

## Plastic Bag Reduction Strategies

### The Problem

A million plastic bags are used every minute worldwide, and the number is rising.<sup>1</sup>

In the United States, less than 5 percent of plastic bags are recycled.<sup>2</sup>

The North Pacific Central Gyre contains forty-six times more plastic than plankton by weight.<sup>3</sup>

Plastic resin polymers are so durable that it can take hundreds of years for plastics to break down at sea, and some may never truly biodegrade in the marine environment.<sup>4</sup>

Marine debris is ubiquitous and can be found from remote arctic regions to highly populated urban beaches.<sup>5</sup>

Plastic bags (which resemble jellyfish or sponges) are mistaken for food or prey by seabirds, marine mammals, fish, and sea turtles.<sup>6</sup>

Plastic bags do not biodegrade, they photodegrade—breaking down into smaller and smaller toxic bits contaminating soil and waterways and eventually entering the food chain when animals accidentally ingest.<sup>7</sup>

Phthalates are chemicals used in many plastics to make them soft or flexible, such as plastic bags. They have been banned in many European countries and Canada and will be banned in the U.S in many children's products by 2014 because of the potential health risks.<sup>8</sup>

### A Cost to You

Public agencies in California spend in excess of \$303 million annually in litter abatement.<sup>9</sup>

Southern California cities have spent in excess of \$1.7 billion in meeting Total Maximum Daily Loads for trash in impaired waterways.<sup>10</sup>

Each year, the State of California spends approximately \$25 million to landfill discarded plastic bags.<sup>11</sup>

The City of San Francisco alone, estimates dealing with plastic bag litter costs about 17 cents per bag, totaling \$8.5 million annually.<sup>12</sup>

### Growing Awareness



Image courtesy of [Zainub](#) via flickr

9 in 10 Californians say the quality of the beach and the ocean is important to them personally as well as for the overall quality of life and economy in the state.<sup>13</sup>

California's "ocean economy" is valued at \$43 billion.<sup>14</sup>

On February 8<sup>th</sup>, 2007 the Ocean Protection Council adopted a comprehensive resolution on marine debris which calls for a statewide plan, targeting the reduction of plastic single-use fast-food and convenience market packaging and containers such as plastic bags.<sup>15</sup>

### The Solutions

Ireland has implemented a fee per plastic bag to discourage the excessive use of plastic bags. Since 2002, plastic bag consumption has decreased by an estimated 90%.<sup>16</sup>

China has banned free plastic bags and will save 37 million barrels of oil each year due to their ban.<sup>17</sup>

The City of San Francisco has banned the use of plastic bags in pharmacies and grocery stores which meet certain financial criteria.

Malibu bans all point-of-sale plastic bags (both compostable and non-compostable) at all retail establishments.

Manhattan Beach has banned all point-of-sale plastic carry-out bags.

The City of Encinitas is considering a plastic bag ban.



Image courtesy of [Ron Prendergast](#), Melbourne Zoo

<sup>1</sup> Williams, Caroline. Battle of the Bag, New Scientist, September 11, 2004

<sup>2</sup> US EPA 2005 Characterization of Municipal Solid Waste, Table 4.

<sup>3</sup> California Coastal Commission, (2006) "Eliminating Land-based Discharges of Marine Debris in California: A Plan of Action from The Plastic Debris Project."

<sup>4</sup> California Coastal Commission, (2006) "Eliminating Land-based Discharges of Marine Debris in California: A Plan of Action from The Plastic Debris Project."

<sup>5</sup> S. Casey, (2006) "Our Oceans are Turning in to Plastic, 'Are we?' Best Life: 103-109.

<sup>6</sup> N. Wallace, "Debris entanglement in the marine environment: A review" (1985) pp. 259-277 in: R.S. Shomura and H.O. Yoshida (eds.), Proceedings of the Workshop on the Fate and Impact of Marine Debris, U.S. Department of Commerce, NOAA Technical Memorandum, NMFS, NOAA-TM-NMFS-SWFC-5

<sup>7</sup> Reusable Bags, <http://www.reusablebags.com/facts.php>

<sup>8</sup> Canadian Broadcasting Centre, <http://www.cbc.ca/health/story/2008/06/04/f-phthalates.html>

<sup>9</sup> Californians Against Waste,

[http://www.cawrecycles.org/issues/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/problem)

<sup>10</sup> Californians Against Waste,

[http://www.cawrecycles.org/issues/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/problem)

<sup>11</sup> Californians Against Waste,

[http://www.cawrecycles.org/issues/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/problem)

<sup>12</sup> Californians Against Waste,

[http://www.cawrecycles.org/issues/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/problem)

<sup>13</sup> 2006 PPIC Poll data.

<sup>14</sup> National Ocean Economics Program, *California's Ocean Economy*, 2005.

<sup>15</sup> Ocean Protection Council Resolution on Reducing and Preventing Marine Debris, adopted February 8, 2007.

<sup>16</sup> Ireland Department of the Environment, <http://www.environ.ie/en/Environment/Waste/PlasticBags/News/MainBody,3199,en.htm>

<sup>17</sup> The Daily Green, <http://www.thedailygreen.com/environmental-news/latest/china-plastic-bags-47010907>

## How big a problem are plastic grocery bags?

- Californians use more than 19 billion plastic grocery bags and merchandise bags each year, roughly 552 bags per person — and if placed end-to-end, enough to stretch around the globe over 250 times. This usage generates 147,038 tons of unnecessary waste.<sup>18</sup>
- Almost all of the 600 bags used in California per second are discarded.<sup>19</sup>
- California taxpayers spend \$25 million to collect and landfill plastic bag waste each year. That figure does not include external costs, e.g., resource extraction and depletion, quality of life issues, economic loss due to plastic bag litter and human health expenses.<sup>20</sup>
- U.S. consumers use 100 billion plastic bags annually, which is the energy equivalent of 12 million barrels of oil. This equates to [60,000 plastic bags](#) used every *five seconds*.<sup>21</sup>
- In San Diego County alone, 9,316 plastic bags were removed during Coastkeeper and Surfrider monthly beach cleanups and during California Coastal Cleanup Day in 2007.<sup>22</sup>

## Will a fee on plastic bags push consumers to use more paper?

- No. A corresponding fee on paper bags will ensure that we do not trade one problem for another.
- The plastic bag ban is designed to push consumers to the best option—[reusable bags](#). Each high quality reusable bag can eliminate hundreds to thousands of plastic bags over its lifetime.
- During manufacturing, both paper and plastic bags emit global warming gases, create water pollution and use raw materials and energy.<sup>23</sup>
- Although most people are aware that paper bags are recyclable, only about 20% of them are actually recycled.<sup>24</sup>

## Frequently Asked Questions about Plastic Grocery Bags



Image courtesy of the Ocean Conservancy

### Aren't plastic bags recyclable?

- Plastic bags are recyclable, however very few are actually recycled. Currently, less than 5% of plastic bags are recycled.<sup>25</sup>
- Plastic bag recycling is not an efficient use of our precious energy resources. Shopping bag plastic is of such low grade that the recycling economics do not work. Transporting and processing the old bags to be reproduced costs more than the bag is worth.<sup>26</sup>
- The focus on recycling encourages over-consumption to some degree. It allows us to think that we can throw away goods because they are recyclable.
- Cities and Recyclers spend incalculable amounts removing plastic bags from their recyclables stream, where they jam machinery and add to the manual labor costs of recycling.<sup>27</sup>

### Is reusing plastic grocery bags the answer?

- No. While some people reuse their bags for cleaning up dog waste and as trash liners, the overwhelming majority of people do not.
- Disposable bags cost our cities up to 17 cents per bag for disposal. And by our cities, we mean you, the taxpayer.<sup>28</sup>

## Where will I get reusable bags to carry my groceries?

- Grocery stores and pharmacies sell reusable bags for a nominal fee.
- There are a number of websites that sell reusable bags.

[www.reusablebags.com](http://www.reusablebags.com)  
[www.onebagatatime.com](http://www.onebagatatime.com)

- Remember to keep reusable bags in your car or purse to ensure that you always have a bag with you when you go to the store.

## Why is the Plastic Reduction Coalition concerned about plastic bag pollution?

- Besides fouling our public spaces with unsightly debris, plastic bags easily find their way to the marine environment through the storm drain system.
- Plastic bags kill sea animals that mistake them for food or become entangled in them. 100,000 marine animals are killed annually by entanglement in marine debris such as plastic bags.<sup>29</sup>
- Some areas of the Pacific Ocean contain forty-six times more plastic debris than zooplankton (the fundamental base of our food chain). These tiny pieces of plastic are eaten by marine animals and move up the food chain, potentially presenting health risks for humans.<sup>30</sup>
- Plastic bags don't biodegrade, they photo-degrade. The bags break down into smaller and smaller pieces of plastic, but never go away.

## What about people who cannot afford reusable bags?

- It is a misconception that you are getting a free bag at the grocery store. You pay for the bags in other costs and impacts to the environment.
- Coalition members are dedicated to hold events such as *A Day without a Plastic Bag*, where reusable bags will be given away and education about pollution prevention will be provided.

<sup>18</sup> Heal the Bay, [http://www.healthebay.org/actionalerts/2008\\_07\\_28\\_ab2058/default.asp](http://www.healthebay.org/actionalerts/2008_07_28_ab2058/default.asp)

<sup>19</sup> Californians Against Waste, [http://www.cawrecycles.org/issues/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/problem)

<sup>20</sup> Californians Against Waste, [http://www.cawrecycles.org/issues/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/problem)

<sup>21</sup> 1 Bag at a Time, [http://1bagatatime.com/index.php?page=misc&section=problem\\_1](http://1bagatatime.com/index.php?page=misc&section=problem_1)

<sup>22</sup> ICC 2007 California Data Report

<sup>23</sup> Heal the Bay, [http://www.healthebay.org/actionalerts/2008\\_07\\_28\\_ab2058/default.asp](http://www.healthebay.org/actionalerts/2008_07_28_ab2058/default.asp)

<sup>24</sup> Heal the Bay, [http://www.healthebay.org/assets/pdfs/PPI/FAQs\\_PlasticBags.pdf](http://www.healthebay.org/assets/pdfs/PPI/FAQs_PlasticBags.pdf)

<sup>25</sup> US EPA 2005 Characterization of Municipal Solid Waste, Table 4.

<sup>26</sup> Better Bags Colorado, <http://www.betterbagscolorado.org/?q=factsheet>

<sup>27</sup> Californians Against Waste,

[http://www.cawrecycles.org/issues/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/issues/plastic_campaign/plastic_bags/problem)

<sup>28</sup> Californians Against Waste, [http://www.cawrecycles.org/plastic\\_campaign/plastic\\_bags/problem](http://www.cawrecycles.org/plastic_campaign/plastic_bags/problem)

<sup>29</sup> N. Wallace, "Debris entanglement in the marine environment: A review" (985) pp. 259-277 in: R.S. Shomura and H.O. Yoshida (eds.), Proceedings of the Workshop on the Fate and Impact of Marine Debris, U.S. Department of Commerce, NOAA Technical Memorandum, NMFS, NOAA-TM-NMFS-SWFC-5

<sup>30</sup> C.J. Moore et al., (2001) "A Comparison of Plastic and Plankton in the Pacific Central Gyre," Marine Pollution Bulletin 42: 297-1300; 11 US Commission on Ocean Policy, An Ocean Blueprint for the 21<sup>st</sup> Century. Final Report. Washington, DC, 2004 ISBN#0-9759462-0-X. 102006 PPIC Poll data: