Kill the Butts!
Reducing Cigarette & Other Tobacco Product Waste

March 27, 2014
Tobacco Control Legal Consortium Webinar Series

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The Tobacco Control Legal Consortium

The legal network supporting the tobacco control movement in the United States.
Kill the Butts!
Reducing Cigarette & Other Tobacco Product Waste

March 27, 2014
Presenters

• Moderator: Mike Freiberg, Tobacco Control Legal Consortium

• Dr. Thomas Novotny, Cigarette Butt Pollution Project; San Diego State University and University of California San Diego

• Clifton Curtis, J.D., Cigarette Butt Pollution Project; Varda Group for Environment and Sustainability
Moderator:

Mike Freiberg
Staff Attorney
Tobacco Control Legal Consortium
Presenter:

Clifton Curtis, J.D.

Research Director

Cigarette Butt Pollution Project

Director

Varda Group for Environment and Sustainability
Presenter:

Dr. Thomas Novotny

Founder,
Cigarette Butt Pollution Project
Professor of Global Health
San Diego State University and
University of California San Diego
Extended Producer Responsibility-Product Stewardship and the Environmental Impact of Cigarette Waste

March 27, 2014
Life Cycle of Cigarettes

- Cigarette Production
- Cigarette Transportation
- Cigarette Consumption
- Tobacco Growing
- Cigarette Waste Disposal

Environmental Issues
Cigarette Waste Disposal and the Environment

Street

Drains

Rivers

Coastal

Ocean

Cigarette butts are harmful to marine life!
Under this principle, tobacco industry should be held responsible for the environmental damage caused by tobacco production.
EPR/PS and Related Environmental Principles

- Extended Producer Responsibility
- Product Stewardship
- Polluter Pays
- Precautionary Principle
- Design for Environment
- Corporate Social Responsibility
Criteria for Applying EPR

• Does the product create/cause adverse risks to the environment or to public health and safety?
• Does the product’s post-consumer waste significantly burden government solid waste or other cleanup and disposal programs?
• Are existing, voluntary cleanup/disposal programs effective?
• Are there examples of success in collecting and processing other toxic or non-toxic products in other states or countries?
• Are existing EPR or PS program for the product at issue viewed as not being effective?
Key Examples of Existing and Potential EPR/PS Supportive Policy, Regulatory and Voluntary Interventions

- EPR and PS state and local laws are needed that mandate policies and programs consistent with these two principles
- Filter ban
- Bans on smoking in designated areas/places
- Labeling
- Litigation
- Cleanup assessment/abatement fees
- Deposit; return/take-back
- Waste fees
- Fines
- An “Endgame” for Tobacco
Cigarette Butt Pollution Project
(www.cigwaste.org)
Environmental Impacts of Tobacco Product WASTE

Thomas E. Novotny, MD, MPH
Cigarette Butt Pollution Project
SDSU Graduate School of Public Health
Tiny Trash
Butts and the Environment

- Tobacco product waste is 30-40% of all debris items collected from beaches, rivers and streams on annual cleanup days.
- 5.5 trillion cigarettes are consumed globally every year;
- Of these, 4.95 trillion are filtered, deposited somewhere in the environment worldwide.
- Up to 65% of all butts discarded improperly.
- Number one item collected on International Beach Cleanup annually since 1996.
# Top Ten Items Picked Up Over 27 Years of Coastal Cleanup

<table>
<thead>
<tr>
<th>Item rank</th>
<th>Item</th>
<th>No. of Debris Items</th>
<th>Percentage of Total Debris Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>cigarettes/filters</td>
<td>52,907,756</td>
<td>32%</td>
</tr>
<tr>
<td>2</td>
<td>food wrappers/containers</td>
<td>14,766,533</td>
<td>9%</td>
</tr>
<tr>
<td>3</td>
<td>caps, lids</td>
<td>13,585,425</td>
<td>8%</td>
</tr>
<tr>
<td>4</td>
<td>cups, plates, forks, knives, spoons</td>
<td>10,112,038</td>
<td>6%</td>
</tr>
<tr>
<td>5</td>
<td>beverage bottles (plastic)</td>
<td>9,549,156</td>
<td>6%</td>
</tr>
<tr>
<td>6</td>
<td>bags (plastic)</td>
<td>7,825,319</td>
<td>5%</td>
</tr>
<tr>
<td>7</td>
<td>beverage bottles (glass)</td>
<td>7,062,199</td>
<td>4%</td>
</tr>
<tr>
<td>8</td>
<td>beverage cans</td>
<td>6,753,260</td>
<td>4%</td>
</tr>
<tr>
<td>9</td>
<td>straws/stirrers</td>
<td>6,263,453</td>
<td>4%</td>
</tr>
<tr>
<td>10</td>
<td>rope</td>
<td>3,251,948</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Top ten total debris items</strong></td>
<td><strong>132,077,087</strong></td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td><strong>Total debris items worldwide</strong></td>
<td><strong>166,144,420</strong></td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Ocean Conservancy, 2011
Environmental Toxicity

- Aquatic ecosystems, such as shorelines and waterways, are most vulnerable, as majority of land-based waste is deposited in these environments.

- Cigarette butt leachates are hazardous toxic waste
  - Contain measureable heavy metals such as cadmium, arsenic and lead;
  - Acutely toxic to freshwater micro-organisms
  - Main cause probably nicotine and ethylphenol
The Problem with Filters

- Made of cellulose acetate, a non-biodegradable plastic
- Cigarette filters are specifically designed to accumulate particulate smoke components including toxic chemicals….that leach out into the environment

*Photo copyrighted by Chris Register, Clean Virginia Waterways*
The Fish Toxicity Study

Topsmelt- Marine  Fathead Minnow- Freshwater

Photos:
Elli Slaughter, MPH (2010)
LC50: 1 butt/L

Smoked: With Tobacco

- Saltwater: Topsmelt
- Freshwater: Fathead minnow

Concentration (Cigarette Butts/Liter)

Mean Survival

Lab Control 0.125 0.25 0.5 1 2 4
Additional Health Issues

- **SUBLETHAL EFFECTS**: adverse effects on growth, development, or reproduction
- **BIOACCUMULATION** and **BIOAMPLIFICATION**;
- **SPECIFIC CHEMICALS** that are lethal are unknown.
Potential Pathways: Butt Waste to Human Health Risks

Image courtesy of Eunha Hoh, 2011
Summary

• Butts are not just litter: they are a toxic waste product needing regulation;
• Butt waste
  – damages habitat, landscapes and ecosystems;
  – ignites destructive, deadly fires;
  – poisons wildlife and children;
  – consumes tax dollars for cleanup and disposal; and lasts forever!
Actions to Prevent Butt Waste

• Change social norms on butt flicking
• Ban smoking in parks, beaches, and other outdoor spaces: bars, restaurants, worksites
• Add litter fee to price of cigarettes
• Add take-back scheme to cigarette market structure
• Change the product to be less of a hazard
• Consider litigation
Smoking Bans

• 150 municipalities across the country prohibit smoking on their beaches
• 650 communities prohibit smoking in their parks
• 766 college campuses nationwide (17%) are completely smoke free, others with designated smoking areas and partial bans (all UC and CSU)

• Do these policies work?
• Many California communities now prohibit smoking outdoors—what happens to the butts?
And More…

- Filters are not biodegradable;
- The tobacco industry tries to avoid responsibility for take-back, prevention, and end-of-product-live effects and nuisance;
- Reframing of butt as toxic waste and raising awareness are needed to develop UPSTREAM policy interventions (EPR).
Filter Waste Degradation

• Varies under different conditions.
  – salt water slows degradation process.
  – 1-5 years under ideal conditions.
  – Plastics such as cellulose acetate may photo-degrade, but not biodegrade.

• Examples
  – 1-2 months in aerobic conditions
  – 6-9 months in anaerobic conditions
  – 12 months in fresh water
  – 36 months or longer in sea-water
  – Japanese study found little degradation.
AB1504 (Stone, D-Monterey)

• AB 1504 would prohibit the sale, gift, or furnishing of cigarettes that come with single-use ‘filters’. Given that anti-litter campaigns and strict laws and penalties have not resulted in the abatement of cigarette butt litter, this bill takes the cigarette filters completely out of the equation. Each violation of this prohibition is subject to a fine of $500.
The Costs of Tobacco Product Litter: Calculating Costs and Abatement Fees in San Francisco

John E. Schneider, PhD
Oxford Outcomes, Inc.
## Maximum Permissible Fee

### Calculation of Per-Pack Maximum Permissible Fee

<table>
<thead>
<tr>
<th>Measure</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarette Packs Purchased in SF (2008)</td>
<td>30,611,026</td>
</tr>
<tr>
<td>Total Litter Mitigation Costs (2009)&lt;sup&gt;a&lt;/sup&gt;</td>
<td>$7,487,916</td>
</tr>
<tr>
<td>Total Litter Mitigation Costs Adjusted for In-migration (2009)&lt;sup&gt;b&lt;/sup&gt;</td>
<td>$6,649,270</td>
</tr>
<tr>
<td>Total Litter Mitigation Costs per Pack (2009)</td>
<td>$0.22</td>
</tr>
</tbody>
</table>

*Sources and Notes:* (a) from Table 2 Column [4]; (b) assumes commuter and tourist visitors to San Francisco purchase 50% of their cigarettes outside of San Francisco, resulting in an 11.2% reduction in mitigation costs associated with TPL purchased within the boundaries of the City.
Litigation

• Basis:
  – Public nuisance and prevention of access to pristine natural environments
  – Recover economic costs of cleanups
  – Violation of federal Resource Conservation and Recovery Act
  – Application of California Hazardous Waste Laws

• Previous multi-state agreement (MSA) with tobacco industry involved health care costs only ($287 billion)
  – Disclosures were extremely damaging to industry
  – Pre-empted more class action suits but not individual suits
  – Does not apply to environmental impacts
Preemption and Local Authority
State and Local Authority

- **Preservation Clause** in Tobacco Control Act preserves authority of state and local governments to adopt tobacco control measures related to sale (including prohibition of sale), distribution, advertising, promotion, information reporting, taxation of tobacco products, and related policies.

- **Preemption Clause** prohibits state and local governments from adopting tobacco product standards, and a few related policies.

- **Savings Clause** reiterates that state and local governments can adopt regulations relating to sale, distribution, possession, information reporting, exposure to, access to, the advertising and promotion of, or use of, tobacco products by individuals of any age, or relating to fire safety standards for tobacco products...
Congress decided “to preserve for the states a robust role in regulating, and even banning, sales of tobacco products.”

Other Approaches

“A person may not offer for sale or sell a cigarette in the state unless the cigarette, including the filter, is biodegradable.”

House Bill 405, Maryland Legislature

Smoke-Free Laws

Extended Producer Responsibility / Product Stewardship

Deposit and Refund Programs

www.publichealthlawcenter.org
Questions?

Contact us:

• Tobacco Control Legal Consortium: (651) 290-7506

• Cigarette Butt Pollution Project: cigwaste.org