The Impacts of Single-Use Plastic Bags

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MBNMS Sanctuary Advisory Council
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Single-Use Plastic Bags

- Over 19 billion single-use high density polyethylene (HDPE) plastic grocery bags are used annually in California.

- Most end up in landfills or as litter.

- Of the four types of bags considered, plastic bags have the greatest impact on litter.
Effects on Marine Life

- Over 267 species of marine wildlife have been affected by plastic bag litter

- Clogging the throat, thus choking the animal

- Artificially filling the stomach so that the animal cannot consume food, depriving them of nutrients

- Infecting them with harmful toxins that can poison the animal

- Entangling the animal, leading to choking, cuts, and restricting growth

LA County Staff Report 2007
Leatherback Sea Turtles

- 37% of 371 autopsied leatherback turtles since 1968 had plastic in their GI tract

International Coastal Cleanup

- 108 countries
- ~500,000 volunteers
- 7.4 million pounds of debris
- 10.2 million pieces of trash
- Top 3 items:
  1. Cigarettes/filters
  2. Plastic bags
  3. Food wrappers.
# California Coastal Cleanup

<table>
<thead>
<tr>
<th>California Statewide</th>
<th>Monterey Bay Cleanups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cigarettes/Filters</strong></td>
<td><strong>Plastic Bags:</strong></td>
</tr>
<tr>
<td></td>
<td>2007: 1799</td>
</tr>
<tr>
<td></td>
<td>2008: 5674</td>
</tr>
<tr>
<td></td>
<td>2009: 3087</td>
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<tr>
<td></td>
<td>ACC 2009: 4057</td>
</tr>
<tr>
<td><strong>Food Wrappers/Containers</strong></td>
<td>2010: 4102</td>
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<tr>
<td></td>
<td>ACC 2010 SC: 4423</td>
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<tr>
<td><strong>Caps, Lids</strong></td>
<td>2010 Mont: 2494</td>
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<tr>
<td></td>
<td>ACC 2010 Mont: 2494</td>
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<tr>
<td><strong>Bags (plastic)</strong></td>
<td>2011: 365</td>
</tr>
<tr>
<td><strong>Cups, plates, forks, knives, spoons</strong></td>
<td><strong>Total: 26,001</strong></td>
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</table>

| | |
## International Coastal Cleanup 2009

### Marine Wildlife Found Entangled in Marine Debris

<table>
<thead>
<tr>
<th>Wildlife</th>
<th>Beverages Bottles</th>
<th>Beverages Cans</th>
<th>Crab, Lobster, &amp; Fish Traps</th>
<th>Fishing Hooks</th>
<th>Fishing Line</th>
<th>Fishing Nets</th>
<th>Plastic Bags</th>
<th>Ribbon/Strings</th>
<th>6-Pack Holders</th>
<th>Wires</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Amphibians</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>12</td>
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<tr>
<td>Birds</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>45</td>
<td>53</td>
<td>19</td>
<td>5</td>
<td>5</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Fish</td>
<td>5</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>48</td>
<td>11</td>
<td>11</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>89</td>
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<tr>
<td>Invertebrates</td>
<td>6</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>14</td>
<td>12</td>
<td>6</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>55</td>
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<tr>
<td>Mammals</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>6</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>5</td>
<td>1</td>
<td>23</td>
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<tr>
<td>Reptiles</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td><strong>Total Debris Items</strong></td>
<td><strong>14</strong></td>
<td><strong>3</strong></td>
<td><strong>3</strong></td>
<td><strong>10</strong></td>
<td><strong>126</strong></td>
<td><strong>82</strong></td>
<td><strong>49</strong></td>
<td><strong>16</strong></td>
<td><strong>23</strong></td>
<td><strong>4</strong></td>
<td><strong>336</strong></td>
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</tbody>
</table>

[Image of marine debris affecting wildlife]
Debris Collection Results, Monterey CA, Summer, 2009

Percent of Total By Category (Top Five)
- plastic 55%
- styrofoam 14%
- biodeg 12%
- metal 3%
- other 16%

Avg Sail Track

Not just a problem for marine life

- Trashed neighborhoods invite crime
- Litter has a detrimental effect on tourism
- Everyone deserves a clean neighborhood

**Economics**
- Cost of cleanup: cities and agricultural land
- Stores pass on the cost of “free” bags to consumers
Recycling is NOT the Solution

1) It is **cost prohibitive** to recycle plastic bags or other types of plastic film or plastic wrap in curbside programs.

2) The recycled bags **have little value**, and when collected get badly contaminated, decreasing their value further.

3) There are virtually **no markets** in the U.S. for curbside-recovered plastic bags, and international markets are not much better.

4) Curbside plastic bags get **wound up in collection and processing equipment**, requiring maintenance that costs money and time, and **creates inefficiencies** for processing all the recyclables.

- From Ken Prue, San Diego Recycling Program
Progress on Bans so far in California

- City of San Francisco - March 2007
- City of Oakland - July 2007 (suspended by suit)
- City of Fairfax - August 2007
- City of Malibu - May 2008
- City of Los Angeles - July 2008
- City of Manhattan Beach - July 2008 (suspended by suit)
- City of Palo Alto - March 2009
- County of Los Angeles - November 2010
- City of San Jose - December 2009
- City of Long Beach - December 2010
- County of Marin - January 2011
- City of Santa Monica - January 2011
- City of Santa Barbara - January 2011

- Cities of Santa Cruz, Capitola, Glendale, Arcata, Sunnyvale, St. Helena, and the Counties of Santa Cruz, Marin & Alameda are all moving towards plastic bag bans.

- AB 1998 (statewide ban) did not pass California legislature in 2010

- California Supreme Court will determine whether full EIRs are required
Proposed SAC Resolution

- Formally recognizes the problem
- Supports legislation and local ordinances
- Supports voluntary initiative by businesses
- Supports clean-up efforts
- MBNMS SAC would be the first!
Thank you!