

# COALITION *for* RESOURCE RECOVERY



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# Global Green USA's Coalition for Resource Recovery

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- Industry working group dedicated to transforming waste into assets.
- Conduct pilots in New York City to identify and program scalable, transferable waste diversion programs and technologies.



# CoRR

Generating Business Value through Creating a Zero Waste NYC



**Food: 1,100**  
Tons/day

**Fiber: 700**  
Tons/day

**Plastic: 300**  
Tons/day

**Metal: 100**  
Tons/day

**Glass: 70**  
Tons/day

Food Waste



Wholesale Packaging



Food Packaging



Beverage Containers



Plastic Bags



**NYC Opportunity**

- 15,000 tons/day

**Restaurant & Retail**

- 2,400 tons/day

**CORR's Programs**



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# A Coalition of Members

- Action Carting
- BASF
- Bemis
- Chemol
- DBB Enterprises
- Design & Source
- Dow Corning
- Duro Bag
- LBP Manufacturing
- International Paper
- Interstate Container
- MidPoint International
- N&V International
- Orwak
- PepsiCo
- Pratt Industries
- Pratt Institute
- Pret A Manger
- Smurfit Stone
- Solo Cup Company
- Spectra-Kote
- Starbucks
- Tomra
- TransTech
- Waste Management
- Western Michigan University



## **Weapons of Mass Destruction**



**Global Green USA  
US Affiliate of  
Green Cross International**

*Addressing Three of the  
Greatest Challenges Facing  
Humanity*



**Lack of Clean Water**



**Climate Change and  
Resource Consumption**

Why Did We Start With OCC?

## Paper Food Packaging U.S Discards

Paper Product Category	2008 Discarded Tons
Paper Plates & Cups	1,250,000
Folding Cartons	3,460,000
Bags & Sacks	730,000
Total	5,440,000

# 2008 Generation & Discard Data

	Corrugated Boxes	Office Type Papers	Tissue Paper & Towels
Generation	29,710,000	6,050,000	3,460,000
Recovery	22,760,000	4,290,000	Neg.
% Recovery	76.6%	70.9%	Neg
Discards	6,950,000	1,760,000	3,460,000

# Concept being Tested through NYC Pilots

- All restaurants throughout the United States bag their spent paper food packaging in 100% recycled content paper bags that are collected and recycled with its old corrugated cardboard (OCC), reducing waste costs for restaurants, adding valuable fiber to the recycling stream, and creating a net greenhouse gas benefit.

# Pilot Stages

## Material Pre-Screen



## Collect with OCC



## In-Store Design



## Recycle



# Metrics and Measurements

	4Q '09	2 <sup>nd</sup> Q '10	4Q '10	2Q '11
Lbs/Day	50	200	500	1,000
Percent Processing Volume	–	–	–	20% – 50%
Purity Criteria	≥ 80% Goal Met	Improve	Improve	≥ 90%
Actions to Improve Purity		Test paper bin liner	Test new bin prototype	Test new bin prototype

Material collected for the OCC trial will provide the volumes needed to test the material's utility for a range of end uses including tissue, folding cartons, medium, and linerboard.

# Mill Trial Results

	Lab	Mill 1	Mill 2
Feedstock	Sbux Hot Cups & Sleeves	PE & PLA-Coated Hot & Cold Cup Cut Waste	PE Coated Hot & Cold Cup Cut Waste; 86% yield in repulpability Lab Test
% test material	20%	50%	10%
Pulper, Screen & Process type	High Consistency Pulper, Low Density Reverse Cleaning	Batch, NA	Continuous. Low consistency, high sheer pulper w/detrasher system
Results	94% fiber yield for cups and sleeves, no operational impacts, 10% increase of burst strength over OCC	Good fiber Increased pulping time, decreased yield, increased rejects, increased energy per ton	Excellent fiber separation, Sheer blade cut PE into small pieces which clogged extractor plate

# Mill Results & Next Steps

- Mills that tested the material felt the material tested was not a good fit for their mills.
- To our knowledge, a mill with a high consistency or drum pulper has not yet conducted a mill test. Better understanding of prevalence of pulper types is needed.
- Deinked pulp mills currently recycling post-consumer coffee cups
- Tissue mills process cup stock cut waste and have strong interest in post-consumer material

# Collection & Logistics Considerations

- Collection & processing with OCC is preferred method for in-store pick-up
- Other processing methods may be preferred for residential and public space

# Food Residuals & Microbials

Are New Grades Needed or Do  
Existing Definitions Need to  
be Expanded?

# Thank You!

For more information:

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