

Connecticut Department of  
**ENERGY &  
ENVIRONMENTAL PROTECTION**  
Solid Waste Advisory Committee  
Hartford, CT

**Green by Nature EPR:  
Efficiency by Design**

**Daniel Lantz, COO**

24 May 2016

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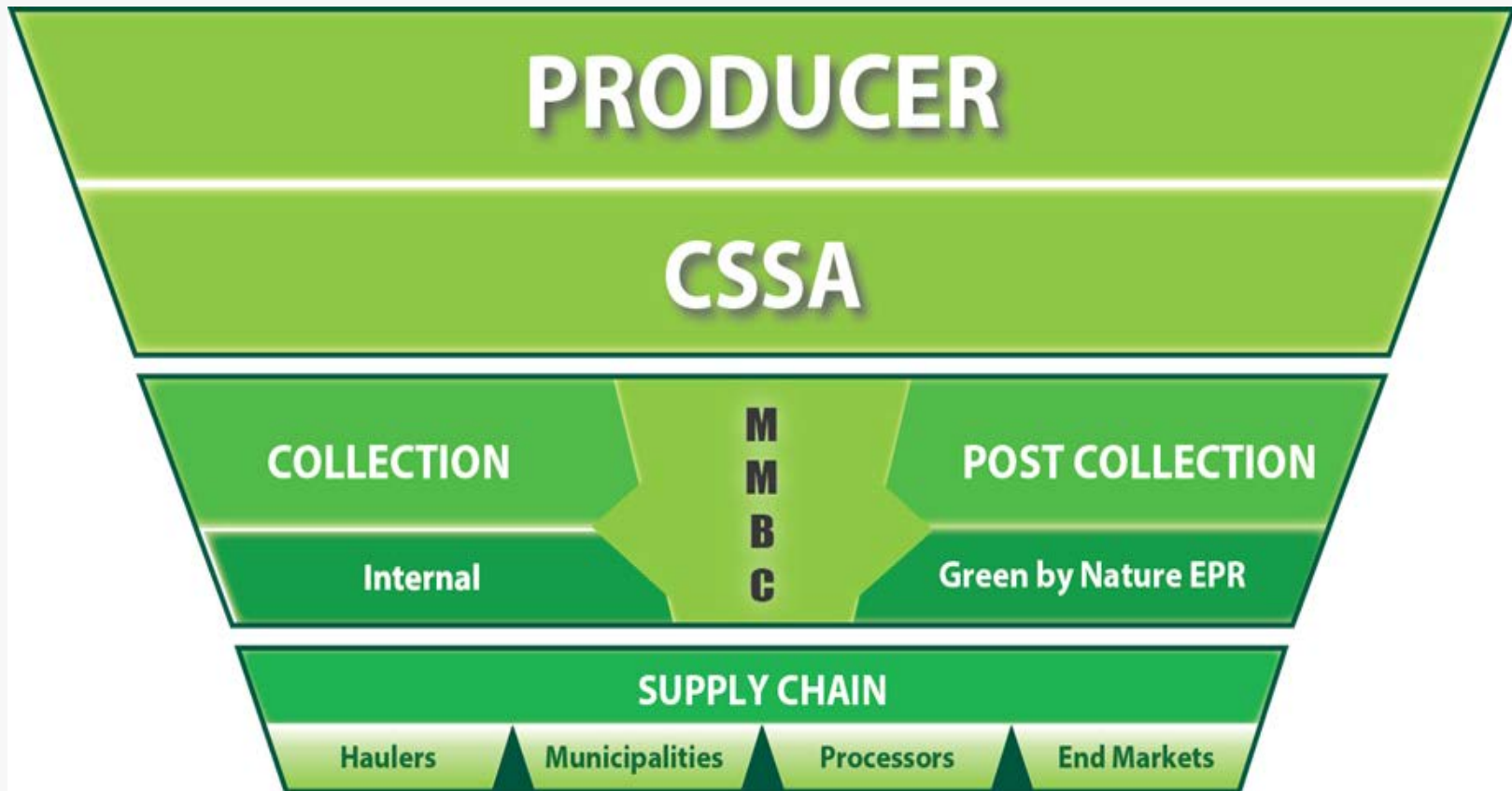
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# Outline

- ❑ **How Things Work in BC**
- ❑ **Receiving, Consolidation and Transfer**
- ❑ **Pre-Conditioning Facilities**
- ❑ **Container Recovery Facility**
- ❑ **Efficiency in System Design**
- ❑ **Application to Connecticut**
- ❑ **Summary**
- ❑ **Questions (and Answers!)**

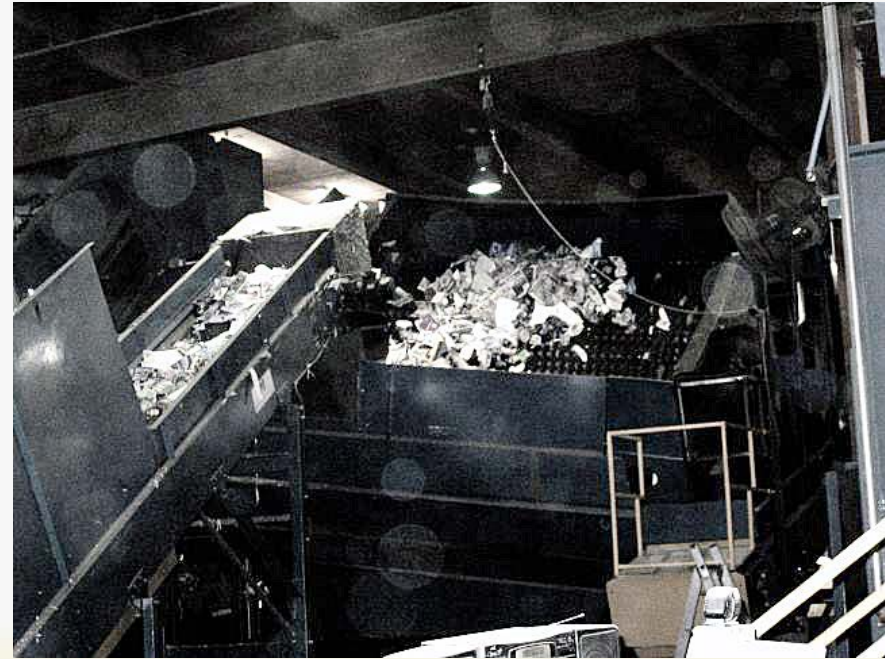
# How Things Work in BC



- ✓ **Producers have 100% control**
- ✓ **Municipalities and Industry part of the supply chain**
- ✓ **MMBC controls collection**

# How Things Work in BC

- **Green by Nature controls post-collection services**
  - **Movement of materials from depots to facilities**
  - **Processing at facilities**
  - **Marketing of all products generated**
- **GBN does not own any infrastructure**
  - **Logistics coordinators**



# How Things Work in BC

**31 RCTs**

Receiving, Consolidation & Transfer Facilities

**15 PCFs**

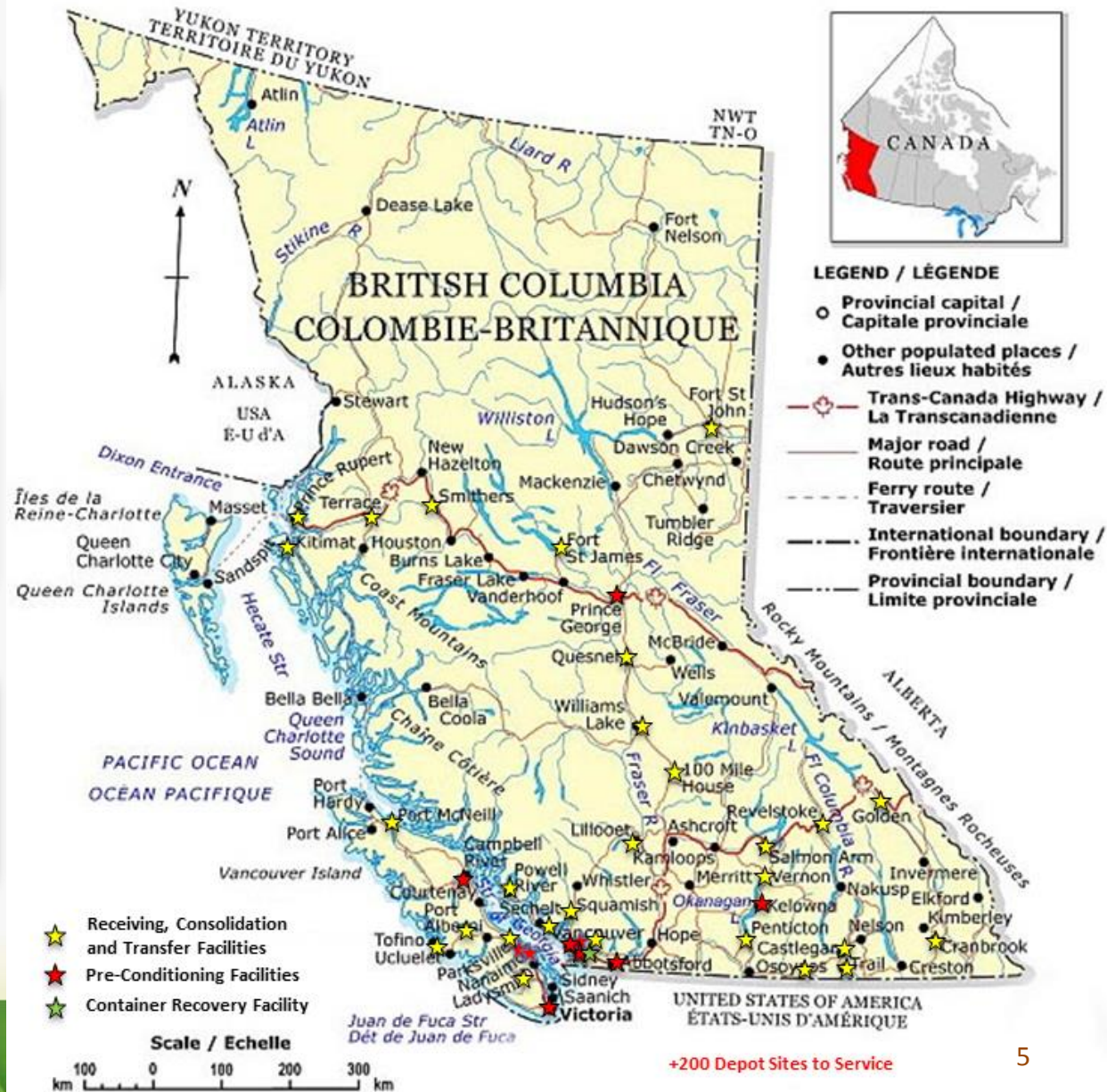
Pre-Conditioning Facilities

**1 CRF**

Container Recovery Facility



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# Receiving Consolidation and Transfer

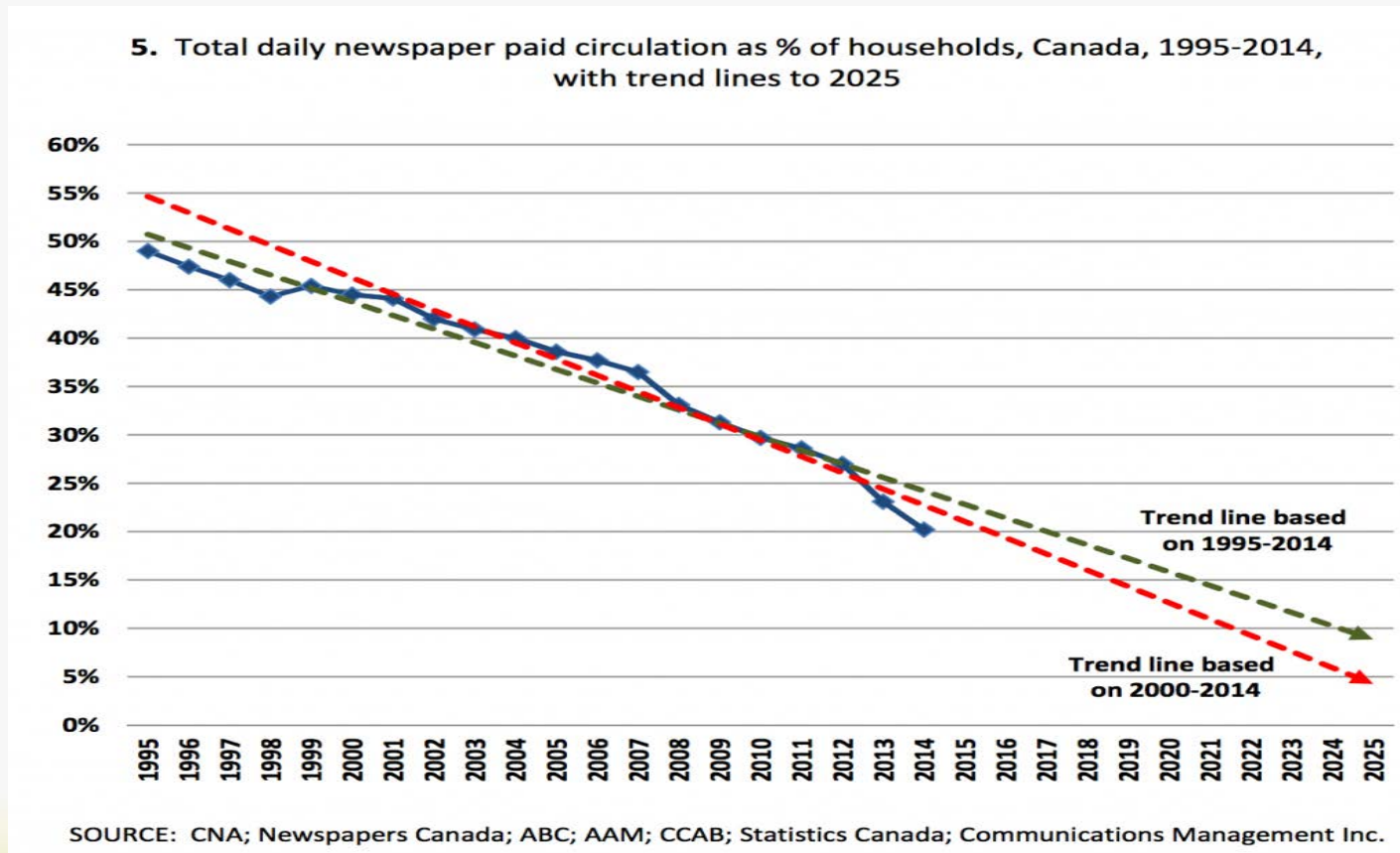
- ❑ Receives materials from curb and/or depots
- ❑ Bale fibres, cross dock through Vancouver or directly to market
- ❑ Bale containers
- ❑ Ship containers to Container Recovery Facility
  - **NO processing of any sort**



# Receiving Consolidation and Transfer

## □ No more paper sorting

### ▪ No newspapers by 2025



# Pre-Conditioning Facilities

- ❑ Repurposed existing MRF infrastructure
- ❑ Single Stream plants – about 50% of material
- ❑ Receive materials directly from curb, depots or RCTs
  - Still need to separate the fibres from the containers
  - Generates an OCC B grade
  - Take out the large residue, glass and steel
  - All other containers sent to baling
  - Let machines do most of the work
  - Reduced staffing as sorting needs reduced



# Pre-Conditioning Facilities

- ❑ **Two stream plants – about 50% of material**
- ❑ **Receive materials directly from curb, depots or RCTs**
  - **Fibres – not sorted, directly to baler**
    - **Generates an OCC grade when markets dictate**
  - **Take out the large residue, glass and steel**
  - **All other containers sent to baling**
  - **Reduced staffing as sorting needs reduced**

# Pre-Conditioning Facilities

## □ Containers sorting in two steps – PCFs sort



**GLASS**

**STEEL**

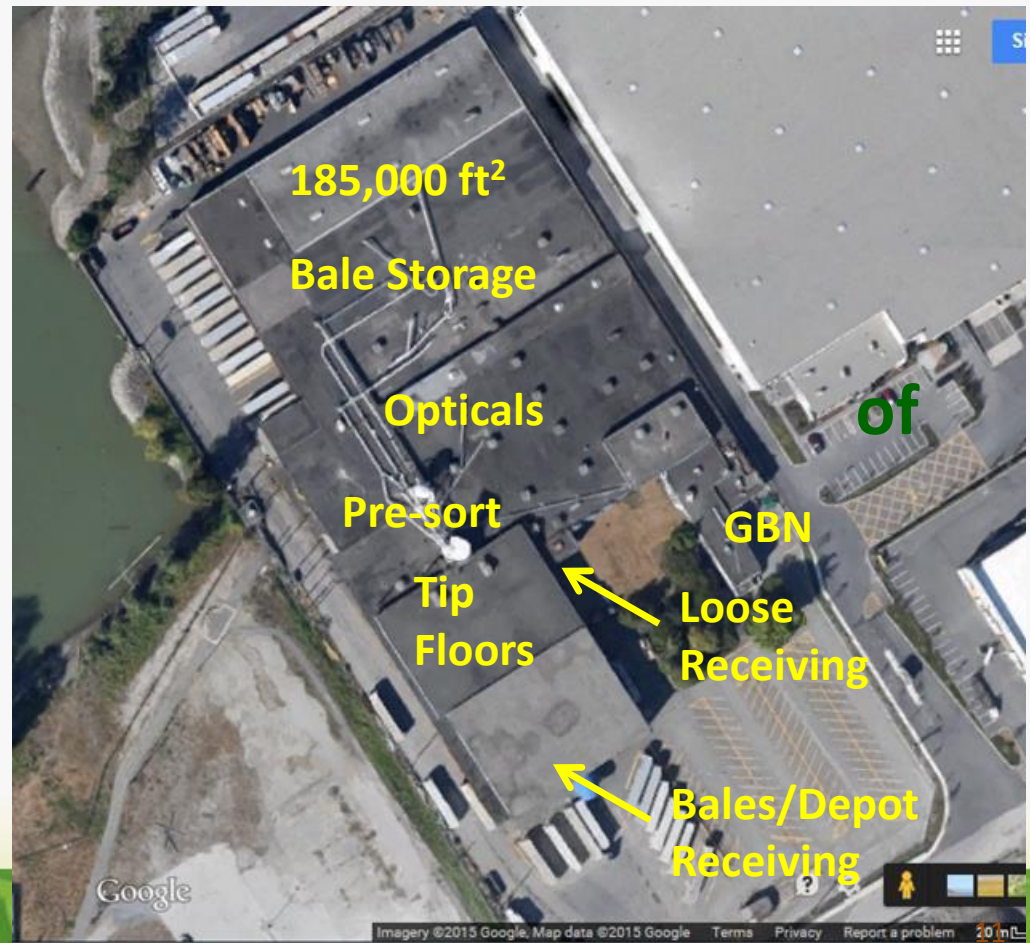


**RESIDUE**

- **Reduces contamination and weight for shipping**
- **Saves having to build in unnecessary redundancy**

# Container Recovery Facility

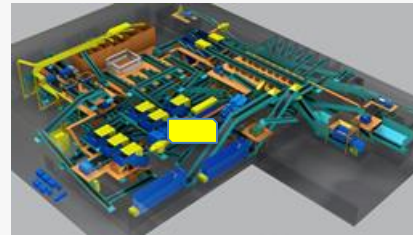
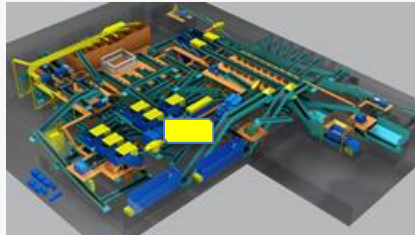
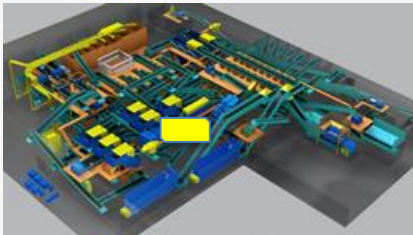
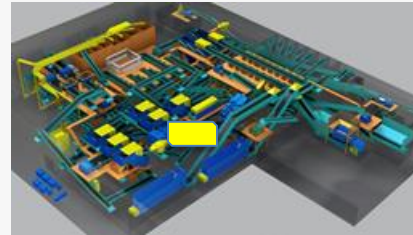
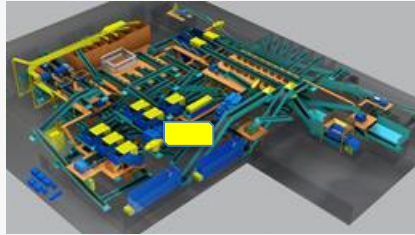
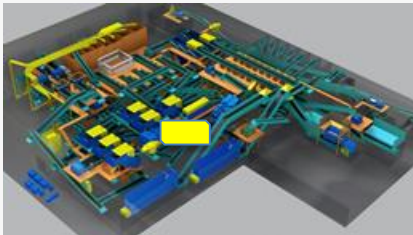
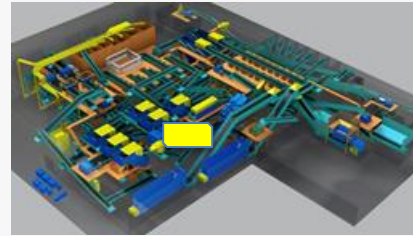
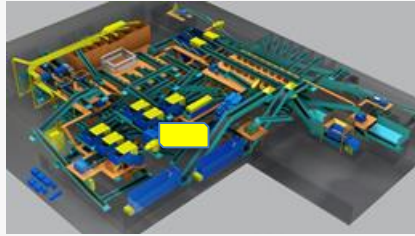
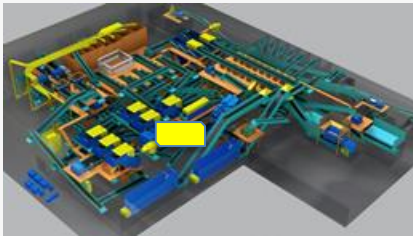
- ❑ **ALL** plastics, aseptics, polycoat, aluminum to Merlin Container Recovery Facility (CRF) in New Westminster
- ❑ More than \$20 million in new equipment
- ❑ Manages upwards 30,000 tpy of mixed containers



# Efficiency in System Design

## ❑ Traditional MRF approach

- **Slow to Respond, Expensive**



- ➡ Mix Paper
- ➡ OCC
- ➡ Steel
- ➡ Glass
- ➡ Residue
- ➡ As/PMC
- ➡ PET
- ➡ HDPE – C
- ➡ HDPE – N
- ➡ Mix
- ➡ Plastic
- ➡ Aluminum
- ➡ **Polypropylene**

**Change needed? Change x # of MRFs**

# Efficiency in System Design

## □ GBN approach

- Rationalize, Repurpose



**RCTs**



Mix Paper  
OCC  
Mixed Containers



**PCFs**



Mix Paper  
OCC  
Steel  
Glass  
Residue  
Eng'd Plastics



**CRF**



As/PMC  
PET  
HDPE – C  
**Polypropylene**  
HDPE – N  
Mix Plastic  
Aluminum

**Change needed?  
...One Facility!**

# Efficiency in System Design

- ❑ Use of a central CRF provides more flexibility for more sorting as product mix changes
  - One plant can readily adapt
- ❑ Recovery rates higher than are typically seen with “traditional” MRF infrastructure
- ❑ Increases the quality for end markets
  - Less export shipping
  - In house solutions



# Application to Connecticut

- Harmonize programs to increase recovery
- Possibility for transportation efficiencies
  - Connecticut 1.3% of the size of BC in area
- BC and Connecticut handle about the same quantity of recyclables each year
  - One CRF would handle all containers generated
- Reduced processing need at five facilities could reduce capital costs and save money
  - Changes could be phased in over lifecycle of MRFs

# Summary

- ❑ Consistent and harmonized – entire province on the same program
- ❑ Built the system to manage the package rather than forcing the package into the system

~~DON'T TELL US~~  
IT CAN'T BE DONE!





# Summary

- ❑ Created a recovery environment that is motivated to find positive end of life solutions for all PPP
  - About the only thing we are not accepting is multi-laminated packaging
- ❑ Provide a low cost, sensible solution that works for the industry AND is acceptable to Producers
- ❑ Rationalized the supply chain – remove unnecessary redundancy



# Thank You

□ Thank you for your time today

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