Beyond Bag and Polystyrene Food Ware Bans:

Other Strategies for Reducing Single Use Plastics

Plastic Pollution Prevention Summit

February 23, 2011

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CLEAN WATER ACTION

CALIFORNIA

2011 bills in CA legislature

- AB 298 (Brownley)- state wide ban on distribution of free plastic and paper bags
- SB 568 (Lowenthal) – state-wide polystyrene take-out food container ban
- Package of EPR bills- sharps, fluorescent lamps, batteries

California Policies Moving to Source Reduction and Prevention

California Coastal Commission's Action Plan

- 66 actions identified, heavy emphasis on source reduction

Ocean Protection Council's Marine Debris Resolution (February 2007)

- targeted reduction of food packaging waste through source reduction, litter law enforcement, public education, and making producers of packaging responsible for end of life management of their products.

•Ocean Protection Council Strategy to Reduce Marine Litter (2008)

- 3 priorities: producer take-back, fees, bans

Priorities
Prevention and Reduction Efforts

Producer take back of packaging

- 33 countries do this already- started by Germany in 1990
- 68 jurisdictions in California have enacted resolutions

Ban certain litter-prone / marine debris items (polystyrene, straws, caps, lids, bags)

- 48 California jurisdictions have enacted polystyrene food container bans
- 8 jurisdictions have enacted plastic bag bans

Assess fees on litter-prone items, like convenience food packaging

- City of Oakland – litter fees on packaged products at convenience food stores near schools

Clean Water Action- Taking Out the Trash

Focusing on prevention:

1. Bag Bans: supporting local and state bag bans
2. Banning polystyrene: supporting local and state-wide bans
3. Phase out Take-out: supporting re-usable mug, cup, food containers instead of disposable-
4. Packaging EPR– researching models for California focused on prevention and source reduction
5. Involving local business- collecting data showing business sources of litter (convenience food stores, fast food establishments, grocery stores, institutional sources)

Taking Out the Trash-
involving businesses and institution sources

- 2010-2011: identifying sources through litter audits in 4 cities- Oakland, Richmond, San Jose, South San Francisco
- Partners: The Watershed Project, Conservation Corps, the 4 cities, County of San Mateo, Oakland High School, San Jose State
- New street litter monitoring technique aimed at identifying sources of littered products- businesses and institutions
- Collecting brand name and other source information
- Cigarette butts, snack food wrappers, hot and cold drink cups /lids/straws = most numerous items in preliminary tallies
- Typical sources: fast food, convenience stores, grocery, malls, schools, movie theatres

Project will provide a “snapshot” of litter sources in the community

Follow up with local businesses and institutions

- Conducting cost-benefit analysis
- Guidance on Reduce, Re-use, Recycle at food establishments
- 2011- presenting data to community and business groups via meetings and workshops
- Follow up with disposables audits for businesses in selected monitoring locations

Next steps…promote re-usables policies at local level, encourage businesses to voluntarily reduce and control trash

Sustainable Solutions for Grab n' Go- Univ. of Colorado - Cafeteria

- Original request from cafeteria: find most sustainable bio-plastic to replace petro plastics for grab n' go
- Cardboard boxes, plastic clamshells and utensils, napkins, plastic bottles
- Compared PS to PLA and aluminum: LCAs showed that recycled materials have lower impacts-

Problems with PLA

A single acre of corn is treated with an average of 170 pounds of nitrogen- and potassium- based fertilizers, as well as nearly a pound of “agrochemicals.”

Running the equipment and transporting the materials for cultivation of this acre of corn also consumes about 8 gallons of fossil fuels and 41.7 kilowatt-hours of electricity.

U.S. corn crop has been increasingly dominated by genetically engineered (GE) plantings

Ethanol competing for corn- projected to require 26% of all US grown corn in 2008- driving up food prices

PLA problems cont'd

- PLA is actually more harmful than certain conventional plastics in terms of other environmental impacts, such as aquatic and terrestrial eutrophication.
- These impacts result from the presence of phosphorous, nitrogen oxides, and ammonia in effluents released from production
- Natureworks claimed energy reductions (65%) turned out to be based on purchasing carbon offsets to account for 1/3 of energy savings- independent analysis showed no clear advantage over fossil fuel plastics for energy or carbon
- Requires industrial composting, which many places lack
- *Concerned that PLA legitimizes single-serving, over-packaged products*

Aluminum

Aluminum is widely available, but production is energy-intensive and associated with high carbon outputs.

The end-of-life profile for aluminum is less deleterious than other alternatives, since recycling this metal yields clear environmental and economic benefits.

	Plastic (polystyrene #6)	**Aluminum**	**PLA**
Number of containers/week	8000	8000	8000
Weight per container (lbs)	0.0325	0.0835	0.0394
Pounds CO_2 Emissions Per Pound Produced	4.33	4.93	3.5
Total Yearly Carbon Emissions (lbs CO_2)	180,000	526,000	177,000
Equivalent Yearly Emissions (for number of cars being driven)	18	52	17
Current Disposal Option	Landfill	Recycle	Landfill

Recommendations

Disposable packaging is a manifestation of the view that the planet itself is disposable. Ultimately, any strategy for sustainability needs to work towards eliminating single-use, single-serving packaging, rather than merely changing its form. Long term goals should include reusable containers, bags, and bottles. We recommend the following actions.

Short Term Goals

- Reduce usage of non-recyclable plastic packaging and minimize overpackaging, such as individually wrapped tableware sets.
- Change purchasing guidelines to require that all single serving drinks come in containers that are recyclable on campus.
- Research and pilot Totally Chlorine Free or unbleached paperboard to reduce volume and environmental impact of pizza boxes.
- Do not convert to PLA plastic containers.
- Replace conventional plastic containers with aluminum, but only as a transition strategy to durable, reusable containers.

Long Term Goals

- Adopt a truly sustainable strategy that eliminates single use containers that go to the trash can. Specific long term strategies are proposed in the Summary of Recommendations by the ENVS 3001 class.[83]

University of Oregon

- At 2 of the University's Grab n Go outlets, students can use re-usable or disposable plate
- If student chooses to "eat –in" it's a re-usable plate, "to go" is on paper
- Even with half the plates taken, they still reduced spending on disposables from $23,000 to $10,000 for both paper and re-usable plates combined
- Saving 1/3 of garbage tipping fees from these food outlets

Dartmouth College

- Created a Sustainable Dining Club- 140 members by end of term- take out food served on re-usable containers- reduced containers purchased by 80%
- Replaced all packaged drinks with fountain service
- Replaced packaged condiments with bulk items
- Offer bulk food snack items instead of packaged
- Required tremendous amount of education to be successful

Dartmouth Sustainable Dining Club

- Students purchase a Sustainable Dining Kit - $20
- Since each student uses about $1.17 worth of disposables every day, one kit pays for itself in 17 days
- Place dirty containers in return bin and pick up a clean new container at each meal
- Significant reduction in trash- from 50 lbs per meal per venue to 5 lbs of trash and 5 lbs of compostables

Clean Water Action Model Ordinance

Server must ask if “for here” or “to go”

FOR HERE:

- Must be served with re-usable beverage container

TO GO:

- If customer does not bring re-usable cup, charge for the disposable

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