

Reducing Disposable Bag Use

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The Ubiquitous Bag

Plastic shopping bags were introduced to the consumer market about 25 years ago. Since then, they've become – literally – a ubiquitous part of the American landscape. Every year, between 500 billion and one trillion disposable plastic shopping bags are consumed worldwide.¹ In the United States, 100 billion plastic bags are used each year, costing retailers \$4 billion, which is passed on to the consumer in the price of goods.² In 2005, the Environmental Protection Agency (“EPA”) estimated Americans recycled only 5.2% of plastic bags used.³ In 2009, the Progressive Bag Alliance of the American Chemistry Council (“PBA”) estimated an increase in the recycling rate to 13%.⁴ Despite increased recycling, about 200,000 plastic bags are landfilled every year.⁵ The remainder become litter or are incinerated.⁶ Those bags will take up to 1,000 years to biodegrade.⁷

Plastic shopping bags are made using polyethylene resin (“PER”), a byproduct of petroleum and natural gas.⁸ It takes an estimated 12 million barrels of oil to produce the 100 billion bags used by Americans annually.⁹

“Massive Eddies of Trash”

In 2011, the Ocean Conservancy found that 5% of all marine debris collected over the past 25 years was plastic shopping bags, with 7,825,319 individual bags collected from beaches, streams, and waterways during that period.¹⁰ About 46,000 pieces of plastic per square mile of ocean currently swirl in massive eddies of trash.¹¹



Moreover, plastic bags can harm fish and wildlife by asphyxiating animals that accidentally consume them, restricting their movement, and complicating their digestion.¹² According to one estimate, some 100,000 mammals and birds die from consumption of bags or entanglement each year.¹³

“Paper or Plastic?”

Given the disturbing effects of plastic bags, an environmentally-conscious consumer may choose the standard alternative: paper bags. However, paper is not necessarily the better option.

Composted paper bags generate 80% more solid waste than plastic bags.¹⁴



Production of paper bags creates twice the greenhouse gas emissions of plastic.¹⁵ It takes 91% more energy to recycle a pound of paper than a pound of plastic.¹⁶

Is today’s consumer without an ethically sound option? In an effort to reduce consumption of

plastic bags, communities in the United States and countries around the world have begun programs aimed at reducing or abolishing bag consumption and promoting reusable alternatives.

Major American Cities

San Francisco was the first major American city to ban plastic bags altogether.¹⁷ In 2007, the city banned the distribution of plastic bags in large supermarkets - those with \$2 million or more in annual revenue - and chain pharmacies. Those retailers had the option of offering paper bags made of 40% recycled material.¹⁸ In 2010 the city reported a 50% reduction in plastic bag street litter.¹⁹

Washington, D.C. has experienced similar success. The Anacosta River Cleanup and Protection Act of 2009, also known as the “Bag Bill,” has generated \$1.7 million for the city's river cleanup fund and reduced disposable bag litter around the river watershed by 60% between 2009 and 2011.²⁰ The law imposes a five-cent tax on every disposable paper or plastic bag distributed at stores in the District, and requires food and alcohol retailers to use bags made out of 100% recyclable material.²¹ By early 2011, more than 5,000 businesses were in compliance with the bag tax program.²² In that same period, the District Department of the Environment handed out 42,460 free reusable bags to seniors and low-income residents to encourage their use.²³

Smaller Scope, Positive Results

The movement toward reducing plastic bag use is not limited to major metropolitan areas. In 1998, 30 small communities in Western Alaska joined together to prohibit retailers from providing consumers with plastic

bags.²⁴ The regional goal was to protect local wildlife, like salmon and seals, and prevent the accumulation of litter that marred the arctic landscape.²⁵ While there is no extant study of the effects of the ban, anecdotal accounts from residents indicate a sweeping change in the landscape owing to decreased usage.²⁶

In 2009, Edmonds, Washington, a small, middle-class city of about 40,000 people on Puget Sound, adopted a resolution banning all single-use plastic checkout bags from all retail establishments in the city.²⁷ Retailers are subject to a \$100 fine for each violation.²⁸ In addition to a general promotion of reusable bags, the city also created educational programs aimed at informing residents about the virtues of reusable bag usage.²⁹ Educational materials are provided by the city through their website.³⁰ No statistics have been collected yet regarding reductions in use.

The “Gold Standard”

One of the nation’s most successful implementations of a plastic bag fine is in Westport, Connecticut. Westport banned the use of plastic shopping bags in 2008.³¹ The law fines businesses operating in Westport up to \$150 if they continue to use plastic bags.³² The intent of the law was to encourage retailers to promote reusable bags.³³ One city official, speaking to the New York Times, estimated a 70% increase in reusable bag use since the ban began, with each of the town’s 10,000 households using two fewer bags a week.³⁴ Large companies in Westport who originally opposed the measure, like Stop & Shop, ultimately began promoting reusable bags in their stores.³⁵ The only flaw in the Westport model is that, unlike the Washington D.C. legislation, it applies only to plastic bags, and not paper.



Citizens Campaign for the Environment has used the Westport legislation to spearhead disposable bag ordinances in downstate New York.³⁷ The downstate campaigns are focused on distributing educational materials to communities in Westchester County and Long Island and airing public service announcements on television in those markets.³⁸ Citizens Campaign also works with local grocery chains to promote reusable bags, and publishes “report cards” grading each store’s present reusable bag policies.³⁹ Through these efforts, both South Hampton and East Hampton have passed resolutions, and several other communities are now considering ordinances similar to Westport’s.⁴⁰

The Irish Epicenter

More drastic measures to combat plastic bags have been enacted overseas. Ireland instituted a plastic bag tax at 15 cents per bag in 2002.⁴¹ Within five months of enacting the tax, the country reported a 90% drop in plastic bag usage.⁴² In 2007, the tax was increased to 22 cents per bag.⁴³ Total Irish bag use dropped from 27 bags per month per person to two.⁴⁴

The United Kingdom has not banned or taxed bags, but has conducted an ongoing public campaign against plastic bag use. Some major British retailers, like Marks & Spencer, have begun charging customers for plastic bag use.⁴⁵ Tesco, the largest British grocery chain, offers customers “reward points” for refusing disposable bags at the register.⁴⁶ Sainsbury's, another grocery chain, has attempted to capitalize upon a “trend” of avoiding bag use by offering “designer” reusable bags at 5 pounds per bag.⁴⁷ These non-governmental initiatives seem to have had some effect. Between 2006 and 2009, British bag consumption dropped 40%.⁴⁸



Fighting Temptation

Elsewhere in Northern Europe, Denmark has taken a different approach. Rather than impose a tax or fine on consumers at the register, the government focuses its attention on the people who make the bags available. In 1994, the Danish government began taxing retailers by the kilogram on plastic bag purchases.⁴⁹ Instead of passing on the additional cost to consumers, retailers are encouraged to implement alternative bagging solutions, like promoting reusable bags.⁵⁰ The tax per kilogram of plastic is 22 Danish krone, or \$3.97 USD.⁵¹ From 1994 to 2006, plastic bag consumption in Denmark has dropped by 66%.⁵²

Tougher Measures

Some countries have put in place more draconian policies. In China, plastic bags that were less than .025 millimeters thick were banned by the centrally-controlled government in 2008.⁵³ Bags of that description were called “white pollution” by the government, and retailers who continued to use them were assessed fines as high as \$1,500 if they continued to issue them.⁵⁴ By 2009, the government reported a 66% decrease in plastic bag distribution among Chinese supermarkets.⁵⁵



In 2002, Bangladesh banned the use of all plastic bags, citing the prevalence of plastic bag litter in clogging municipal drainage pipes.⁵⁶ The clogged pipes allegedly led to several floods between 1989 and 1998 that inundated two-thirds of the country.⁵⁷ To prepare for a nationwide ban, the government aired several commercials and

documentaries on television outlining “the adverse effects of polyethylene in public life” and plastered educational posters within cities and towns.⁵⁸ The ban on plastic bags led to an increase in the use of jute bags, woven from renewable, biodegradable jute plants common to Bangladesh.⁵⁹

How Far is Too Far?

The heaviest penalty currently in existence is found in South Africa. The South African government put a levy on plastic bags thicker than 30 microns and banned thinner bags entirely in 2003.⁶⁰ Retailers using thinner bags could be subject to up to a 10-year jail sentence or a 100,000 rand (\$12,387 USD) fine.⁶¹ The fine, 46 rand cents, is the equivalent of roughly \$0.06 USD.⁶² By 2008, the charge was credited with a 90% drop in plastic bag use.⁶³

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- 1.) Citizens Campaign for the Environment, “Disposable Bag Reduction,” <http://www.citizenscampaign.org/campaigns/plastic-bags.asp>, last modified October 10, 2011.
 - 2.) ReUseit, “Facts about the Plastic Bag Pandemic,” <http://www.reuseit.com/learn-more/top-facts/plastic-bag-facts>, last modified October 12, 2011.
 - 3.) Chris Conway, “Taking Aim at All Those Plastic Bags,” New York Times, <http://www.nytimes.com/2007/04/01/weekinreview/01basics.html>, April 1, 2007.
 - 4.) Progressive Bag Alliance, “Fast Facts on Plastic Grocery Bags,” American Chemistry Council, <http://www.plasticbagfacts.com/Main-Menu/Fast-Facts>, last modified October 12, 2011.
 - 5.) Endnote 1, *supra*
 - 6.) *Id.*
 - 7.) *Id.*
 - 8.) Priscilla Lapoutre, “The Manufacture of Polyethylene,” New Zealand Institute of Chemistry, undated.
 - 9.) Secretariat of the Pacific Regional Environment Programme, “Factsheet: Plastic Bags,” November, 2008.
 - 10.) Ocean Conservancy, “Trash Free Seas,” <http://www.oceanconservancy.org/our-work/marine-debris/>, last modified October 12, 2011.
 - 11.) Endnote 1, *supra*
 - 12.) *Id.*

- 13.) Gregory MacNamee, "Plastic Bags and Animals: Making the Wild Safe for Wildlife," Advocacy for Animals, <http://advocacy.britannica.com/blog/advocacy/2008/12/plastic-bags-and-animals-making-the-wild-safe-for-wildlife/>, December 8, 2008.
- 14.) Endnote 4, *supra*
- 15.) *Id.*
- 16.) *Id.*
- 17.) Endnote 3, *supra*
- 18.) San Francisco Department of the Environment, "Plastic Bag Ban," http://www.sfenvironment.org/our_programs/interests.html?ssi=2&ti=6&ii=142, last modified October 12, 2011.
- 19.) EarthTalk, "Does Banning Plastic Bags Help the Environment?" Business Ethics Magazine, <http://business-ethics.com/2010/04/10/0957-does-banning-plastic-bags-help-the-environment/>, April 10, 2010.
- 20.) Melanie D.G. Kaplan, "Washington reduces disposable bag usage by half," Smart Planet, <http://www.smartplanet.com/blog/pure-genius/washington-reduces-disposable-bag-usage-by-half/5298>, January 12, 2011.
- 21.) *Id.*
- 22.) *Id.*
- 23.) *Id.*
- 24.) Joel Gay, "Towns Bag Paper or Plastic Query," Anchorage Daily News, <http://www.adn.com/epicks/story/3049897p-3072837c.html>, May 2, 2003.
- 25.) *Id.*
- 26.) *Id.*
- 27.) City of Edmonds, "Bring Your Own Bag Campaign," <http://www.ci.edmonds.wa.us/bagcampaign.stm>, undated.
- 28.) *Id.*
- 29.) *Id.*
- 30.) *Id.*
- 31.) Pays To Live Green, "Plastic Bag Ban in Westport, Connecticut," <http://www.paystolivegreen.com/2008/09/plastic-bag-ban-in-westport-connecticut/>, September, 2008.
- 32.) *Id.*
- 33.) *Id.*
- 34.) Charanna Alexander, "Connecticut Town Stars by Banning Plastic Bags," New York Times, <http://www.nytimes.com/2009/10/11/nyregion/11bgreenct.html>, October 11, 2008.
- 35.) *Id.*
- 36.) Personal communication with Brian Smith, Citizens Campaign for the Environment, October 7, 2011.
- 37.) *Id.*
- 38.) Endnote 1, *supra*.
- 39.) *Id.*
- 40.) Endnote 36, *supra*.
- 41.) BBC News, "Irish Bag Tax Hailed Success," <http://news.bbc.co.uk/2/hi/europe/2205419.stm>, August 20, 2002.
- 42.) *Id.*

- 43.) Bibi van der Zee, "UK Plastic Bag Use on the Rise," The Guardian, <http://www.guardian.co.uk/environment/2011/jan/17/plastic-bag-use>, January 17, 2011.
- 44.) *Id.*
- 45.) Jessica Aldred, "Q&A: Plastic Bags," The Guardian, <http://www.guardian.co.uk/environment/2007/nov/13/plasticbags.pollution?INTCMP=SRCH>, November 13, 2007.
- 46.) *Id.*
- 47.) *Id.*
- 48.) Endnote 43, *supra*.
- 49.) Hong Kong Environmental Protection Department, "Overseas Experience in Plastic Shopping Bag Reduction," http://www.epd.gov.hk/epd/english/news_events/legco/files/OverseasExperienceonPlasticShoppingBagReduction.pdf, July, 2007.
- 50.) *Id.*
- 51.) *Id.*
- 52.) *Id.*
- 53.) Michelle Cordray, "What Cities Can Do About Plastic Bags," Natural Resources Defense Council, <http://smartercities.nrdc.org/articles/bag-bans-taxes-and-fees>, September 8, 2010.
- 54.) *Id.*
- 55.) *Id.*
- 56.) BBC News, "Planet Earth's New Nemesis?" http://news.bbc.co.uk/2/hi/uk_news/1974750.stm, May 8, 2002.
- 57.) *Id.*
- 58.) Md. Reazuddin, "A Step Forward to Promoting Environmentally Sustainable Development in Bangladesh," Bangladesh Centre for Advanced Studies
- 59.) Khaleej Times, "Bangladesh Jute Gets Boost from Plastic Bag Ban," http://www.khaleejtimes.com/DisplayArticle08.asp?xfile=data/environment/2010/June/environment_June67.xml§ion=environment, June 27, 2010.
- 60.) Reviva Hasson, Anthony Leiman, and Martine Visser, "The Economics of Plastic Bag Legislation in South Africa," South African Journal of Economics, vol. 65, pp 66-85, April 23, 2007.
- 61.) BBC News, "South Africa Bans Plastic Bags," <http://news.bbc.co.uk/2/hi/africa/3013419.stm>, May 9, 2003.
- 62.) Endnote 60, *supra*.
- 63.) *Id.*