

# Contamination in Commingled Recycling Systems Standards & Guidelines Initiative

Update to Stakeholders  
Teleconference

Thursday, January 10, 2008

# Agenda

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- Overview of Process
- Collection Guidelines Workgroup Update
- MRF Standards Workgroup Update
- Next Steps
- Questions & Answers

# Vision & Mission Statements

## Vision Statement

To develop a standard and guidelines for commingled recycling systems such that:

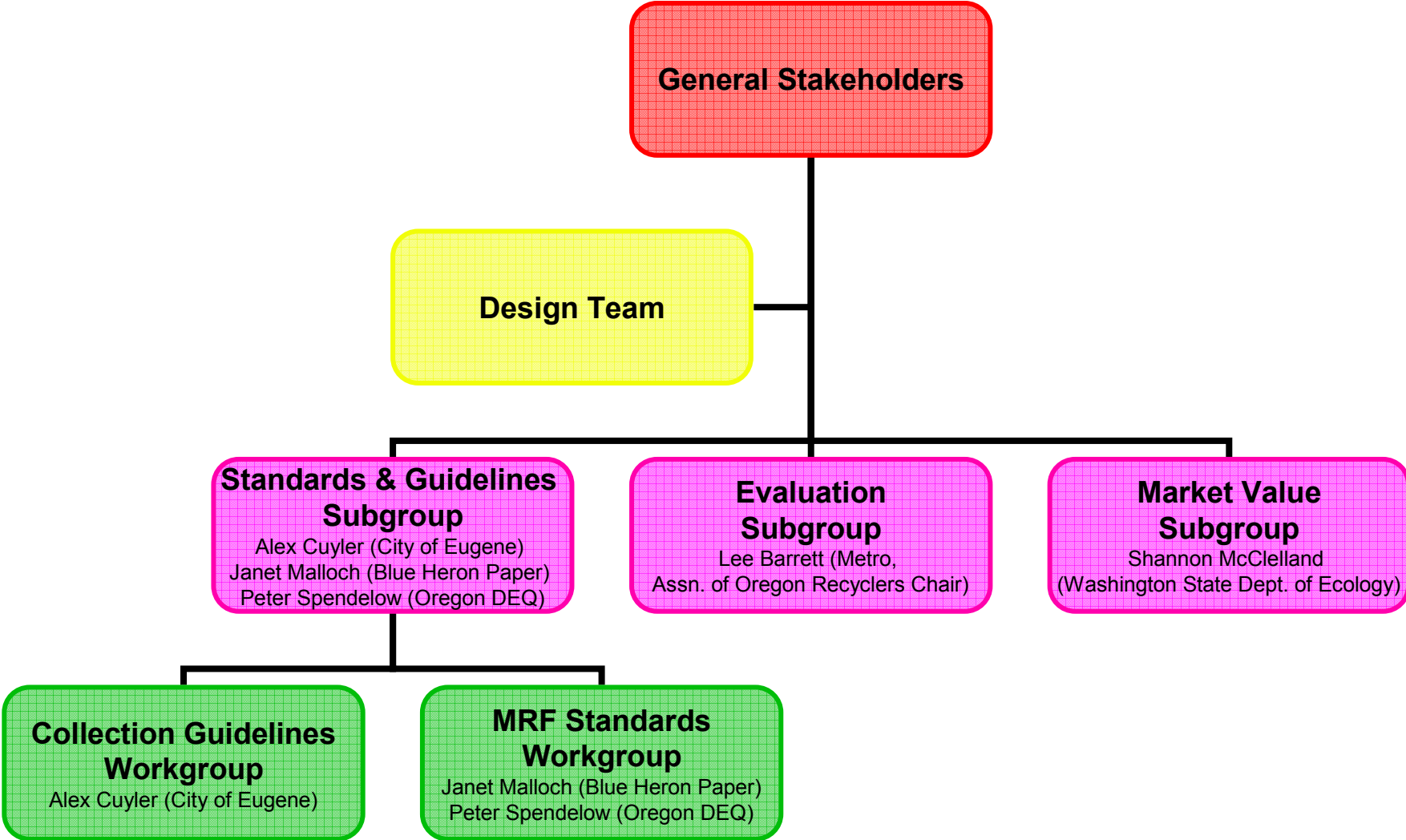
- (1) Cross-contamination of recyclable materials would be reduced;
- (2) The quality and quantity of materials recycled would be increased;
- (3) The highest percentage of materials that are intended to be recycled would be captured.

## Mission Statement

To agree to a clear and measurable standard and guidelines that:

- (1) Allows governments and other contracting entities to easily and consistently specify that their materials are collected and processed according to the standard and guidelines for haulers and MRFs;
- (2) Allows haulers and MRFs to achieve a higher market value by meeting the standard and guidelines;
- (3) Increases the overall quantity and quality of material recycled;
- (4) Reduces the quantity of recyclable material lost as either outthrow or prohibitive materials in other recycling streams;
- (5) Has a consistent measurement and evaluation system that is cost effective and transparent;
- (6) Encourages and rewards more effective and efficient collection systems.

# Group Structure



# Subgroup Purpose Statements

## **Standards & Guidelines**

To develop a draft standard and guidelines for approval by the larger group that does the following:

- (1) Clearly defines the acceptable level of contamination for incoming material to MRFs from collection processes or specifies Best Management Practices for collectors of commingled materials.
- (2) Clearly defines levels at which materials processed at MRFs are considered not cross contaminated by other recyclable materials and are considered usable for high end products.
- (3) Reflects the larger mission of work group.

## **Evaluation**

To develop and propose an evaluation system for a standard and guidelines that includes financing, roles, and accountability.

## **Market Value**

To develop and propose a plan to ensure that the standard and guidelines are incorporated into contracts, purchasing, policy, and permitting.

# Standards & Guidelines Subgroup Desired Outcomes

- (1) Determine and use common terminology.
- (2) The guidelines and standards should consider employee safety.
- (3) The guidelines and standards should establish a procedure for their revision in response to markets.
- (4) Draft collection guidelines to present to larger stakeholder group for review and approval. Collection guidelines should clearly define the acceptable levels of contamination for incoming materials and/or specify best management practices for collectors of recyclable materials.
- (5) Draft MRF standards to present to larger stakeholder group for review and approval. MRF standards should clearly define levels at which materials processed at MRFs are considered (1) non-contaminated by prohibitives, outthrows, and other recyclable materials and (2) usable for high quality end products.
- (6) Draft guidelines and standards that allow adherence to guideline or standard to be measured. Evaluation Subgroup will design evaluation system.
- (7) Draft guidelines and standards that can be incorporated into contracts, purchasing, policy, and permitting. Market Value Subgroup will develop and propose a plan to accomplish such incorporation.

# Collection Guidelines Workgroup Update

# Collection Guidelines Workgroup

- Developed draft collection guidelines in preparation of Tacoma Meeting.
- Discussion points raised included desire for standard, but questions continue re: differences between WA and OR collection programs (glass) and development of distinct commercial and residential documents.
- Data presented suggests 43% of WA programs are keeping glass out of commingled...but better data is likely needed, as well as analysis related to curbside costs for separate collection.

# MRF Standards Workgroup Update

# **Material Recovery Facility MRF Standards**

# MRF Standards Workgroup Goals

- Decide how to set standards
- Create realistic standards that mills can accept and MRFs can produce
- Identify obstacles to cross contamination and efficiency – i.e. what obstacles are in between the current system and the proposed standard or guideline.

# MRF Workgroup Discussion: Barriers to MRF Efficiency from the Curbside

## Prohibitives at the curb

- Medical waste and sharps

- Long things – tubes, hoses, tape

- Ceramic

- Styrofoam

- Small stuff: stones, caps, corks

## Recyclable but problematical

- Plastic Bags and Shredded Paper

- Small Stuff: small plastic containers

## MRF Workgroup Activities: Barriers to Efficiency

- Recyclable but responsible for the majority of cross contamination:
- Glass
- Shredded paper
- Plastic bags

# MRF Workgroup: Data Collection

## ISRI

2% prohibitives

5% out throws

The ISRI standard is not good enough because it does not define what the 97% paper is – could be egg cartons. Mills want mostly newspaper and printing & writing grades.

# Standard or Guideline Proposal

Before we make a suggested standard, needed a common understanding of:

1. Evaluation methods
2. Current efficiencies
3. Reality check with markets, what they could possibly live with.
4. Reality check with governments as to their goals.
5. Understanding of the GAP.

# MRF Standards Workgroup

- Telephone conferences were not easy.
- We need to have a better understanding of the starting place from the curb, the mrf and the feed to the mills. Data meeting planned for Jan 17<sup>th</sup>.

# Metro 2004-05 MRF Contamination Study

<b>Curbside Materials</b>	<b>Tons Collected</b>	<b>Tons Lost</b>	<b>Loss Rate</b>
<b>Newspaper</b>	66,936	694	1%
<b>Cardboard</b>	15,914	4,153	26%
<b>Metal</b>	4,062	583	14%
<b>Plastic Bottles</b>	3,390	800	24%

Source: July 11, 2007 General Stakeholder Meeting Presentation

# King County MRF Study

<b>Curbside Material</b>	<b>Sent to Proper Market</b>	<b>Cross-Contaminant or Residue</b>
<b>Newspaper, Mixed Paper</b>	98-99%	1-2%
<b>PET</b>	47%	53%
<b>HDPE</b>	72%	28%
<b>Aluminum</b>	64%	36%
<b>Tin</b>	77%	23%
<b>Glass</b>	90%	10%

Source: July 11, 2007 General Stakeholder Meeting Presentation



## **Reducing Cross-contamination Problems**

- **Main goal: realizing the maximum environmental and public benefit of the recycling programs**
- **Possible additional benefits**
  - **Improved material quality for paper mills and plastic and metal recyclers**
  - **More likely to recycle materials locally**



## Possible Standard Format

Example for plastic containers:

- By 2009, at least X% of the plastic containers entering a facility as commingled material must be sorted out and marketed to a plastics recycler.
- By 2011, at least Y% of the plastic containers entering a facility as commingled material must be sorted out and marketed to a plastics recycler.
- By 2013, at least Z% of the plastic containers entering a facility as commingled material must be sorted out and marketed to a plastics recycler.



## Possible Standard Format

- Incoming plastic container tonnage estimated by adding up all the outgoing plastic in all streams:
  - Tonnage sold in plastic bales to plastics recycler
  - Tonnage going out in the newsprint.
  - Tonnage going out in the other commodities
  - Tonnage disposed as residue
- Standards could start low and then ramp up over time



## Possible Standard Format

Cross contamination standards for following materials:

- Printing/Writing Paper (ONP, OMG, etc combined)
- Brown/Unbleached paper (or possibly all paper mixed)
- Plastic Containers
- Tinned Cans
- Aluminum
- Other metal?
- Glass?

## Starting Point for 1/17/2008 meeting

- MRF Survey
- Mill data
- Any other data from the curbside
- Goal is to make an estimate of the quality range at each point for a material balance – from the curb, mrfs and mills.

# Next Steps: Evaluation Subgroup

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**Lead:** Lee Barrett (Metro, Association of Oregon Recyclers Chair)

**Members:** Alex Cuyler (City of Eugene), John Lucini (SP Recycling Corporation), Desmond Machuca (City of SeaTac), Jeff Murray (Far West Fibers), Gretchen Newman (Washington State Department of Ecology), Jennifer Porter (City of Portland), Jay Simmons (NORPAC), Doug Swan (JMK Fibers), Ed Tolan (Nippon Paper Industries), and Dave White (Oregon Refuse and Recycling Association).

# Next Steps: Market Value Subgroup

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**Lead:** Shannon McClelland (Washington State Department of Ecology)

**Members:** Dan Gee (Weyerhaeuser), Tom Mabie (Glass Packaging Institute), and Desmond Machuca (City of SeaTac).

# Questions & Answers

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For additional questions or concerns or if you'd like to join any or all of the subgroups, please contact Melissa Winters at (206) 553-5180 or [Winters.Melissa@epa.gov](mailto:Winters.Melissa@epa.gov).