

Plastic Recycling Technology Program Updates

Focus on Film Plastic

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Presentation Outline

May 19, 2005

- 2004 Waste Characterization Study (WCS)
 - CIWMB Publication Number: 340-04-005
- Plastic Trash Bag (PTB) Law and Legislative Report
- Plastic Film Recovery Efforts and Work Groups
- Materials Collection Data Bases
- Contract Studies
- Rigid Plastic Packaging Container (RPPC) Law



Plastics- 4th Largest Component of Waste Stream

(2004 CIWMB WCS)



	2004 Waste Characterization Study Results of California's Waste Stream by Category Type	Est. Pct.	Est. Tons
1	Organic	30.20%	12,166,452
2	C and D	21.70%	8,732,074
3	Paper	21%	8,445,898
4	Plastic	9.50%	3,809,699
5	Metal	7.70%	3,115,357
6	Special Waste	5.10%	2,038,431
7	Glass	2.30%	934,926
8	Electronics	1.20%	481,357
9	Mixed Residue	1.10%	437,448
10	Household Hazardous Waste	0.20%	73,599



Plastic Film Disposal (2004 CIWMB WCS)

2004 Waste Characterization Study Results of California's Waste Stream by Film Plastic Types	Film as% of Total Plastics Disposed	Total Tons Disposed
All Plastic	100 %	3,809,699
Plastic-Other Than Film	54.13%	2,062,040
All Plastic FILM	45.87%	1,747,659
• Other Film: Sandwich, newspaper, food bags & wrap, etc	21.70%	826,757
• Plastic Trash Bags	10.25%	390,460
• Commercial and Industrial Packaging (transport pkg, shrink wrap; bubble wrap; mattress bags, vehicle, etc)	7.62%	290,331
• Plastic Grocery and other Merchandise Bags	3.86%	147,038
• Film Products (agriculture, construction wrap, drop cloths	2.44%	93,073



Percent of Plastic Film In Total Waste Disposed, By Industry Category

Industry Category	Percent Film in Total Waste Disposed
Manufacturing, food/kindred	12.5 %
Transportation, other	8.5 %
Manufacturing, electronic equipment	8.5 %
Combined categories (includes agriculture; some manufacturing	8.4 %
Wholesale trade, nondurable goods	8.0 %
Retail trade, food store	7.1 %
Manufacturing, industrial/machinery	6.5 %
Services, business services	6.4 %



Why Focus on Plastic Film Recycling ?????

- **California's 2004 Waste Study Estimates:**
 - Annual Film Disposal = 1.75 million tons/yr
 - Film Disposal Estimates 4.3% by Weight, 8-10% by Volume
 - Per Person = 97 pounds of film disposed annually
 - Commercial, Industrial, Ag, consume 66% of film market
- 5% or less of all film plastic produced is recycled.
- Most film plastic contains no recycled material.



Plastic Trash Bag Law (Current)

- All manufacturers and wholesalers of regulated (thickness of 0.7 mil or greater) plastic trash bags sold in California.
- Annually, plastic trash bag manufacturers and wholesalers must certify that they either:
 - (1) Used 10% or more post consumer material in new regulated trash bags, or
 - (2) Used 30% post consumer material in all plastic products not subject to compliance with the Rigid Plastic Packaging Container or other minimum-content law; or
 - (3) Demonstrate there was insufficient quality and/or quantity of post consumer materials to satisfy the 10 or 30% standards.

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To Implement a Comprehensive Film Plastics Diversion Management Action Plan: The CIWMB Recommends Adopting Legislation

- Direct the Board to negotiate and execute Memoranda of Understanding (MOU) with film plastic industry stakeholders including manufacturers, distributors, retailers, waste collectors, recyclers, reprocessors, and local and state government agencies. This process should be completed by December 31, 2006.
- The MOUs would establish film plastic diversion goals and targets for 2008; projects to divert from disposal film plastic products; increase recycling; education and outreach programs; quality standards and other appropriate subjects.
- Adopt legislation to implement the assessment of a mil fee on film plastic products. The fee would be assessed if MOUs cannot be negotiated with the primary stakeholders or if the diversion goals and targets are not met. The fee, if assessed, would commence on July 1, 2007 or July 1, 2010.
- Grant the Board the authority to suspend enforcement of the plastic trash bag law (Public Resources Code sections 42290–42297).
- Repeal of the plastic trash bag law when the first phase of MOUs is executed

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Staff and Film Collection Workgroups

- **Goal:** Increase diversion of film plastics from CA's landfills.
- **Who:** Voluntary workgroups of CIWMB staff, industry and local government stake holders.

- Workgroup Topics:
 - Overall Film Collection Matrix
 - Residential and Commercial Education and Training
 - Technical Training and Issues
 - Washing and Sorting Technology

- Workshop June 28, 2005
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Film Collection Data Bases

Residential & Commercial

- **CIWMB's Clearinghouse Data Base for Businesses:**
<http://www.ciwmb.ca.gov/Plastic/Recyclers/> No Charge
 - Search: Resin types, locations, facility name, quantities
 - Contact: Edgar Rojas, erojas@ciwmb.ca.gov

- **American Plastics Council and Moore Recycling:**
<http://www.plasticbagrecycling.org/> No Charge
 - Grocery store collection
 - Commercial drop off
 - Assist with setting up new programs
 - Calculator for analyzing economics of recovery.
 - Contact: Nina Bellucci, ninabell@vom.com

Postconsumer Resin Quality Assurance and Testing Protocol

CIWMB Publication Number: 432-05-003

- PCR Objectives:
 - Evaluate PCR processors in California and programs
 - Propose model program for quality assurance

- Quality control system & guidelines for:
 - Resin types: LLDPE, LDPE, MDPE, HDPE, PP, PS, and PET
 - Product types: trash bags, rigid packaging, and plastic lumber

- Documentations, specifications, and testing requirements for quality

- PCR levels ranging from 1 to 5.
 - Trash bag manufacturers = levels 1, 2, or 3.
 - RPPC manufacturers = levels 4 or 5.

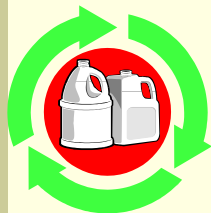
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Compostable Study

- Evaluate performance of Compostable plastic products meeting ASTM 6400 (Compostable specification) in commercially operated compost systems:
 - Product performance as advertised
 - Fully degradable
 - Environmental fate of degradation byproducts
- Follow up study examines additional Compostable and degradable plastics

Rigid Plastic Packaging Container (RPPC) Law Update



- **RPPC Regulated Containers**
 - 8 fluid ounces to 5 gallons, non-food, reclosable, all plastic,
- **Product manufacturers must comply with law**
 - 25% Post-Consumer Resin
 - 10% Source Reduction
 - 5 times Re-Use/Refill or
 - 45% Recycled by product
- **SB 1729:** Eliminated CIWMB's requirement to calculate recycling rate options:
 - 25% All-Container Recycling Rate, and
 - 55% PET Recycling Rate
- **CIWMB Continues Annual Certifications**

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