0.05	Plastic and Paper	Retailers	
South Portland, Maine	Fee	0.05	Plastic and Paper	Retailers	
Montgomery County, Maryland	Excise Tax	0.05	Plastic and Paper	County with a $0.01 to be kept by retailers for administrative expenses	
Longport, New Jersey	Fee	Not less than 0.10	Any single use or reusable	Retailers	
Long Beach, NY	Fee	0.05	Any carryout bag of paper, plastic, or reusable material	Retailers	
Suffolk County, NY (Went into effect 1/1/18)	Fee	0.05	Plastic and Paper	Retailers	

MIDWESTERN REGION					
Jurisdiction	**Mechanism**	**Amount**	**Bag Type Fee is Charged On**	**Where the Money Goes**	**Notes**
Chicago, Illinois	Fee	0.07	Plastic and Paper	$0.05 to city, $0.02 to retailers	Switched from ban to fee on 02/01/17 due to ineffectiveness of ban
Minneapolis, Minnesota	Fee	0.05	Paper and Reusable	Retailers or can choose not to charge the fee and make donations to an organization dedicated to addressing litter	Also bans single use plastic bags
WESTERN REGION					
Jurisdiction	**Mechanism**	**Amount**	**Bag Type Fee is Charged On**	**Where the Money Goes**	**Notes**
Bisbee (C), Arizona	Fee	0.05	Paper	$0.02 to retailer for costs; $0.03 to City Environmental Fund	
California (statewide)	Fee	0.10	Paper and Reusable	Retailers	Also bans single use plastic bags
Aspen , Colorado	Fee	0.20	Paper	$0.05 to retailer and $0.15 to the City for waste reduction	Also bans single use plastic bags
Ashland, OR	Fee	Not less than 0.10	Paper	Retailers	Also bans single use plastic bags
Corvallis, OR	Fee	0.05	Paper	Information not available	

Eugene, OR	Fee	Not less than 0.05	Paper	Retailers	Also bans single use plastic bags
Kermit, Texas	Fee	0.10	Paper	Retailers	Also bans single use plastic bags
Bainbridge Island, Washington	Fee	Not less than 0.05	Paper	Retailers	Also bans single use plastic bags
Bellingham, Washington	Fee	0.05	Paper	Retailers	Also bans single use plastic bags
Ellensburg, Washington	Fee	0.05	Paper or plastic	Retailers	Also bans single use plastic bags
Issaquah, Washington	Fee	Not less than 0.05	Paper	Retailers	Also bans single use plastic bags
Kirkland, Washington	Fee	Not less than 0.05	Paper	Retailers	Also bans single use plastic bags
Olympia, Washington	Fee	Not less than 0.05	Paper	Retailers	Also bans single use plastic bags
Port Townsend, Washington	Fee	0.05	Paper	Retailers	Also bans single use plastic bags
Seattle, Washington	Fee	Not less than 0.05	Paper	Retailers	Also bans single use plastic bags
Tacoma, Washington	Fee	Not less than 0.05	Paper	Retailers	Also bans single use plastic bags
Thurston County, Washington	Fee	0.05	Paper	Retailers	Also bans single use plastic bags

Tumwater, Washington	Fee	0.05	Paper	Retailers	Also bans single use plastic bags

U.S. Ban Ordinances

An exclusion in most of the bans was produce and meat bags, dry cleaning bags, and newspaper bags.

EASTERN REGION

Jurisdiction	Mechanism	Bag Type Ban is On	Allowable Bag Alternatives	Notes
Westport, Connecticut	Ban	Plastic carry out	Reusable, recyclable paper bag that contains no old growth fiber, 100% recyclable and min 40% post-consumer content	
Kennebunk, Maine	Ban	Plastic carry out	Reusable, recyclable paper bags	
York, Maine	Ban	Plastic carry out	Reusable, recyclable paper bags	
Chester, Maryland	Ban	Plastic check out less than 2.4 mils	Paper bags	Exception for restaurant take-out
Adams, MA	Ban	Thin-film single-use plastic bags	Reusable or biodegradable shopping bags	
Amherst, MA	Ban	Single use plastic bag	Biodegradable, reusable, compostable or recyclable paper bags	
Aquinna, MA	Ban	Plastic carry out	Reusable bags	
Barnstable, MA	Ban	Plastic carry out	Paper bags, reusable bags and boxes	
Bourne, MA	Ban	Plastic carry out	Reusable bags	
Bridgewater, MA	Ban	Plastic carry out	Reusable or biodegradable shopping bags	
Brookline, MA	Ban	Plastic carry out	Reusable bags or durable plastic	

Cambridge, MA	Ban	Plastic carry out	Reusable bag or recyclable paper bag	40% recycled content for paper, 10 cent fee on allowable alternatives
Chilmark, MA	Ban	Plastic carry out	Reusable bags and recyclable paper bag	
Concord, MA	Ban	Plastic carry out	Reusable bags and recyclable paper bag	
Dennis, MA	Ban	Plastic carry out	Reusable bags and recyclable paper bag	
Edgartown, MA	Ban	Plastic carry out	Recyclable paper bag and reusable bags	
Framingham, MA	Ban	Plastic carry out	Reusable or biodegradable shopping bags or compostable paper bags	
Great Barrington, MA	Ban	Plastic carry out	Reusable or biodegradable bags	Includes helpful pictures in educational materials about the ban
Hamilton, MA	Ban	Plastic carry out	Reusable bag	
Harwich, MA	Ban	Plastic carry out	Reusable bag	
Ipswich, MA	Ban	Plastic carry out	Reusable or biodegradable shopping bags	
Lee, MA	Ban	Plastic carry out	Reusable or biodegradable bags	

Lenox, MA	Ban	Plastic carry out	Paper bags or reusable shopping bags: The following information must be printed in a visible manner on the outside of the bags or on permanent tags: the name of the manufacturer; the country of manufacture; a true statement that the bag does not contain lead, cadmium, or other heavy metals in toxic amounts; the percent of post-consumer recycled material used in the bag, if any; and a statement recommending regular cleaning or disinfection.	
Manchester, MA	Ban	Plastic carry out	Reusable bag	
Marblehead, MA	Ban	Plastic carry out	Recyclable paper bag and reusable bags	
Mashpee, MA	Ban	Plastic carry out	Reusable bag	
Newburyport, MA	Ban	Plastic carry out	Reusable or biodegradable bags	
Newton, MA	Ban	Plastic check out bags	Reusable; recyclable paper	
North Hampton, MA	Ban	Plastic carry out	Reusable; biodegradable plastic and compostable	Plastic bags greater than 3 mils are considered reusable

Provincetown, MA	Ban	Certain single use plastic	Reusable; paper	Single-use plastic bags do not include plastic bags which are a maximum of 11 inches by 17 inches and are without handles provided to the customer for transporting produce, bulk food, candy or meat from a department within a store to the point of sale, to hold prescription medication dispensed from a pharmacy, to segregate food or merchandise that could damage or contaminate other food or merchandise when placed together in a point-of-sale bag, to distribute newspapers, or to protect clothing in dry-cleaning establishments.
Plymouth, MA	Ban	Plastic carry out	Reusable; paper	Less than 3 mils with handle is considered single use
Shrewsbury, MA	Ban	Plastic check out	Compostable and marine degradable plastic; recyclable paper; reusable	
Tisbury, Massachusetts	Ban	Plastic check out	Reusable; paper	May charge and retain a fee for paper or reusable
Chatham, MA	Ban	Single-Use plastic bags with handles; less than 2.5 mills	Reusable; paper	May charge a fee for paper; exempts dry cleaning, newspaper, product, meat bulk foods, wet items

Truro, MA	Ban	Certain single use plastic bags	Reusable	Single-use plastic bags do not include plastic bags which are a maximum of 11 inches by 17 inches and are without handles provided to the customer for transporting produce, bulk food, candy or meat from a department within a store to the point of sale, to hold prescription medication dispensed from a pharmacy, to segregate food or merchandise that could damage or contaminate other food or merchandise when placed together in a point-of-sale bag, to distribute newspapers, or to protect clothing in dry-cleaning establishments.
Wellsley, MA	Ban	Single use plastic check out	Reusable; recyclable paper	
Wellfleet, MA	Ban	Plastic carry out	Paper; reusable or boxes	
West, Tisbury, MA	Ban	Plastic check out bag	Reusable; recyclable paper	
Williamstown, MA	Ban	Plastic carry out	Reusable, recyclable paper bag that contains no old growth fiber, 100% recyclable and min 40% post-consumer content, compostable and marine degradable plastic bag	
Town of East Hampton, NY	Ban	Plastic/retail check out bags	Reusable; recyclable paper bags	
Village of East Hampton, NY	Ban	Plastic/retail check out bags	Reusable; recyclable paper bags	

Hasting on the River, NY	Ban	Plastic/retail check out bags	Reusable; recyclable paper bags	
Larchmont, NY	Ban	Plastic/retail check out bags	Reusable; recyclable paper bags	
Mamaroneck, NY	Ban	Plastic/retail check out bags	Reusable; recyclable paper bags	
New Castle, NY	Ban	Plastic/paper/ biodegradable bags	Reusable bags	
New Paltz Village, NY	Ban	Plastic bag	Reusable and recyclable bag	
Patchogue Village, NY	Ban	Plastic bag	Reusable and recyclable bag	
Rye, NY	Ban	Plastic bag	Reusable and recyclable bag	The term “checkout bag" does not include plastic produce bags or plastic bags measuring 28" by 36" or larger in size.
Southampton Town, NY	Ban	Plastic/retail check out bags	Reusable and recyclable bag	
Southampton Village, NY	Ban	Plastic/retail check out bags	Reusable and recyclable bag	
Barrington, Rhode Island	Ban	Plastic check out	Reusable and recyclable bag	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post-consumer content

MIDWESTERN REGION

Jurisdiction	Mechanism	Bag Type Ban is On	Allowable Bag Alternatives	Notes
Evanston, Illinois	Ban	Plastic carry out		Paper bags must be 100% recyclable and 40% min post consumer content
Marshall, Iowa	Ban	Plastic		Paper requirements: no old growth fiber, 100% recyclable, 40% min of PWC and specific ID requirements.
Minneapolis, Minnesota	Ban	Single use plastic carry out	Reusable, recyclable paper, commercially compostable	Minimum 40% post consumer content in paper

				Fee charged on the allowable alternatives

WESTERN REGION

Jurisdiction	Mechanism	Bag Type Ban is On	Allowable Bag Alternatives	Notes
Bethel, Alaska	Ban	Plastic carry out	Reusable, recyclable paper bags, compostable/biodegradable bags	
Homer, Alaska	Ban	Plastic carry out or any biodegradable or compostable bags	Information not available on allowable alternatives	
Hooper Bay, Alaska	Ban	Plastic carry out	Information not available on allowable alternatives	
California (statewide)	Ban	Plastic carry out	Any type of reusable bag	Fee on paper and reusable bags
Aspen , Colorado	Ban	Disposable plastic bag	Reusable bag	Fee on paper bags
Carbondale, Colorado	Ban	Disposable plastic bag	Reusable bag	Fee on paper bags
Crested Butte, Colorado	Ban	Disposable plastic bag	Reusable; paper made from 40% recycled content and 100% recyclable	
Telluride, Colorado	Ban	Disposable plastic bag	Reusable	Fee on paper bags
Kauai, Hawaii	Ban	Plastic carry out	Reusable, biodegradable, recyclable paper bags	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post-consumer content
Maui, Hawaii	Ban	Plastic carry out	Reusable or recycled paper	Paper bags must be 100% recyclable and 40% min post-consumer content
Pala, Hawaii	Ban	Plastic carry out	Information not available on allowable alternatives	

Santa Fe, New Mexico	Ban	Plastic carry out	Reusable, recyclable paper bags, compostable/biodegradable bags	
Silver City, New Mexico	Ban	Plastic carry out	Reusable bags, recyclable paper bag and/or cardboard boxes	
Ashland, Oregon	Ban	Plastic carry out	Reusable or paper	
Corvallis, Oregon	Ban	Plastic carry out	Reusable or paper	
Eugene, Oregon	Ban	Plastic carry out	Reusable or paper	
Portland, Oregon	Ban	Plastic carry out	Reusable or recycled paper	
Austin, Texas	Ban	Plastic carry out	Reusable or recycled paper	Contain 80% post consumer content
Brownsville, Texas	Ban	Plastic carry out	Reusable, recycled paper, biodegradable plastic	Paper bags must be 100% recyclable and 40% min post consumer content
Fort Stockton, Texas	Ban	Plastic carry out	Reusable or recycled paper	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post consumer content
Kermit, Texas	Ban	Plastic carry out	Reusable or recycled paper	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post consumer content
Laguna Vista, Texas	Ban	Plastic carry out	Reusable; recyclable paper; compostable bags	Compostable plastic bags must be easily differentiated by markings or color
Port Aransas, Texas	Ban	Single use plastic check out	Reusable; recyclable paper	
Sunset Valley, Texas	Ban	Single use plastic and paper carryout bags	Reusable	

Edmonds, Washington	Ban	Single use plastic carry out	Reusable or recyclable paper	Paper bags must be 100% recyclable and 40% min post consumer content
Ellensburg, Washington	Ban	Paper	Reusable or plastic	Paper bags must be 100% recyclable and 40% min post consumer content
Issaquah, Washington	Ban	Single use plastic carry out	Reusable or paper	Paper bags must be 100% recyclable and 40% min post consumer content
Kirkland, Washington	Ban	Single use plastic carry out	Reusable or paper	Paper bags must be accepted in city's recycling/composting program, 40% min post consumer content
Lacey, Washington	Ban	Single use plastic carry out	Reusable or paper	Paper bags must be 100% recyclable and 40% min post consumer content
Mukitlteo, Washington	Ban	Single use plastic carry out	Reusable, paper, or made of renewable material	Paper bags must be 100% recyclable and 40% min post consumer content
Olympia, Washington	Ban	Single use plastic carry out	Reusable or recyclable paper	Paper bags must be 100% recyclable and 40% min post consumer content
Port Townsend, Washington	Ban	Single use plastic carry out	Reusable or recyclable paper	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post consumer content

San Juan County, Washington	Ban	Single use plastic carry out	Reusable or recyclable paper	Paper bags must be 100% recyclable and 40% min post consumer content
Seattle, Washington	Ban	Single use plastic carry out (including biodegradable and compostable bags)	Reusable or recyclable paper	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post consumer content
Tacoma, Washington	Ban	Single use plastic carry out	Reusable or recyclable paper	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post consumer content
Thurston County, Washington	Ban	Single use plastic carry out	Reusable or recyclable paper	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post consumer content
Tumwater, Washington	Ban	Single use plastic carry out	Reusable or recyclable paper	No old growth fiber for paper bags and they must be 100% recyclable and 40% min post consumer content
SOUTHERN REGION				
Jurisdiction	**Mechanism**	**Bag Type Ban is On**	**Allowable Bag Alternatives**	**Notes**
Barrier Islands, North Carolina	Ban	Plastic carry out	Reusable, compostable plastic bag, recyclable paper bags	

International Ordinances

Plastic Bag Regulations Around the World		
Country	**Plastic Bag Regulations**	**Reduction Measure**
Argentina	The provinces of Buenos Aires and Mendoza both ban plastic bags. In 2012, the city of Buenos Aires tightened the province-wide restrictions on non-biodegradable plastic bags that had been passed in 2008.	Ban
Australia	Coles Bay (Tasmania) became Australia's first town to forgo plastic bags in 2003. Motivated by a desire to protect whales from bag litter as they passed by on their annual migration and to keep the National Park clean, all the retailers agreed to stop providing plastic bags. The rest of the state of Tasmania banned very thin plastic bags in 2013. South Australia was the first state to ban plastic bags, starting in 2009. A 2012 study found that ban effective, with customers bringing their own bags more often. Northern Territory and Australian Capital Territory followed with their own plastic bag bans in 2011. While Australia's four other states do not ban the bag, several cities and towns have initiated voluntary bans.	Ban
Austria	Some Austria supermarkets have stopped offering single-use plastic bags.	Some retailers have voluntarily stopped using plastic bags at checkout
Bangladesh	In 2002, the government attempted to ban the manufacture and use of plastic bags in Dhaka (the capital) and then nationwide. However, a lack of enforcement has prevented a noticeable decrease in use and many people forget that there is even a ban in place.	Ban that is not working
Bhutan	Plastic bags were banned in Bhutan in 1999 as part of the kingdom's effort to increase Gross National Happiness. However, the ban was poorly implemented and as a consequence it had to be reintroduced in 2005; monitoring of compliance is difficult.	Ban
Belgium	The combination of a tax on plastic bag producers, a voluntary fee charged by retailers, and a voluntary bag reduction initiative by the retail sector led to an 86 percent drop in plastic bag consumption between 2003 and 2011.	Tax, voluntary fee, and voluntary reduction by retailers
Botswana	In 2007, Botswana established a minimum thickness for bags and mandated that retailers apply a minimum levy to thicker bags, which would be used to support government environmental projects. Many retailers charged more than the minimum tax, and prices fluctuated over time. A study of four retail chains 18 months after implementation of the charge showed that bag use fell by half.	Fee

Bulgaria	Bulgaria's tax on plastic bags began in October 2011, at 15 stotinki (11¢) per bag. It has since increased to 55 stotinki. This tax is imposed on producers and importers and is then passed on to retailers, who pass it on to consumers. Bag consumption more than halved in the first month of the tax.	Fee
Cameroon	In 2013, the government of Cameroon launched a campaign against non-biodegradable plastic bags and banned them in 2014. An environmental incentive program was also instituted. Citizens can help the environment and earn money by collecting plastic bags that have been littered. People can earn $17 per kilogram of bags collected.	Ban
Canada	The Ontario Plastic Bag Reduction Task Group, a coalition of grocery, retail, and plastics industry associations and the Recycling Council of Ontario, formed in 2007 to work toward the province's goal of halving plastic bag use by 2012. Stores offered a variety of alternatives to plastic, with many providing incentives for using reusable bags and charging a fee for plastic bags or even dropping them altogether, helping Ontario meet its goal two years early. Retailer participation also helped the province of Québec reach a similar 50 percent reduction goal well before the target date. The Northwest Territories began requiring that grocery stores charge 25¢ for all single-use bags in January 2010; the law expanded to cover all retailers in February 2011. Canadian towns with bans on single-use plastic bags include Leaf Rapids, Fort McMurray, and Thompson. Toronto's 2009 plastic bag tax was challenged by the industry and ended in 2012.	Fees and bans
Channel Islands	Stores began charging 5 pence (8¢) per single-use bag in 2008. Bag use dropped 90 percent in the year after the charge was introduced.	Fee
Chile	Pucón was the first city in Chile to ban plastic bags in 2013, to be fully enforced in 2015. Punta Arenas followed suit, passing a ban in early 2014.	Ban
China	A few cities and provinces introduced and tried to implement policies limiting or eradicating bags in the beginning in the late 1990s, but enforcement was poor. In association with the 2008 Beijing Olympic Games, a set of national laws limiting plastic bag production and consumption came into effect. These mandated that all retailers stop providing bags under a certain thickness and charge a fee for thicker bags that is higher than the cost of the bag. According to government figures, one year after the charge began, bag use was reduced by 40 billion bags, and by 2013, the savings reached 67 billion bags. A detailed study found that shoppers in Beijing and Guiyang used fewer new plastic bags, filled them with more items, and were more likely to reuse them after the law was implemented.	Fee
Czech Republic	Supermarkets that do not charge their customers for plastic bags must pay the government some 230 euros ($320) per ton for their disposal.	Fee

Denmark	Denmark began taxing producers for plastic and paper shopping bags by weight in 1994. The rate paid today is 22 kroner ($4) per kilogram of plastic bags, slightly higher than the original rate of 20 kroner. Bag manufacturers pass the cost on to retailers, who then decide if they will in turn charge customers. Consumers generally pay 2–3.5 kroner (37–65¢) per bag, which may be the highest price in the world. The country experienced an initial reduction in bag use of 60 percent in the year after the tax took effect.	Tax on producers, fee for consumers
Egypt	In 2009, Hurghada, a city on the Red Sea, banned plastic bags.	Ban
Eritrea	In 2002, the government announced a ban on plastic bags.	Ban
Estonia	Retailers charge about 10 euro cents (14¢) per bag. In addition, bag manufacturers are responsible for arranging the recovery or recycling of their product. If recycling or material recovery targets are missed, producers must pay a tax based on the shortfall amount.	Fee
Ethiopia	In 2008, Ethiopia passed a law banning thin plastic bags.	Ban
European Union	Some 88 billion single-use plastic bags are used in the EU every year, ranging from about 4 single-use bags a year in Denmark and Finland to over 400 bags per person annually in Portugal, Poland, and Slovakia. Although many European countries have attempted to decrease plastic bag use on their own, bag litter is still problematic enough—especially in the marine environment—that the European Commission (EC) decided to attempt enforcing a Europe-wide law. In April 2014, draft rules amending the EC's Packaging Waste Directive were approved by the European Parliament. The new rules aim to decrease plastic bag use in the EU by 50 percent by 2017 and by 80 percent by 2019. Member states can choose whether to use bans, taxes, or other means to hit the targets.	Target goal set and EU states can choose how they want to meet the goal
Finland	Most supermarkets charge for all types of grocery bags.	Fee but unknown whether fee is mandated or voluntary for retailers
France	A ban on plastic bags went into effect on July 1, 2016 and a ban on bags used for fruit and vegetable packaging went into effect on January 1, 2017.	Ban

Germany	To comply with the 1991 Packaging Ordinance, German packaging distributers and manufacturers finance the collection, sorting, and recycling of their products—including plastic bags—through what is known as the "Green Dot" system (named for the symbol found on recyclable packaging). According to a study by the German Society for Packaging Market Research, virtually all plastic bags consumed in the country are recycled, almost three quarters of consumers use carrier bags multiple times, and only about a tenth of groceries are taken home in a new plastic bag. Most German supermarkets voluntarily charge 5–10 euro cents (7–14¢) per bag. In 2000, Germans used 7 billion plastic bags; in 2012, the figure had dropped to 6 billion (76 bags per person).	Voluntary fee
Guinea-Bissau	In 2013, the government announced a ban on plastic bags to come into effect in 2014.	Ban
Haiti	In 2012, the Prime Minister announced a ban on black plastic bags and polystyrene (commonly referred to as Styrofoam) containers for to-go food. Small plastic bags filled with drinking water are exempt from the ban. The government announced a crack-down in 2013 and conducted a raid on warehouses.	Ban
Hong Kong	In 2009, major supermarkets and chain stores in Hong Kong were required to charge HK50 cents (6¢) for plastic bags. In 2013, the government announced that the fee raised less than initially projected, pulling in HK$26.5 million, far short of the expected HK$200 million. The charge successfully reduced plastic bag use by 75 percent in the affected stores. In 2014, the Legislative Council voted to expand the charge to all retailers and allow the stores to keep the proceeds.	Fee
Hungary	Some supermarkets choose to charge for plastic bags.	Voluntary fee
Ireland	Ireland's bag levy, which came into force in March 2002, is a frequently referenced example of a successful plastic bag regulation. Prior to implementation, the government gained the support of retailers and the public. The levy applies to both biodegradable and non-biodegradable bags. The proceeds go to the implementation of the levy and to an environmental fund that pays for recycling centers, landfill cleanups, and other environmental projects. The levy began as a 15 euro cent (21¢) tax and resulted in an over 90 percent decrease in consumption—from 328 bags per consumer per year to 21 bags. A subsequent increase in consumption—to 31 bags per person by 2006—resulted in a 7 euro cent increase in the levy in July 2007. Again, bag consumption decreased. In 2011, legislation allowed the levy to be amended once a year with the aim of limiting use to 21 bags per person per year or less, with a ceiling at 70 euro cents per bag.	Fee

Italy	In 1988 Italy passed a law taxing importers and producers of non-biodegradable bags 100 lira (7¢) per bag, but it did not last or appear effective. A national pilot program aiming to gradually reduce consumption of non-biodegradable shopping bags began in 2007, and in 2011 Italy banned single-use plastic bags. The ban has not been fully implemented or enforced because of unresolved legal disputes over EU trade laws.	Ban
Kenya	In 2007, Kenya banned the manufacture and import of thin plastic bags, yet the ban was not enforced. In 2011, the use of thin bags was banned and a tax was imposed on thicker bags, yet neither the tax nor the ban has been well enforced.	Ban and tax
Latvia	Retailers are taxed to pay for the disposal of plastic bags. Customers can no longer get a free plastic bag at the supermarket.	Tax on retailers for disposal and fee for consumers at checkout
Luxembourg	A voluntary agreement between the Environment Ministry and the packaging materials industry association VALORLUX began in 2004, promoting the sale of reusable "Eco-sac" bags in order to reduce disposable plastic bag consumption. In 2007, a charge of 3 euro cents (4¢) per "emergency" single-use bag was introduced. Plastic bag use decreased from 55 million in 2004 to 6.5 million in 2009.	Fee
Macedonia	Starting in 2009, stores were barred from giving out free plastic bags. Customers reportedly pay 1 denar (2¢) for a bag.	Fee
Malawi	In 2013, Malawi banned plastic bags.	Ban
Malaysia	As of 2011, shoppers in the state of Penang are charged 20 sen (6¢) per plastic bag.	Fee
Mali	A ban against non-biodegradable bags was announced in 2013.	Ban
Mauritania	In 2013, Mauritania banned plastic bags. In the capital of Mauritania, an estimated 70 percent of cattle and sheep deaths are from plastic bag ingestion.	Ban
Mexico	Mexico City passed a plastic bag ban in 2009, but the law was reformed before it came into effect to simply encourage biodegradable bags and require a certain recycled content in plastic bags.	Voluntary reduction
Mongolia	In 2009, Mongolia banned plastic bags.	Ban
Netherlands	Since the mid-1990s, supermarkets have voluntarily charged for most kinds of plastic bags. Customers pay about 20 euro cents (28¢) per bag.	Fee
Nigeria	In 2013, Nigeria announced a ban on plastic bags to begin in 2014, which includes both plastic shopping bags and plastic sachets of drinking water.	Ban
Northern Ireland	Since April 2013, all single-use carrier bags cost consumers 5 pence (8¢). Proceeds go to the Northern Ireland Environment Link's NGO Challenge Fund for environmental projects.	Fee

Oman	In 2009 the Environment Society of Oman (ESO), a non-governmental organization, staged a five-month "road show," traveling to supermarkets, schools, malls, and gas stations around the Sultanate to raise awareness about the environmental risks posed by plastic bags. Their efforts were backed by the Ministry of Environment and Climate Affairs, which, as of March 2014, was deliberating on how to implement a proposed ban on production and import of non-biodegradable plastic bags. ESO is part of the committee being consulted.	Voluntary reduction
Pakistan	In 2006, thin plastic bags were banned in Karachi. In 2013, the Islamabad Capital Territory also banned thin plastic bags.	Ban
Papua New Guinea	Papua New Guinea banned plastic bags in 2009.	Ban
Philippines	Beginning in 2013, several cities in the Manila metropolitan area banned plastic bags. Several other cities across the archipelago followed suit, including Laoag, Bontoc, and Ilolio.	Ban
Poland	A tax of up to 40 groszy (13¢) was considered but eventually dropped in 2010.	Tax
Portugal	In 2008, Parliament passed a resolution recommending the government work to cut plastic bag use by educating retailers and the public, creating incentives for reusable bag use, and using other measures such as a charge per bag.	Voluntary reduction
Republic of the Congo	In 2011, the government announced a ban on plastic bags, but did not announce when it would take effect.	Ban
Romania	Romania introduced a 20 bani (6¢) per bag eco-tax on plastic bag producers and importers in 2009.	Tax on producers and importers of plastic bags
Rwanda	In 2008, Rwanda banned the use of non-biodegradable plastic bags thinner than 100 microns, which covers most typical carryout bags. Expatriate and journalist accounts note that plastic bags found in the luggage of airline passengers from outside the country are confiscated. However, there is a black market for plastic bags, and there have been reports that bags are freely used in some areas.	Ban
Scotland	Proposed legislation would have customers pay 5 pence (8¢) per single-use carrier bag starting in October 2014.	Fee
Singapore	In 2013, the Singapore Environment Council released a study of plastic bag use and recommended different actions to reduce use such as plastic bag free days and education campaigns. The National University of Singapore has voluntarily banned plastic bags.	Voluntary reduction
Slovakia	Billa, Hypernova, and Kaufland are among the food stores that charge for plastic bags.	Voluntary fee
Somaliland	In 2005, Somaliland banned plastic bags.	Ban

South Africa	In South Africa, thin plastic bags were banned in 2003. The government set a charge for thicker plastic bags and took a portion of it as a levy to fund environmental projects. Bag use decreased by 90 percent when the measures were first introduced, but consumption has slowly increased since. Retailers charge consumers varying prices near half a rand (50¢).	Ban and consumer fee
South Korea	South Korea has a levy on plastic bags.	Fee
Spain	Through a voluntary agreement among Catalonia's Waste Agency, regional and national business groups, plastic bag manufacturers, food distributors, and supermarkets, single-use plastic bag consumption in the region dropped by more than 40 percent between 2007 and 2011. Annual supermarket plastic bag use dropped by 1 billion units in that time, an impressive 87 percent decline. Stores began charging customers in the Andalucía region 5 euro cents (7¢) for each plastic bag in 2011. Spain had planned to phase out plastic bags completely by 2018, but this effort is on hold as Spain resolves issues raised by the European Commission.	Voluntary reduction and voluntary fees
Switzerland	In 2012, the Swiss Parliament passed a motion banning single-use plastic bags.	Ban
Taiwan	Taiwan used 16 million shopping bags a day before the government began restricting their use in 2001. Now plastic bags cost between NT$1 and NT$2 (3–6¢) each. In 2006, 72 percent of people surveyed said they regularly carried used plastic bags when they went shopping, compared with 18 percent in 2001 before the bag charge.	Fee
Tanzania	In 2006, Tanzania passed a law banning plastic bags. In 2011, semi-autonomous Zanzibar also banned plastic bags.	Ban
Thailand	Tesco Lotus, a supermarket, is piloting "no bag" policies in two stores, one in Koh Samui and the other in Phuket.	Voluntary reduction
Turkey	In 2010, Kadıköy, a district within Istanbul, announced a ban on plastic bags.	Ban
Wales	Since October 2011, Welsh customers pay 5 pence (8¢) per single-use carrier bag. A survey of 13 retailers published in 2012 showed 35 to 96 percent reductions in single-use bag consumption as a result of the charge.	Fee
Uganda	In 2007, Uganda banned the import and use of thinner bags and mandated a charge on thicker bags.	Ban
United Arab Emirates	As part of its "No to Plastic Bags Campaign, "the Dubai Municipality's Waste Management Department announced a contest in2013 to see which retailers could reduce their plastic bag use the most. All supermarkets and hypermarkets had already switched entirely to biodegradable plastic bags, but the city urged them to cut the number of these given out as well.	Voluntary reduction

United Kingdom	In 2012, U.K. supermarket customers took home over 8 billion single-use plastic bags, roughly 120 per person. Marks and Spencer, a large U.K. retailer, has had a 5 pence (8¢) charge for plastic bags in its food sections since 2008. Wales introduced a 5-pence charge on single-use carrier bags at all stores in 2011. Northern Ireland did the same in 2013, and Scotland aims to do so by October 2014. In England, a 5-pence charge will be applied to single-use plastic bags only, beginning in October 2015. Most proceeds will go to charity, and other specifics are under discussion. Several small English towns—such as Kew, Aylsham, Girton, Hebden Bridge, Henfield, Modbury, and Overton—worked with local retailers to encourage voluntary bans on plastic bags in the late 2000s. London considered a plastic bag ban in 2007, but the proposal was shelved the next year.	Fee
Vietnam	Non-biodegradable bags are taxed by weight.	Tax

Appendix F

California's Requirements for Reusable Bag Certification[113]

42281.5.

On and after July 1, 2015, a producer of reusable grocery bags made from plastic film shall not sell or distribute a reusable grocery bag in this state unless the producer is certified by a third-party certification entity pursuant to Section 42282. A producer shall provide proof of certification to the department demonstrating that the reusable grocery bags produced by the producer comply with the provisions of this article. The proof of certification shall include all of the following:
(a) Names, locations, and contact information of all sources of postconsumer recycled material and suppliers of postconsumer recycled material.
(b) Quantity and dates of postconsumer recycled material purchases by the reusable grocery bag producer.
(c) How the postconsumer recycled material is obtained.
(d) Information demonstrating that the postconsumer recycled material is cleaned using appropriate washing equipment.
(Added by Stats. 2014, Ch. 850, Sec. 1. Effective date postponed (until November 9, 2016) by referendum petition. Approved in referendum Proposition 67 at the November 8, 2016, election.)

42282.

(a) Commencing on or before July 1, 2015, the department shall accept from a reusable grocery bag producer proof of certification conducted by a third-party certification entity, submitted under penalty of perjury, for each type of reusable grocery bag that is manufactured, imported, sold, or distributed in the state and provided to a store for sale or distribution, at the point of sale, that meets all the applicable requirements of this article. The proof of certification shall be accompanied by a certification fee, established pursuant to Section 42282.1.
(b) A reusable grocery bag producer shall resubmit to the department proof of certification as described in subdivision (a) on a biennial basis. A reusable grocery bag producer shall provide the department with an updated proof of certification conducted by a third-party certification entity if any modification that is not solely aesthetic is made to a previously certified reusable bag. Failure to comply with this subdivision shall result in removal of the relevant information posted on the department's Internet Web site pursuant to paragraphs (1) and (2) of subdivision (e) for each reusable bag that lacks an updated proof of certification conducted by a third-party certification entity.
(c) A third-party certification entity shall be an independent, accredited (ISO/IEC 17025) laboratory. A third-party certification entity shall certify that the producer's reusable grocery bags meet the requirements of Section 44281.
(d) The department shall provide a system to receive proofs of certification online.
(e) On and after July 1, 2015, the department shall publish a list on its Internet Web site that includes all of the following:
(1) The name, location, and appropriate contact information of certified reusable grocery bag producers.
(2) The reusable grocery bags of producers that have provided the required certification.
(f) A reusable grocery bag producer shall submit applicable certified test results to the department confirming that the reusable grocery bag meets the requirements of this article for each type of reusable

[113] "California Legislative Information". https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=30.&title=&part=3.&chapter=5.3.&article=2

grocery bag that is manufactured, imported, sold, or distributed in the state and provided to a store for sale or distribution.
(1) A person may object to the certification of a reusable grocery bag producer pursuant to this section by filing an action for review of that certification in the superior court of a county that has jurisdiction over the reusable grocery bag producer. The court shall determine if the reusable grocery bag producer is in compliance with the requirements of this article.
(2) A reusable grocery bag producer whose certification is being objected to pursuant to paragraph (1) shall be deemed in compliance with this article pending a determination by the court.
(3) Based on its determination, the court shall direct the department to remove the reusable grocery bag producer from, or retain the reusable grocery bag producer on, its list published pursuant to subdivision (e).
(4) If the court directs the department to remove a reusable grocery bag producer from its published list, the reusable grocery bag producer shall remain off of the published list for a period of one year from the date of the court's determination.
(Added by Stats. 2014, Ch. 850, Sec. 1. Effective date postponed (until November 9, 2016) by referendum petition. Approved in referendum Proposition 67 at the November 8, 2016, election.)

42282.1.

(a) A reusable grocery bag producer shall submit the fee established pursuant to subdivision (b) to the department when providing proof of certification or recertification pursuant to Sections 42281.5 and 42282.
(b) The department shall establish an administrative certification fee schedule that will generate fee revenues sufficient to cover, but not exceed, the department's reasonable costs to implement this article. The department shall deposit all moneys submitted pursuant to this section into the Reusable Grocery Bag Fund, which is hereby established in the State Treasury. Notwithstanding Section 11340 of the Government Code, moneys in the fund are continuously appropriated, without regard to fiscal year, to the department for the purpose of implementing this article.

Appendix G

New York State Municipal Bag Ordinance Survey

Municipality	Town of East Hampton, NY
Region	LI
Mechanism	Ban
Ban Type	Plastic/retail check out bags
Year	2015
Contact	**Councilwoman Sylvia Overby,** SOverby@EHamptonNY.Gov, 631-324-2620 **Kim Shaw,** Natural Resources Department Director, Town of East Hampton **Marguerite Wolffsohn,** Planning Committee, Town of East Hampton, 631-324-2178
Question 1 - Was there initial buy in among both the consumers and business community?	**Sylvia Overby:** "The ban went off without a hitch", no complaints from businesses so far, had public support in beginning and no complaints from public now, initially businesses' biggest concern was inventory of plastic bags so they were given 3-4 month lag time for law to be enforced **Kim Shaw:** Little bit of pushback from main grocers in the beginning, public on board in beginning **Marguerite Wolffsohn:** Public on board, some concern from grocers at first
Question 2 - Since the ban has been in place have any public perceptions changed?	**Sylvia Overby:** Public very accepting, no issues **Kim Shaw**: Public perception has been good. Retailers are on board because reusable bags are free advertising **Marguerite Wolffsohn:** Public perception has not changed
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	Nothing to add to this from **Sylvia Overby** or **Kim Shaw**. Both said all has been good and they are not anticipating changing anything **Marguerite Wolffsohn:** Nothing planned
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Sylvia Overby:** No issues but would change education - have people continue to bring bags to grocery stores, continue education of BYOB (Bring Your Own Bag) **Kim Shaw**: Not anticipating changing anything **Marguerite Wolffsohn:** No issues

Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Sylvia Overby:** 1) Plastic bags not big issue on roadside anymore, 2) Paper is the alternative and they do not charge for paper bags - suggests fee on paper because they don't have one and plastic bags have been almost directly replaced with paper bags **Kim Shaw**: There are only two locations that use paper bags and a couple of delis so paper bag use hasn't gone up too much, "retail has all gone for plastic reusable bags" **Marguerite Wolffsohn:** Paper bags have increased but just her personal opinions, noticed an increase in reusable bags right when it was enacted, no studies have been done to find this out
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Sylvia Overby:** 1) It started to get complicated with the fee (collection, adding on to sale ticket, who gets the money? where does the money go?), 2) Didn't want retailers to feel like they had to charge patrons more money and then have them go elsewhere. **Kim Shaw:** Litter committee did a lot of research on what was happening in the area as far as bans vs. fees and was following Southampton who did a ban prior to them **Marguerite Wolffsohn:** Not sure but thinks they modeled after the Village who had done the ban first and it worked
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Sylvia Overby:** Public hearing there was only 1 lobbying group - pro plastic bag group, does not remember who though **Kim Shaw:** Reps from grocery stores came out and spoke against the ban because of the large quantities of plastic bags in stock so that's why the Town decided on the phase in **Marguerite Wolffsohn:** Not sure since it has been so long
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Sylvia Overby:** Has not heard anything on this **Kim Shaw:** Less plastic bags floating around their landfill, in the trees and at the recycling facility **Marguerite Wolffsohn:** Very little plastic bags now, no impact on roadside litter because there's so much of it, no more plastic bags in trees, thinks it makes a big difference
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Sylvia Overby:** Talked about it in public sessions before legislation was written to get the feeling of the community, have other groups around to support it (sustainability groups, recycling groups, environmental groups), write letters of support to newspapers and town board members **Kim Shaw:** Did not have anything for this **Marguerite Wolffsohn:** Suspects quite a lot of paper bags are being used, do more education

Notes	**Sylvia Overby:** 1) Law allowed for lag time for businesses so that they could clear out their plastic bag inventory, 2) Bottom line was the education process of reusable bags, have not seen any problems, narrowed it to retail (delis are under retail but restaurants not under law), some liquor stores have gone to reusable bags, 3) Feels like it has worked, did it mainly for trash on side of roads and seems to have helped 4) Showed plastic bag documentary "Bag It"' in auditorium setting, had 100 people from the area attend **Kim Shaw:** 1) In the beginning there was a large promotion of reusable bags, reusable bags now have become trendy, J.Crew and Vineyard Vines have bags that people want to keep and be seen with, retailers like it because it is free advertising 2) Some businesses charge up to 15 cents per bag for plastic bags 3) Public education and outreach from litter committee went well - signs outside of grocery stores that say "Did you remember your reusable bags?", 4) Phase in went well because businesses joined a business alliance and the alliance agreed on the phase in date **Marguerite Wolffsohn:** 1) So many very wealthy tourists in the area that might not even blink at the fee so due to demographics a ban is better there, 2) Store in Sag Harbor gives fee to charity groups

Municipality	Village of East Hampton, NY
Region	LI
Mechanism	Ban
Ban Type	Plastic/retail check out bags
Year	2012
Contact	**Councilwoman Sylvia Overby**, SOverby@EHamptonNY.Gov **Becky Mulinaro**, Village Administrator, 631-324-4150
Question 1 - Was there initial buy in among both the consumers and business community?	**Sylvia Overby:** Said that her answers above apply to both the Town and Village **Becky Mulinaro:** There were only a handful that were not being supportive, a lot of consumers were on board, especially environmental groups and property groups
Question 2 - Since the ban has been in place have any public perceptions changed?	**Becky Mulinaro:** No - very smooth transition, only knows of one retailer that still uses plastic bags, everyone else uses paper or reusable, Lululemon and Vineyard Vines use small reusables
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Becky Mulinaro:** No plans to adjust because of smooth transition

Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Becky Mulinaro:** No major issues or changes being considered, retailers are allowed to charge voluntary fee on single use plastic and paper bags so some retailers are imposing a fee on paper themselves for consumers that are not using reusables.
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Becky Mulinaro:** Massive compliance, only one store using plastic checkout bags
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Becky Mulinaro:** Was not there at that time
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Becky Mulinaro:** Mainly heard from local environmental groups and Citizens Campaign for the Environment
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Becky Mulinaro:** No municipal recycling program to speak of, people self-haul to Town site
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Becky Mulinaro:** No
Notes	**Becky Mulinaro:** No one blinks an eye when they use a reusable bag or paper bag, has worked out very well, people have transitioned very well, it is second nature to people now, reusable bags also act as free advertising for retailers

Municipality	Hastings-on-Hudson, NY
Region	Westchester
Mechanism	Ban
Ban Type	Plastic/retail check out bags
Year	2015
Contact	**Jordan Christensen**, Hudson Valley Program Coordinator for Citizens Campaign for the Environment, jchristensen@citizenscampaign.org **Francis Frobel,** Village Manager,516-390-7150, 914 -478-3420
Question 1 - Was there initial buy in among both the	**Jordan Christensen:** 1) Had public buy in from get go and community says it has been going great

consumers and business community?	2) Only main opposition was A&P grocery store - initially FIA sued Hastings but the lawsuit was dropped because the plaintiff (A&P) went out of business 3) Mainly saw support at hearings and mainly a lot of questions 4) A lot of student groups were on board already **Francis Frobel:** 1) Quite a bit of opposition from retailers because it was a change in practices and retailers saw it as an expense (much easier to supply plastics vs. paper), 2) Most consumers didn't care and it made no difference to them
Question 2 - Since the ban has been in place have any public perceptions changed?	**Jordan Christensen:** Knows anecdotally from people in community that public is generally supportive, people just got into habit **Francis Frobel:** 1) Never any opposition from public, 2) Business community has leveled off - gave quite a bit of time in local law to phase in compliance
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Jordan Christensen:** Has not heard about any changes because it is a small enough community and the ban works **Francis Frobel:** No talk of any change
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Jordan Christensen:** No plans to make any changes but having an issue with grocers making bags over 2.25 mil and these bags meet the qualification of reusable so they're available at carry out for free (smaller stores comply because of cost of thicker bags), also seeing an increase in paper bag use **Francis Frobel:** No issues or plans to make any changes
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Jordan Christensen:** 1) No formal surveys but visibly less litter 2) Increases in reusable bags 3) Unfortunately also seeing increase in paper bag use **Francis Frobel:** Seeing cleaner downtown because also banned use of styrofoam, not seeing kind of litter they used to see, notice less plastic bags as litter on the ground, thinks people are using reusable bags more
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Jordan Christensen:** This was a first generation model of legislation - Rye, Hastings, Larchmont, Mamaroneck - all did it in a very similar way, ban was easier to go with at first **Francis Frobel:** Fee too cumbersome, this was easier to enforce
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Jordan Christensen:** FIA **Francis Frobel:** No one besides FIA

Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Jordan Christensen:** Does not have anything on this but would like to have this data **Francis Frobel:** Not aware of anything
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Jordan Christensen:** 1) Number one recommendation is make sure you address paper and thicker plastic, 2) Do better data collection, 3) Larger municipalities have larger resources to fight lawsuits **Francis Frobel:** Businesses and restaurants were concerned about how it would work out so think about how businesses and the community accept it, tell them you're going to do it, give them time to implement, give them room to vent, give long ramp up time (Hastings gave months), tell them to run through inventory, used to personally go into stores which helped bring about compliance, surprised more municipalities around the State have not implemented a ban - surprised it didn't get more popular, wouldn't change anything
Notes	**Jordan Christensen:** Do good outreach on banning SUPBs and then keep up good outreach because habits slip over time, people go back to old habits, NYC: a lot of plastic bag manufacturing groups, APBA and paper bag manufacturers **Francis Frobel:** Even though a 6 month ramp up period was given there was hold out from a few retailers, sent series of letters and did outreach but even so there have been reports of noncompliance

Municipality	Larchmont, NY
Region	Westchester
Mechanism	Ban
Ban Type	Plastic/retail check out bags
Year	2013
Contact	**Millie Magraw,** Legislative Aide to Westchester County Legislator Catherine Parker, mlm9@westchestergov.com
Question 1 - Was there initial buy in among both the consumers and business community?	**Millie Magraw:** Business and community support up front, businesses and community still supportive but some business owners do ignore it
Question 2 - Since the ban has been in place have any public perceptions changed?	**Millie Magraw:** No - businesses and community still supportive
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Millie Magraw:** No plans to adjust anything or change but if were to change then would impose a fee on paper as well ban plastic and put a fee on paper and have retailer keep part of fee on paper or all of it, Larchmont also considering banning heavier plastic bags because some stores came out with slightly heavier bag

Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Millie Magraw:** 1) Don't currently plan to change but if they were to change then they would impose a fee on paper as well as ban plastic and have retailer keep part of the fee on paper or all of it, 2) Larchmont also considering banning heavier plastic bags because some stores came out with a slightly heavier bag that qualifies as reusable so they're still seeing plastic bag use
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Millie Magraw:** Seeing more paper bags and a lot more reusable bags or no bags, less clogged storm drains
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Millie Magraw:** Moved forward with ban because 1) That's what municipalities before them did and it was a popular model 2) A few years back there wasn't as much out there as there is now about the negative impacts of paper so part of it was also a little bit of lack of education, 3) Also thought something is better than nothing 4) Thinks that people would be fine with a fee
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Millie Magraw:** A few but went away quickly - FIA and plastics industry
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Millie Magraw:** Not that they're aware of, probably not significant enough of a change because not enough communities in the County have ban
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Millie Magraw:** 1) Unlike Mamaroneck, Larchmont does not have any big box grocery stores - pushback comes from people that have dogs, 2) Food industry has said that they're more supportive of countywide or statewide ordinances, 3) Knows that Mamaroneck felt stymied by lawsuit
Notes	**Millie Magraw:** 1) If you have a community that has a sizeable number of people on SNAP or WIC and there is an environmental justice component to it, then consider that and also have ban on plastic and fee on paper because that will do the most good, 2) Have an educational component

Municipality	Village of Mamaroneck, NY
Region	Westchester
Mechanism	Ban
Ban Type	Plastic/retail check out bags
Year	2013

Contact	**Martin Hain,** Chair for the Committee for the Environment, CFTE@vomny.org, 415-225-8767
Question 1 - Was there initial buy in among both the consumers and business community?	**Martin Hain:** Buy in from both consumers and retailers, big education campaign in beginning - played "Bag It" for the public **Millie Magraw:** Had very little public debate on it, kind of snuck it in, have not gotten any pushback
Question 2 - Since the ban has been in place have any public perceptions changed?	**Martin Hain:** Not sure on this one, constantly educating public and it is anongoing mission, always running things for awareness but don't get a lot of feedback from residents themselves
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Martin Hain:** Don't think so because everyone has been very compliant
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Martin Hain:** Not aware of any
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Martin Hain:** Hard to gauge consumer impact but greater use of reusable bags especially at grocery stores, all grocery stores offer reusable bag option and Stop and Shop gives a discount for using reusable bags, very successful because finding less and less bags in waterways
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Martin Hain:** 1) Ban was more environmentally friendly and speedier process, 2) Village main street leads straight into harbor, wanted more immediate impact
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Martin Hain:** No lobbyists but people did voice concern on cost
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Martin Hain:** Have not heard anything yet
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Martin Hain:** 1) Education is key - don't just drop it on people, 2) Went out and talked to merchants on main drag in village, 3) Education was held at events and personally went to all merchants on Main St and talked to them about it, 4) Offered public viewing of "Bag It" - by the time they finished the movie the people that attended it understood the problem

Notes	**Martin Hain:** Merchants very compliant except for CVS because they made heavier bags to get around the law

Municipality	New Castle, NY
Region	Westchester
Mechanism	Hybrid
Ban Type	Ban on plastic/fee on allowable alternatives (2.25 mil plastic bags, reusable bags and paper bags)
Year	2017
Contact	**Steven Wolk,** steve@wolkco.com, 917-863-3316
Question 1 - Was there initial buy in among both the consumers and business community?	**Steven Wolk:** No, Town Board was not on board, Town Supervisor not on board, residents and businesses mixed, some businesses against, number one reason people were against it was lack of education, once people were educated then people got on board.
Question 2 - Since the ban has been in place have any public perceptions changed?	**Steven Wolk:** 1) Public perception was negative but once there was education it improved, once people start understanding the severity and magnitude of the problem then they started understanding the ordinance more, 2) Some businesses are now very much on board but not all are happy to say that publicly, 3) No business is doing it to make money it is because they believe in the importance of helping the environment, 4) Residents are very happy about it 5) At first cashiers were getting yelled at due to people's discontent but this has died down and this took about 6 months to die down
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Steven Wolk:** Confidential because this information has not been made public yet, right now it is a really good law but there may be tweaks, a lot of other towns are modeling their laws after New Castle
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Steven Wolk:** No, things seem to be going well
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Steven Wolk:** Anecdotal but seeing less litter and DPW spending less time picking up litter, more people just saying no to a bag seeing, more reusable bags
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Steven Wolk:** 1) Originally was going to do just a ban because they thought that it would provide the most waste reduction but through education found out otherwise 2) Didn't want stores to have to buy plastic and paper bags - had a lot of conversations with retailers and it is better for stores if they only have one type of bag they need to buy, 3) Fee provided a disincentive for taking a paper bag

Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Steven Wolk:** Heard from an attorney for the FIA
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Steven Wolk:** Their recycling is mixed in with other towns so there's no way for the MRF to know what comes from New Castle
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Steven Wolk:** 1) Get as many residents as you can on board and try to get businesses on board too, 2) Businesses may not publicly support you, 3) Once you get residents on board it is difficult for others to say no, had 1,000 people+ write to local politicians
Notes	**Steven Wolk:** 1) Does not think a ban or a fee on strictly plastic is even a solution, thinks there is no point unless there is a reduction effort for both plastic and paper, 2) Have seen other towns with bans and all of the stores are giving out paper bags and people are not reducing waste, 3) New Castle would oppose anything that does not include waste reduction methods for plastic and paper, 4) Starting "Take a bag leave a bag" - newspaper stand in front of a store where people can leave their bags and others can take them 5) Will hear from people that reusable bags get dirty but the food that you buy is just as dirty no matter what bag you put in, 6) Working on a solution where residents can take their plastic bags and film plastics to the Shop Rite in the next town over and then Shop Rite takes the bags and brings them to their center in NJ, 7) Did grassroots education 8) Called it a reusable bag initiative instead of calling it a plastic bag ban 9) One new supermarket and largest one in town is on the border of most affluent area and non- affluent area and there was concern they wouldn't want to move into town due to the ordinance but they did - the store has signs out front telling customers to remember their reusable bags, 40-60% of bags used at store are reusable (anecdotal), store asks people "Do you want a paper bag? It will cost you 10 cents.", there was a concern that the store would not get customers but that has not been an issue – it is difficult to even find a parking spot there New Castle is very passionate about this and can be contacted for further information on their hybrid solution. New Castle wants to see this go into in the right direction and very much would like to be involved in the solution, New Castle is coaching towns on how to do this

Municipality	New Paltz Village, NY
Region	Ulster County

Mechanism	Ban
Ban Type	Plastic bag
Year	2015
Contact	**Don Kerr,** Trustee, Village of New Paltz, donpaltz@aol.com, 845-255-7400
Question 1 - Was there initial buy in among both the consumers and business community?	**Don Kerr:** 1) 50/50 buy in, business owners initially happy to help out but every new rule costs them money so they were concerned about costs and New Paltz was able to address that - addressed through finding and recommending vendors that were in compliance with the law and found a supplier that actually reduced their costs, visited every business in village to inform them of the ban and the alternatives 2) General public was pretty much on board due to demographics 3) Had initial pushback after ban was enacted about paper bags on rainy days so village found corn based bags that were compliant with law
Question 2 - Since the ban has been in place have any public perceptions changed?	**Don Kerr:** 1) People are pretty happy with it 2) Call Village Clerk and tell them about non-compliance if they find issues 3) Business owners helping each other out with the allowable alternatives and making suggestions to one another
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Don Kerr:** Village would like to expand to Town but not a lot of enthusiasm because of the two supermarkets in Town.
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Don Kerr:** No, doing well. Didn't want to be the bag police so Don visits establishments and if need be he follows up with building inspector and ticket
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)? **Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)**	**Don Kerr:** 1) Still see plenty of plastic bags coming from supermarkets, 2) Everyone who isn't using corn based bags has gone paper **Don Kerr:** 1) Concern from business community - "don't increase our costs" 2) Didn't want to increase anyone's cost because that would have gotten more pushback
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Don Kerr:** One person came out against the reusable bags saying that they're a health hazard but no one knew who he was
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Don Kerr:** Not sure on this one

Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Don Kerr:** 1) Really careful that their law was modeled after other 5 communities so that if there was a legal challenge they'd have more ground 2) Worked hard not to reinvent wheel and modeled after others
Notes	**Don Kerr:** Village bought 1,000 reusable bags and distributed to churches, Salvation Army, etc.

Municipality	Patchogue Village, NY
Region	LI
Mechanism	Ban
Ban Type	Plastic bag
Year	2015
Contact	**Joe Keyes**, Trustee, jkeyes@patchoguevillage.org, 631-475-4300
Question 1 - Was there initial buy in among both the consumers and business community?	**Joe Keyes:** 1) Small pushback at beginning but overall has gone very well, had a lot of buy in and no problems at beginning, 2) Gave merchants year and a half because merchants needed to get through their stock of bags, very productive public forum, gave time for merchants to reduce inventory, 3) A food store was afraid of losing customers and hasn't lost any customers
Question 2 - Since the ban has been in place have any public perceptions changed?	**Joe Keyes:** 1) Received nothing but positive comments from public, 2) Didn't get many responses from merchants from recent survey, 3) No complaints except from one store that had an excess supply of bags 4) Very well received, one or two places that aren't complying
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Joe Keyes:** Everything is good so far
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Joe Keyes:** 1) Coordinating with code enforcement officer to get non-compliant stores on board because some stores have fallen off 2) One store has trouble getting customers to bring reusable bags so Village has been helping him hand out reusable bags
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Joe Keyes:** 1) Merchants switched over to acceptable bags (heavier plastic or paper) 2) Most have gone to paper and that has been working well, 3) Did merchant survey that had few respondents but of those that did respond it was found that 57% of respondents noted less litter around neighborhood, 50% of businesses viewed bag ban as positive, 12% negative, 37.5% neutral 4) Paper bag use has increased more than reusable bags and thicker plastic bag use has increased 5) See much improvement as far as plastic debris and downtown 6) Some stores are adding 5 cents to paper bags

	7) Notices people starting to use reusable bags
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Joe Keyes:** They just wanted them gone altogether
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Joe Keyes:** FIA was their only pushback, threatened with lawsuit
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Joe Keyes:** No stats to back it up but went to Brookhaven's recycling plant a few months ago and Brookhaven has claimed they've seen fewer SUPBs coming through the center since the ban has been in place
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Joe Keyes:** Prefers ban - get rid of the stuff altogether
Notes	**Joe Keyes:** 1) Since this went so well they're working on styrofoam ban, 2) Awarded 40 recycling bins for parks through KAB grant, 3) Haven't gotten many complaints with the ban so far

Municipality	Rye, NY
Region	Westchester
Mechanism	Ban
Ban Type	Plastic bag
Year	2012
Contact	Millie Magraw, Legislative Aide to Westchester County Legislator Catherine Parker, mlm9@westchestergov.com
Question 1 - Was there initial buy in among both the consumers and business community?	**Millie Magraw:** Has seen a lot of community support in Westchester County, spoke to businesses in Rye and most were supportive, one person that sold newspapers was not supportive, one other business owner of a pet store was not supportive because her reusable bags didn't sell quickly, business owners mostly saw success with it
Question 2 - Since the ban has been in place have any public perceptions changed?	**Millie Magraw:** Businesses and community still supportive
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	none
Question 4 - Are there any other issues and are any changes being considered due to those issues?	none

Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Millie Magraw:** Less litter
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	none
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	none
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	none
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	none
Notes	none

Municipality	Southampton Town, NY
Region	LI
Mechanism	Ban
Ban Type	Plastic/retail check out bags
Year	2015
Contact	Deiter VonLehsten 212-362-6399 Co-chair of Sustainability Committee
Question 1 - Was there initial buy in among both the consumers and business community?	Consumers were not the problem, problem was the municipalities at that time in the Town of Southampton and there was pushback from Republicans. It took three years to convince government that education wasn't working. Consumers were prepared for the date that the changeover happened. The date the changeover happened the committee stood outside grocery stores and handed out bags. In public hearings there was basically no pushback at all from consumers. The business community pushback depended on type of business. Smaller businesses pushed back.
Question 2 - Since the ban has been in place have any public perceptions changed?	No, not at all. All think it is great. Went over so well due to their location (rely on tourists and keeping the beaches and community clean).

Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	none
Question 4 - Are there any other issues and are any changes being considered due to those issues?	No because of the Suffolk County fee so they have the ban in the Town plus the fee imposed by the County.
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	When standing outside of big stores, you find that most people are bringing their own bags and paper bag use is still strong. Bring Your Own Bag has been a success.
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	The ban was the thing to do at that time on the South fork of Long Island.
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	American Progressive Bag Alliance and came out with lawsuits to frighten municipalities.
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	none
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	"The key to all of this is that you have your figures correct". Many of those who oppose just provide anecdotal evidence and not facts. Be sure to know exactly what you're talking about. Ban is an easier "sell" for politicians. Have education materials ready for public hearings.
Notes	Says should have done ban and charge, says they've saved 23 million bags annually just in Southampton Town after ban went into place.

Municipality	Southampton Village, NY
Region	LI
Mechanism	Ban
Ban Type	Plastic/retail check out bags
Year	2012
Contact	**Mackie Finnerty,** Southampton Advocates for the Village Environment, mackiewalt@gmail.com
Question 1 - Was there initial buy in among both the consumers and business community?	**Mackie Finnerty:** Originally cooperative but sometimes in and out with cooperation, most stores in town did comply with it, one resistant Chinese takeout place that refused to comply, had a lot of promotional stuff in the

	beginning, public was on board, had art competition for students to design bag that would be the bag for Southampton Village
Question 2 - Since the ban has been in place have any public perceptions changed?	**Mackie Finnerty:** Hard to measure - originally people that did object were people that said they'd go to the next town over to go shopping but now surrounding areas did it
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Mackie Finnerty:** No anticipated changes because the public knows plastic bags are a problem especially for seaside towns, simply a measure of keeping the town beautiful, not a Democratic or Republican thing
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Mackie Finnerty:** Everything has been okay only issue is that some stores have switched to the greater than 2.25 mil plastic bags but they do not see these thicker ones blowing around or at the beach or in trees and shrubs
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Mackie Finnerty:** 1) Do not see as much litter blowing around, 2) Store owners are now using the reusable bags as free advertisement and some have even dropped regular advertisements because everyone is walking around with their bags, 3) Fancy stores have fancy bags that you would want to reuse, 4) Seeing more use in reusable bags
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Mackie Finnerty:** 1) Studied national and international studies on fees/bans, 2) DC claims 75% success with fee but did not truly see it there when she visited, 3) Said 5 cents was not enough to make change there and they just wanted them gone
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Mackie Finnerty:** Heard from plastic bag lobbyists that attended public meetings
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Mackie Finnerty:** Not sure on this one
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Mackie Finnerty:** 1) Tremendous success was found by going to every single store owner or manager personally, 2) Stores had cost concern of going to paper vs plastic but told them if you could really get people to reuse their bags that would help, 3) Went back to retailers again when they were going to do the hearings and asked them to talk, 4) If she could do it again she would make 5 mil and very cost prohibitive to stores, 5) Does not suggest following 2.25, 6) Get stores on your side so it doesn't come off as government telling people what to do

Notes	1) Typically the local immigrant population would not carry a bag 2) Copied their law after Westport, CT 3) People remember to bring bags to supermarket but not anywhere else 4) Supermarkets have paper bags that they carry and are now promoting paper bag use, 5) The type of bag to use that stores promote to use depends on what they have too much of in stock (paper or reusable), 6) Stores save money not having to purchase bags 7) In the end it was hard to argue with that it was a good thing for the town 8) Made an exemption for store owners that sold large objects 9) Fancy stores have fancy paper bags that people like

Municipality	Long Beach
Region	LI
Mechanism	5 cent fee
Ban Type	Any carryout bag of paper, plastic, or reusable material
Year	2017
Contact	**Ryan McTiernan,** 516-705-7205, rmctiernan@longbeachny.gov
Question 1 - Was there initial buy in among both the consumers and business community?	**Ryan McTiernan:** Yes, worked very closely with Chamber of Commerce and they sent a letter of support, prior to legislation did long educational campaign and showed documentary "Bag It", showed movie at libraries, schools, engaged Chamber of Commerce and started a sustainability committee after all of this for businesses to look into other initiatives, held forums at Chamber meetings so that businesses could come and learn more about law, 7 month window between when it passed and went into effect, held meetings for businesses to come look at vendors and products
Question 2 - Since the ban has been in place have any public perceptions changed?	**Ryan McTiernan:** Has pretty much stayed the same from start of conversation to time law took effect was 15 months tried to give people enough time and gave a good cushion between when vote passed and implementation, had pushback after implementation saying they never heard about it but city did significant outreach
Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	**Ryan McTiernan:** Discussions on making slight changes, some restaurants disclosed that some customers are upset about not having a bag but have decided that there really isn't a need for the bag, right now satisfied with everything, if the bag is the primary container for the product then it is exempt (Ex: produce bag are exempt)
Question 4 - Are there any other issues and are any changes being considered due to those issues?	**Ryan McTiernan:** One of the things they're working really hard on is compliance, had teams go out and walk all three business districts two times over, has been a language barrier and looking to address that (Ex: Chinese food restaurants)
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	**Ryan McTiernan:** Definitely more reusable bag use Suggests some type of reporting from businesses to figure out how many bags they've purchased, have only heard back from a dozen businesses since this is voluntary, have seen that businesses have stopped buying plastic bags and are selling only paper bags, did a bag giveaway on Earth Day, gave 2,000 bags to city residents and have seen those all over town

Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Ryan McTiernan:** Looked at research and came across Jennie Romer's research and went with that because it seemed like the most comprehensive approach, fee incentivizes, also a good educational piece because you can have that bag but for these reasons you have to pay for it, generally turns people off
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Ryan McTiernan:** Heard from FIA, they're okay with the charge don't like the ban, did not influence their decision though, at business outreach seminar between laws passing and going into effect a local bag producer came and complained that he was going to lose business
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	**Ryan McTiernan:** Doesn't seem to be an issue will check on this, have not received any complaints
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	**Ryan McTiernan:** He understands the issues with food takeout and delivery but encourages State and other communities to do something similar to Long Beach, increase education and information on the alternatives instead of paper and plastic bags, strongly discourage exempting delivery and takeout bags
Notes	**Ryan McTiernan:** A reusable bag is only as good as its use, the reusable bags that are sold are a minimum of five cents, has spoken to a few folks about the Task Force and what he has heard is that municipalities with bag laws are not represented on the committee and encourages municipal/local representation

Municipality	Suffolk County
Region	LI
Mechanism	5 cent fee
Ban Type	Plastic and paper
Year	2016
Contact	Liz Alexander, Legislative Aide
Question 1 - Was there initial buy in among both the consumers and business community?	**Liz Alexander:** Start date Jan 1, 2018 - **said that they don't have much to say on this topic overall right now** 1) Had advocates that came out to support 2) A lot of people supported implementing something that would move the muni away from SUPBs, 3) People generally like the idea but the logistics of it may change opinions, 4) Some pushback from public because you're taking away something that used to be free
Question 2 - Since the ban has been in place have any public perceptions changed?	none

Question 3 - If yes to question 2, are there any plans to adjust the law based on those perceptions?	none
Question 4 - Are there any other issues and are any changes being considered due to those issues?	none
Question 5 - Have you noticed any growing trends since the ban went into effect? (i.e. greater use of reusable bags, etc.)?	none
Question 6 - Why did the municipality move forward with a (ban/fee) instead of a (ban/ fee) program? (will choose ban/fee based on their program)	**Liz Alexander:** 1) Did not want to do straight ban because did not want to replace plastic waste with paper waste 2) People like the ban but having people understand fee can be difficult
Question 7 - Did you hear from any lobbying groups during this process? If so, which ones?	**Liz Alexander:** FIA, local bag manufacturer in Melville, heard from paper bag industry, APBA
Question 8 - Is there any feedback you would like to share on the effects of the law on your municipal recycling program in your area?	none
Question 9 - Now that your (ban/fee) is in place, is there anything that you would change or suggest others to consider before enacting a ban or fee?	none
Notes	**Liz Alexander:** Tremendous support for ban but votes were cutting it close, adjusted to fee and got more buy in, had a companion bill that created a working group - 5and5 working group - committee that has been meeting on monthly basis, committee is charged with a series of tasks that will last for 3 years after implementation

Appendix H

Public comments received

There have been a total of 558 submissions to date. Of the itemized comments below, 73 are from a sign-on letter and the remainder are the first 56 comments received. For the majority of comments received, most people offered more than one preference in their response. In terms of how to manage plastic bags in New York State, people most frequently chose a hybrid or fee option as outlined below. Within the table a ban means single-use plastic bag ban.

- Hybrid A (ban on plastic/ fee on paper) – 325
- Fee on both single-use plastic bags and paper bags – 88
- Hybrid B (ban on plastic/fee on all allowable alternatives, including paper) - 64
- Fee on all carryout bags (plastic, paper, thicker plastic bags that qualify as reusable, compostable) – 61
- Ban on single-use plastic bags - 54
- Fee on single-use plastic bags – 14
- No position given/general complaint about plastic bags – 8
- Incentive/discount for bring your own bag- 4
- Ban on both single-use plastic and paper bags -3
- Replace single-use plastic bags with paper bags and reusable totes – 3
- Reinforce reusable bag policy – 2
- Fee - bag type not specified – 1
- Remove single use plastics of all kinds – 1
- Address all bag types but method not fully stated - 1

Date	Name	Association	Location	Position	Note
12/15/17	Brian Smith	Associate Executive Director - Citizens Campaign for the Environment	Buffalo	Hybrid	Fee on all allowable alternatives
12/7/17	Sarah Currie – Halpern and Leslie Davol	Avenues Parent Association, Zero Waste Committee	N/A	Address all bag types, including a fee on paper	Signature on Citizens Campaign for the Environment (CCE) Sign On Letter
12/7/17	Gary C. Carrel	Bring Your Own Bag Coalition of Erie County	Erie County	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Robert Bate	President of Brooklyn Bird Club	Brooklyn	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Dylan Oakley	Chair of Legislative Committee - Brooklyn Solid Waste Advisory Board –	Brooklyn	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Jill Jedlicka	Executive Director - Buffalo-Niagra Waterkeeper	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Michael Helme	Co-Chair BYOBag Warwick – Committee of Sustainable Warwick	Warwick	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Debby Lee Cohen	Executive Director and Founder – Cafeteria Culture	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Adrienne Esposito	Executive Director – Citizens Campaign for the Environment	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Peter H. Kostmayer	CEO – Citizens Committee for New York City	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Jen Chantrtanapichate	Founder and President – Clean Up North Brooklyn	Brooklyn	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Carol Dipaolo	Programs Director and Water Monitoring Coordinator – Coalition to Save Hempstead Harbor	Hempstead	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Arthur H. Kopelman	President – Coastal Research and Education Society of Long Island	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Megan Nordgren	Member of District 3 – Green Schools Group	Manhattan	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	John Oppermann	Executive Director – Earth Day New York	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Donna Wilson	Founder – Empire Dragon Boat Team	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Anne S. Bergantz	Chairman – Erie County Environmental Management Council	Erie County	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Eric Weltman	Senior Organizer – Food and Water Watch	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Diana Blackwell	President – Frederick E. Samuel Resident Association, Inc.	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Patti Wood	Executive Director – Grassroots Environmental Education, Inc.	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Mark Dunlea	President – Green Education and Legal Fund	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Josh Feintuch	Chair – Green Party of Brooklyn	Brooklyn	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Veronique Pittman	Board of Directors – Green Schools Alliance	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Korin Tangtrakul	Coordinator – Guardians of Flushing Bay	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Nigel Savage	President and CEO – Hazon	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Philippine Hoogland	Team member – Healthy Yards	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Christopher X. Dougherty	Guidance Department Chair/I.A.M Green Moderator – Archbishop Molloy High School	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Mary Anne Sullivan	Co-Chair – Environmental Action Committee/league of Women Votes of the City of New York	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Christine Datz-Romero	Co-Founder and Executive Director – Lower East Side Ecology Center	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Dune Ives	Executive Director – Lonely Whale	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Scott Bochner	Board Member – Long Beach Environmental Advisory Board	Long Beach	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Sarah Currie – Halpern	Board Chair – Manhattan Solid Waste Advisory Board	Manhattan	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Emily A. Fano	Senior Manager – National Wildlife Federation NYC Eco-Schools	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Eric A. Goldstein	NYC Environment Director – Natural Resource Defense Council	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Alan Minor	Chair – Board of Directors – Neighbors Allied for Good Growth	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Rachel Spector	Director – Environmental Justice Program for New York Lawyers for the Public Interest	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Deborah Marton	Executive Director – New York Restoration Project	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Lisa Bloodgood	Education Coordinator – Newtown Creek Alliance	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Debbie Mans	Executive Director and Baykeeper – New York/New Jersey Baykeeper	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Kathryn Heintz	Executive Director – New York City Audobon	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Eddie Bautista	Executive Director – New York City Environmental Justice Alliance	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Edie Kantrowitz	Board Member – NYC Friends of Clearwater	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Matt Malina	Founder and Director – NYC H2O	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Ray Kairys	Chair – Organizations United for Trash Reduction and Garbage Equity	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Sam Magavern	Executive Director – Partnership for the Public Good	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Dianna Cohen	CEO/Co-Founder – Plastic Pollution Coalition	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Jennie R. Romer	Founder - plasticbaglaws.org	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Paul Gallay	President and Hudson Riverkeeper – Riverkeeper	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Juli Schroeger	Program Director – Rockaway Waterfront Alliance	Rockaway	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Weiji Ma	Associate Professor NYU and Founding Member – Scientist Action and Advocacy Network	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Enrico G. Nardone	Executive Director – Seatuck Environmental Association	Seatuck	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Molly Ornati	Co-Facilitator – 350BK	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Nate Drag	Watershed Project Coordinator - New York – Alliance for the Great Lakes	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Margaret Perkins	Steering Committee – 350NYC	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Don Riepe	Jamaica Bay Program Director – American Littoral Society	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	George Povall	Executive Director – All Our Energy	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Lynn Neuman	Director – Artichoke Dance Company	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Sebastian Copeland	Founder and President – SEDNA Foundation	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Leslie Mintz Tamminen	Ocean Program Director – Seventh Generation Advisors	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Scott Bochner	Co-Founder – Sludge Stoppers Task Force	Long Beach	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Patrick Diamond	Rise Above Plastics Campaign Lead – Surfrider Foundation, NYC Chapter	New York City	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Harry Moran	Board Chair – Sustainable Saratoga	Saratoga	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Rachel Lincoln Sarnoff	Executive Director - The 5 Gyres Institute	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Christopher Chin	Executive Director – The Center for Oceanic Awareness Research and Education	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Joan Wolf	Faculty Advisor – The Hewitt School Earth Committee	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Stuart F. Gruskin	Chief Conservation and External Affairs Officer – The Nature Conservancy – New York	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Gala Narezo	Coordinator – The Plastic Bag Mandala	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Filippine Hoogland	Team Member – The Reusable Bag Initiative of Mount Kisco & Bedford	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Ling Tsou	Board Member – United for Action	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Matt Prindiville	Executive Director - Upstream	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Roland Lewis	President and CEO – Waterfront Alliance	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter

12/7/17	Malaika Elias	North Atlantic/Chesapeake Organizer – Waterkeeper Alliance	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Peggy M. Sheppard	Executive Director – We Act for Environmental Justice, Inc.	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
12/7/17	Melissa Elstein	Secretary and Founding Member – West 80s Neighborhood Association	N/A	Address all bag types, including a fee on paper	Signature on (CCE) Sign On Letter
11/28/17	Svetlana Wasserman	N/A	N/A	Fee on all carryout bags or hybrid	Portion of fee dedicated to environmental protection projects
11/28/17	Anne Bergantz	Erie County Environmental Management Council	Erie County	Ban on plastic and paper, hybrid, fee on both plastic and paper	Portion of fee dedicated to environmental programs
11/27/17	Jeffrey Tancil	N/A	Brooklyn	Fee on all carryout bags or hybrid	Portion of fee dedicated to environmental protection projects
11/27	Neva Sharon	N/A	Queens	Fee on all carryout bags or hybrid	Portion of fee dedicated to environmental protection projects
11/21	Meredith Faltin	N/A	N/A	Fee on all carryout bags or hybrid	Portion of fee dedicated to environmental protection projects
11/21	Deirdre Cossman	N/A	N/A	Fee on all carryout bags or hybrid	N/A
11/21	Alex Herzan	N/A	Queens	Fee on all carryout bags	N/A

11/20/17	Sandra Meola	NY/NJ Baykeeper	New Jersey	Fee on all carryout bags or hybrid	Portion of fee dedicated to environmental protection projects
11/19/17	Joseph Varon	Past President – New York Marine Education Association	West Hempstead	Hybrid or fee on all carryout bags	Portion of fee dedicated to environmental protection projects
11/17/17	Madeline Kelsey	N/A	Syracuse	Hybrid	Specified 10 cent fee on paper bags
11/17/17	Rochelle Thomas	N/A	N/A	Ban	
11/16/17	Weiji Ma	Scientist Action and Advocacy Network	New York University	A fee on all single-use bags or hybrid	Equal on both positions, minimum 5 cent fee for both positions
11/15/17	Nick Stuckert	N/A	N/A	Fee	Bag type fee applies to not clearly stated
11/15/17	Hanna Holden	N/A	N/A	N/A	Asked to make single-use bags illegal
11/14/17	Anam Hussain	N/A	N/A	Ban or fee on plastic	
11/14/17	Pamela Chong	N/A	Buffalo	Ban on plastic or fee on plastic and paper	
11/8/17	Suzie Elliott	N/A	Manhattan	Ban	Remove plastic bags from the environment
11/8/17	Mary Mooney	N/A	N/A	Ban	
11/7/17	Andrew Rosenthal	N/A	New York City	Ban	
11/7/17	Sandra Sobanski	N/A	Brooklyn	Ban	
11/7/17	Sam Collman	N/A	N/A	Ban	
11/7/17	Karrin Allyson	N/A	N/A	Ban	
11/7/17	Alden Wicker	N/A	N/A	Ban or plastic bag fee	
11/7/17	Alice King	N/A	N/A	Ban	
11/7/17	Jennifer Hayes	Albany Medical Center	Albany	Ban	
11/7/17	Bill Boyle	N/A	Brooklyn	Ban	
11/7/17	Ellen McHale	N/A	Esperance	Ban	
11/7/17	Ray Poehlein	N/A	N/A	Ban	

11/7/17	Steven and Priscilla August	N/A	N/A	Ban	
11/717	Gary Pelkey	N/A	N/A	Ban	
11/7/17	Ingrid	N/A	N/A	Ban	
11/7/17	Christy McElligott	N/A	Selkirk	Ban or plastic bag fee	Make fee $1
11/7/17	Diane and Don Bell	N/A	Troy	Ban or plastic fee	Preference is ban
11/617	Cynthia Moore	N/A	N/A	Ban or plastic bag fee	Preference is ban
11/6/17	Morgaen Hansen	N/A	Albany	Ban	
11/6/17	N/A	N/A	N/A	Ban	
11/6/17	Erin Turner	N/A	N/A	Ban	
11/617	Nancy P Durr	N/A	Cold Spring	Ban or plastic bag fee	Prefers ban, if fee - make it $.25
11/6/17	Tom	N/A	N/A	Ban	
11/6/17	Columb Devine	N/A	N/A	Ban	
11/6/17	Ginger Comstock	N/A	Arcade	Ban	
11/6/17	George Quasha	N/A	Barrytown	Ban	
11/6/17	Edward T Lentz	N/A	New Lisbon	Ban	
11/6/17	Kathleen Williams	N/A	Hillsdale	N/A	Phase out plastic bags, replace with paper or totes
11/6/17	Kathy Harris	N/A	Albany	Ban	
11/6/17	Elijah Sivin	Poly Prep Country Day School	N/A	Ban	Lessen the presence of plastic bags
11/6/17	Lisa Jablow	N/A	Manhattan	N/A	E-mail about negative effects of plastic bags
11/6/17	Jodi Kaufman	N/A	N/A	Ban	
11/6/17	Brian Thompson	N/A	N/A	Ban	
11/6/17	Elisabeth Van Asdale	N/A	N/A	Ban or plastic bag fee	
11/617	Sarah Young	N/A	Brooklyn	Ban	
11/6/17	Anita Fina Kiewra	N/A	N/A	Ban	
11/6/17	Linda Lowell	N/A	N/A	Ban	
11/6/17	Jared Harris	N/A	New York City	Ban or plastic bag fee	Prefers ban
11/6/17	Melanie Ann Stopyra	Syracuse University	Syracuse	Ban	
11/6/17	JR Rich	JCC	Staten Island	Ban	