

Closed Loop Consumers

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Why Recycle Bags

- The environment / ethics
 - Landfill diversion
 - Reduced consumption
 - Energy / virgin material
- Consumer demand
 - Desire for “green” products
- Economics
 - Store buy back programs
 - Virgin material offset

What is the Legislative Picture?

Increased Legislation Communicates Concerns

- Plastic bag legislation has been on the rise
- As of 21 May 2008 there were 117 laws and ordinances under consideration
- The vast majority of legislation proposes recycling

What Is Driving Legislation?

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Understanding Environmental Goals

- **Analysis of plastic bag restricting legislation and environmental movements**
- **Five points / goals identified**
 - Improve recycling rates
 - Improve landfill diversion rates
 - Reduce consumption of oil and natural gas
 - Reduce litter
 - Reduce marine debris

How Do You Respond To These Goals?

Meeting Consumer Environmental Goals

- Products provide environmental benefits
 - Bag reduction / optimization programs
 - Reusable bags
 - More items per bag
 - Recycling programs
 - Open loop
 - Closed loop
 - Degradable additives
 - Can't interfere with recycling programs
 - Must provide an added benefit
 - Compostable Bags
 - Can't interfere with recycling program

Are They Environmentally Effective?

Environmental Product Effectiveness Rating

| | | Improved Recycling Rates | Landfill Diversion | Reduced Consumption of Oil / Natural Gas | Reduce Litter | Reduce Marine Debris | Environmental effectiveness |
|------------------------|------------------------------------------------|-----------------------------|--------------------|------------------------------------------------|---------------|-------------------------|--------------------------------|
| Direct Influence | 3 | | | | | | |
| Indirect Influence | 2 | | | | | | |
| Minimal / No Influence | 1 | | | | | | |
| Negative Influence | 0 | | | | | | |
| Stand Alone Programs | Degradable Bags | 1 | 1 | 1 | 3 | 1 | 7* |
| | Compostable Bags | 0 | 3 | 1 | 3 | 1 | 8* |
| | Open Loop Recycling | 3 | 3 | 1 | 1 | 1 | 9 |
| | Closed Loop Recycling | 3 | 3 | 3 | 1 | 1 | 11 |
| | Bag Reduction / Optimization Programs | 2 | 3 | 3 | 2 | 2 | 12 |
| Hybrids | Recycled Content Degradable Bag | 3 | 3 | 3 | 3 | 1 | 13 |
| | Recycled & Degradable Bag w/ Reduction Plan | 3 | 3 | 3 | 3 | 2 | 14 |

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Assessment of Environmental Program Options

- Recyclers must:
 - Support take back programs
 - Offset first generation virgin resin
- Hybrid programs score highest by building upon recycling's strengths
- Hybrid programs address all five concerns
- Compostable and degradable bags don't achieve much without recycling

Building A

Successful Recycling Program

Two key aspects make recycling programs
“**need to have**” rather than “**neat to have**”

- Environmental benefits
- Participation

How did Hilex achieve these aspects:

- Bag-2-Bag recycling provided the environmental benefits of reduced virgin material and landfill diversion
- Closed loop recycling provides a reward factor since consumers that return bags get recycled bags
 - “closed loop consumers” *improve recycling rates*

Hilex's Goals

- Make recycling a “need to have” and not a “neat to have”
- Listen to consumer's environmental goals and integrate environment benefits in to plastic bags
- Continue to takes steps that make plastics more sustainable
- Educate and develop “closed loop consumers”