



Massachusetts Sierra Club
10 Milk Street, Suite 632
Boston MA 02103-4621
www.sierraclubmass.org
office@sierraclubmass.org
(617) 423-5775

Earth Day - April 22, 2013

Chairwoman Anne M. Gobi
Joint Committee on Environment, Natural Resources and Agriculture
State House, Room 473F, Boston, MA 02133

Chairman Marc R. Pacheco
Joint Committee on Environment, Natural Resources and Agriculture
State House, Room 312-B, Boston, MA 02133

Re: Sierra Club Testimony in support of H696/H787/S359, Related to Plastic Checkout Bags

Dear Chairwoman Gobi, Chairman Pacheco, and Honorable Members of the Committee,

Thank you Chairwoman Gobi, Chairman Pacheco, and Members of the Committee for providing this opportunity to offer our comments on bills H696/H787/S359, related to reducing the use of plastic checkout bags in Massachusetts. We wish to express our strong support in favor of this legislation.

The Sierra Club is the oldest and largest non-profit, non-partisan organization environmental organization in the country. With over a forty year history in this chapter, the Massachusetts Sierra Club represents about 22,000 members throughout the state and nearly one million nationwide. We fight for clean air, clean water, the preservation of the Commonwealth's most precious natural spaces, and healthy, vibrant communities.

These bills would ban polyethylene and other types of plastic carryout bags in retail stores. It would not limit other types of bags, such as those used in a market's vegetable aisle.

Plastic bags cost society a lot more than the price retailers are currently paying to provide them. There is no need for this environmental expense. Simple alternatives such as reusable shopping bags are available and already used in many stores throughout Massachusetts.

The use of single use plastic carryout bags should be banned because:

- Plastic bags are so aerodynamic that even when properly disposed of, they often blow away and become **litter**. Plastic bags are a unique form of litter in that they can end up tangled in trees, which cause visual blight among other problems. The City of Los Angeles found that plastic bags account for 25% of litter in their storm drains.¹ Bags easily escape from the garbage truck, landfill, boat, and average consumer's hands – and are then carried into lakes and waterways, and eventually into the ocean. Plastic bags make up the third largest type of litter from land-based sources found on U.S. coasts.²
- **Plastic bags harm wildlife.** The bags are often mistaken as food by both domesticated and wild **animals**. Birds may also use them for nesting material with dangerous results. Untold numbers of animals die per year by ingesting plastic bags.³ These animals suffer a painful death, the plastic wraps around their intestines or they choke to death. **Plastic bags choke, strangle, and entangle turtles, whales, sea lions, seals, birds, and fish** among other species.^{4 5} Many of these animals are already threatened due to issues such as over fishing or habitat loss. The list of local animals threatened by plastic bags includes green turtles that nest on Nantucket and the right whales that feed off the Massachusetts coast line.

- **Plastic bags do not biodegrade**⁶ and although they do break apart through mechanical action⁷ and photodegradation in the presence of light, these processes are slow taking up to 1000 years to complete. When the bags finally do break down, they do not dissolve into benign substances: they just fracture into smaller and smaller bits called “microplastics.” These small particles present the greatest long-term danger, as these particles **displace food supplies in our oceans**. As they have a nearly identical density of seawater, their removal is not possible. Once microplastics enter our oceans, they will stay there forever. When an animal is killed by ingesting microplastics, the particles will live on to kill again.
- **Only 5.2% of our plastic bags are recycled.**⁸ We cannot recycle our way out of this problem.

For all of the above reasons, single-use plastic bag use needs to be heavily reduced. Because plastic bags are inexpensive and convenient, legislation will be necessary in order to change the behavior of consumers and the retail industry. Voluntary efforts thus far have come up short.

ALTERNATIVES

All these noted bills allow the use of paper bags without any fees or restrictions. In our region, almost all paper bags are made up of 80% recycled content – some have 100% recycled content. They’re also recycled by consumers at a very high rate, enjoying an existing structure to recycle them efficiently. Although paper has a higher initial CO2 footprint, it doesn’t kill animals, persist in the environment, or wreak the kind of permanent environmental damage that plastics do.

H.696 proposes exceptions for two types of plastics that are derived from organic sources ASTM D6400, which specifies a compostable plastic (which breaks down into CO2 and water) and ASTM D7081 (which does the same in a marine environment). While both of these types of bags do truly biodegrade, they are not truly “harmless.” They are made from starchy plant materials, typically corn. Using these to replace our current thruway habit of HDPE bags would divert badly needed food supplies from the world’s human population. Much like our use of ethanol in gasoline did to corn prices in Mexico, simply making all our plastic bags out of corn would undoubtedly create another food supply crisis. The real answer lies with decreasing our dependency on all disposable single use bags.

A number of manufacturers are promoting so-called “oxo-degradable” or ASTM D5272 bags. ASTM D5272 does not measure the environmental aspects of the product, but only its ability to withstand sunlight exposure. ASTM D5272 bags are NOT **biodegradable**, but simply degradable – meaning that they break into small bits. Furthermore, it appears that the vast majority of these bags are made from HDPE (in varying percentages). Although some companies promote their ASTM D5272 bags as degrading into non-toxic or inert particles, this does not mean that they are environmentally benign.

VOLUNTARY AGREEMENTS HAVE FAILED

As a response to public pressure against plastic bags, On March 12, 2009, the Mass Food Association entered a voluntary agreement with the Mass DEP that major supermarkets would decrease plastic bag use by 33% by the year 2013. A 33% reduction, if it actually took place, would place us at the absolute worst performers of all places that have enacted ANY regulation concerning plastic bags – even below Botswana and Burma. However, the Sierra Club has received countless reports of absolutely no change in behavior at any supermarket, and no evidence nor independent body has verified that there has been any change in bag use. Additionally, the performance data is gathered by the supermarkets lobby firm and is not audited.

An inspection of many checkout stations at Star Market, Stop and Shop, and Home Depot clearly show that only plastic bags are available – no paper. Observers have noted that supermarket cashiers still regularly double bag groceries; and place bulky items with handles, such as boxes of detergent, in plastic bags. There has clearly been no training to help achieve this goal.

Even if we were to achieve a 33% reduction in plastic checkout bag use, that would conversely mean that we would be maintaining 67% production. The very reason to decrease plastic bag use is that when these enter the environment, and they do, they wreak havoc on wildlife.

Around the world, when plastic bags bans are implemented, the next day, nothing bad happens. People still shop for groceries. Some of them bring reusable bags, some buy cloth bags, some use paper. People don't buy less or more.

BAGS ARE BEING BANNED WORLDWIDE

Legislation is a realistic solution. Plastic bag bans or surcharges have already been put in place in countries, provinces and cities all over the world, including: Brookline MA, Manchester MA, Nantucket MA, as well as China, Canada, Israel, Belgium, Italy, Ireland, Hong Kong, Taiwan, Singapore, Botswana, Kenya, Tanzania, South Africa, Thailand, several states in India, three states and territories of Australia, Paris, Mexico City, San Francisco, Oakland, Washington DC, 30 rural villages in Alaska, Westport CT, Edmond WA, Rajasthan (India), Sikkim (India), Taiwan, Singapore, Bangladesh⁹, Malawi, Germany, Sweden, the cities of Paris, San Francisco, Oakland, Washington DC, 30 rural villages in Alaska, Brownsville TX, Mexico City, North Carolina's Outer banks Region, and for the past 20 years, Nantucket Island¹⁰.

CONCLUSION

Single use plastic bags are contributing to serious issues facing Massachusetts, United States and the World: energy, public health, global warming, and species conservation. Tackling these issues will require the culmination of many small actions bring about large change. Banning plastic bags is an important and easily implemented step towards meaningful change.

The Sierra Club has long been committed to minimizing the negative environmental impact of human activity and because this legislation would significantly reduce such impact from plastic bags we hope this committee will report these bills favorably.

Respectfully,



Phillip Sego
Massachusetts Sierra Club
phil@sierraclubmass.org - 617-807-0311

¹ California Ocean Protection Council, "An Implementation Strategy to Reduce and Prevent Ocean Litter", 2004, p. 13
[http://www.opc.ca.gov/webmaster/ftp/pdf/opc_ocean_litter_final_strategy.pdf]

² Ocean Conservancy, "Tracking Trash", 2011 report, p. 66

³ "Plastic bag killed beaked whale", 2012-02-10

[http://www.marineconnection.org/archives/marine_impacts/plasticbag.htm]

⁴ Lazar, B. and R. Gracan, "Ingestion of marine debris by loggerhead sea turtles, *Caretta caretta*, in the Adriatic Sea." 2011. *Marine Pollution Bulletin* 62: 43-47.

⁵ United Nations Environmental Programme. "Marine Litter-Trash that kills". 2001.

[<http://www.unep.org/regionalseas/marinelitter/publications/default.asp>]

⁶ Algalita Marine Research Foundation, *Research-Pelagic Plastic-Gyre Voyage 2002*, July 26, 2002

(http://www.algalita.org/research_ffs.html).

⁷ Crump, Andrea, Marine Conservation Society, *Long Term Impacts of Plastic Bags in the Marine Environment* [www.mcsuk.org/downloads/policy/coastal_polln/MCS_Long_Term_Impacts_of_Plastic_Bags_In_the_Marine_Environment_\(Aug_2004\).doc](http://www.mcsuk.org/downloads/policy/coastal_polln/MCS_Long_Term_Impacts_of_Plastic_Bags_In_the_Marine_Environment_(Aug_2004).doc).

⁸ US Environmental Protection Agency (EPA), Report (web) Wastes, Non-Hazardous Waste, Municipal Solid Waste. November, 2008.

⁹ More Cities and Stores Banning Plastic Bags, Planetsave. Feb. 16, 2008.

¹⁰ Janel Sterbentz. "More Cities and Stores Banning Plastic Bags". Website. Accessed June 14, 2011.
<http://planetsave.com/2008/02/16/more-cities-and-stores-banning-plastic-bags/>.