

RETHINKING RESIDENTIAL RECYCLING WITHIN CHANGING GLOBAL MARKETS

ALLEN LANGDON, MANAGING DIRECTOR



RECYCLEBC™

WHO WE ARE



RECYCLEBC™

Recycle BC is a non-profit organization responsible for residential packaging and paper recycling throughout British Columbia.

Recycle BC ensures household materials are collected, sorted and responsibly recycled.

Our program is funded by over 1,200 businesses that include retailers, manufacturers and restaurants that supply packaging and paper to BC residents, shifting costs away from homeowners.



RECYCLE BC'S STEWARDSHIP PLAN

- Producers of packaging and paper are responsible for:
 - Reasonable access to packaging and paper collection services
 - Management of collected packaging and paper
 - Within the context of the pollution prevention hierarchy
 - To achieve 75% recovery within a reasonable time
 - Establishing relationships with:
 - Collectors - local governments, private sector companies and not-for-profit organizations
 - Post-collection service provider
 - Financing implementation of the Stewardship Plan (\$80 million per year)



PROGRAM OVERVIEW

2016 PROGRAM PERFORMANCE



185,477
Tonnes collected



78%
Recovery rate

98%



Percentage of households with access to depots



1,844,000*

Number of households serviced

*Includes curbside, multi-family & depot collection

154



Number of communities benefitting/participating
in program (curbside and multi-family)



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RECYCLE BC COLLECTION SYSTEM

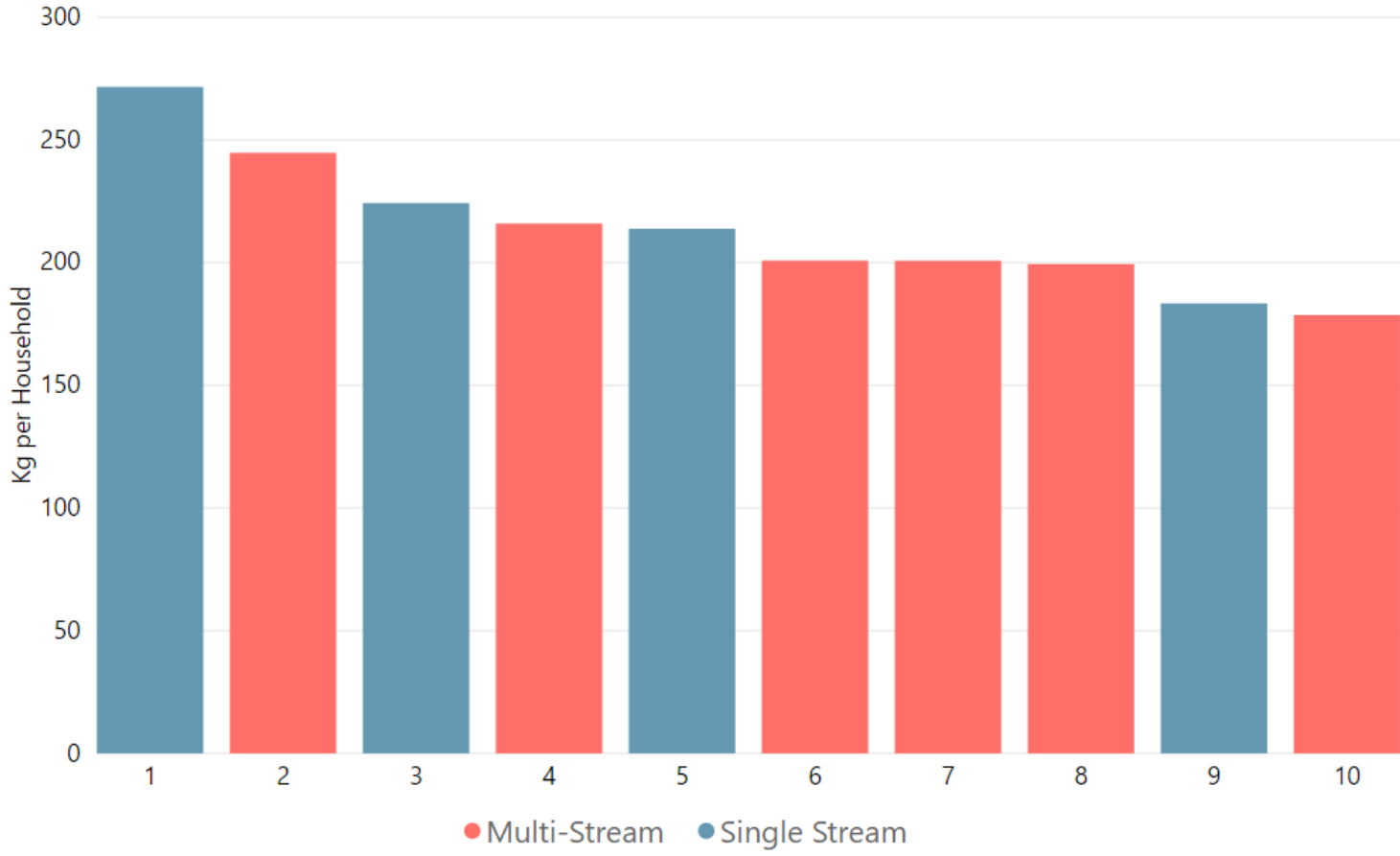
- Standardized material list for all curbside and multi-family collection across the province
 - Material list includes many items not included in traditional recycling programs – coffee cups, aerosol containers, plant pots, single-use coffee pods
 - Clear/coloured glass containers can be collected
 - At curbside if segregated from other packaging and paper
 - From multi-family buildings if segregated from other packaging and paper
 - At depots where it can be kept separate from other packaging and paper
 - Plastic film and expanded PS collected at depots
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RECYCLE BC COLLECTION SYSTEM

- Curbside recycling
 - Local governments receiving Recycle BC incentives on a per-household basis
 - Communities serviced directly by Recycle BC in 13 jurisdictions
- Multi-family recycling
 - Local governments and private companies receiving Recycle BC incentives on a per-household basis
- Depots
 - Local governments, non-profits and private companies receiving Recycle BC incentives on a per-tonne basis

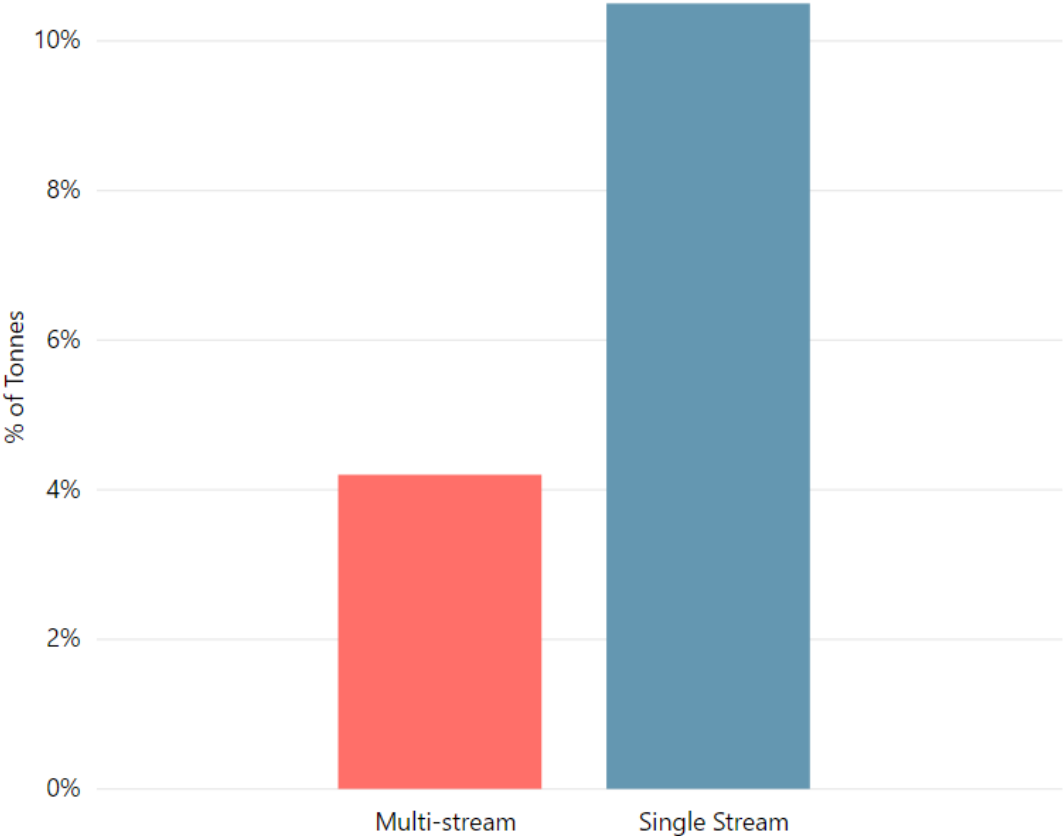
CURBSIDE CAPTURE RATES

TOP 10 HIGHEST CURBSIDE CAPTURE RATES



CURBSIDE CONTAMINATION RATE

CURBSIDE CONTAMINATION RATE



POST-COLLECTION SYSTEM

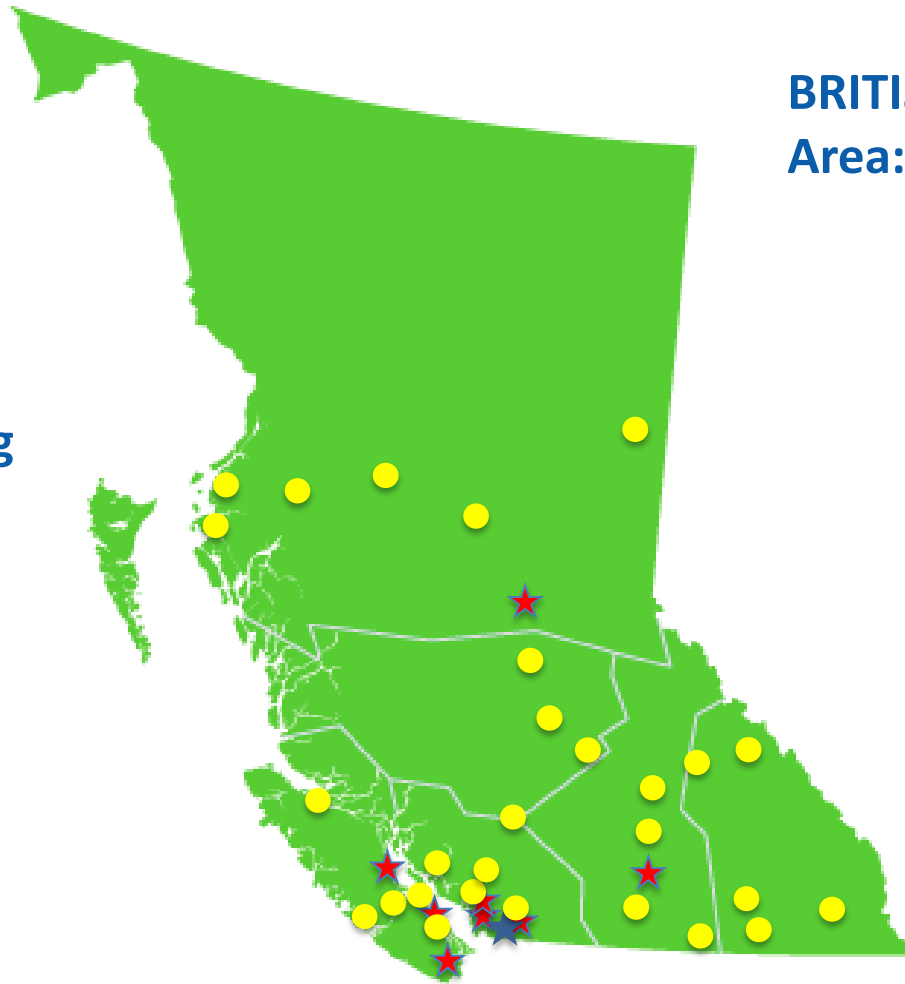
- Recycle BC is responsible for all post-collection activities by hiring contractors to:
 - Pick-up packaging and paper from depots
 - Receive packaging and paper from curbside and multi-family building collectors
 - Transport, process and market packaging and paper
- Green by Nature (GBN) operates the entire province-wide post-collection system

POST-COLLECTION NETWORK

● 31 Receiving, Consolidation and Transfer Facilities (RCTs)

★ 11 Pre-conditioning Facilities (PCFs)

★ 1 Container Recovery Facility (CRF)



BRITISH COLUMBIA
Area: 944,735 km²

POST-COLLECTION SYSTEM – CRF

- All containers from cross the province are baled and sent to a newly built 185,000 square-foot Container Recovery Facility (CRF)
- This facility, uses state-of-the-art recycling equipment to sort 30,000 tonnes of containers per year
- Containers are sorted into 8 categories different categories including:
 - PET clear & coloured
 - HDPE natural & coloured
 - PP
 - Other Plastics
 - Aseptic/Polycoat
 - Steel
 - Aluminum

OUR SYSTEM AT WORK



OUR SYSTEM AT WORK



RECYCLING END-MARKETS

- Recycle BC gives priority to end-markets located in countries that are members of the Organization for Economic Co-operation and Development (OECD). Recycle BC does permit marketing to packaging and printed paper end-markets located in other countries if they meet or exceed OECD standards.
- **Plastics** - Plastics are sold to end-markets in British Columbia
- **Paper/Fibres** – The majority of fibres are sold to end-markets in China, South Korea or other overseas markets, with the rest either remaining in BC or going to end-markets in the United States
- **Glass** - Glass is sold to end markets in British Columbia
- **Metals** - Metals are largely sold to end-markets in Ontario, with the rest either remaining in BC or going to end-markets in the United States



WHAT'S NEXT?

MANAGING END-MARKETS

- Recycle BC is responsible for marketing all material collected through our program
 - Marketing of material overseen by Green by Nature
- All plastics currently processed in British Columbia through our partner Merlin Plastics
- Mixed paper, including paper, boxboard, newspaper, and cardboard, has historically been sent to China and other overseas markets
 - Limited markets exist for mixed paper in BC and the Pacific Northwest
- All costs associated with sorting, processing and marketing materials are the responsibility of Recycle BC, not municipal governments

THE PERFECT STORM

- Recycled paper mills in other countries are taking advantage of the oversupply of recycled paper in the market to purchase higher quality material for lower prices
- Over many years China has built the infrastructure to import, transport, and process the majority of the world's paper exports, other countries do not have the infrastructure in place to handle such volumes of material
- With an oversupply of material in the market, only the highest quality materials will sell, therefore many recycling programs will be forced to improve their material quality

Addressing the Paper Challenge

- Material that is clean, properly sorted, and contains only accepted material is now more important than ever to ensure we have viable end-markets for our material
 - An integrated approach to reducing contamination (currently 6.5% system wide) is important and will include resident education, tagging, and leaving behind not-accepted materials
 - Single-use plastic bags will be a top priority
 - Other problem materials include organics, textiles, wood, and electronics
 - Standards for quality of mixed paper being sent to China set to become more stringent with standard for prohibitive material potentially reduced to as low as .3% as early as mid-year
 - We will continue to work with our partners to focus on further diversifying markets for our materials
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Benefits of a System-Based Approach

- The current approach to recycling in North America is not working and the lack of a coordinated, systems-based approach is leading to negative outcomes - rising costs for taxpayers, poor quality material, removal of items from collection, warehousing and landfilling of material
- Incremental fixes are not sufficient to address the problems that exists across the system and cannot be solved in an ad hoc manner
- A shift to a systems-based approach with an optimized collection network and post-collection system is required to ensure recycling remains sustainable into the future

Benefits of a System-Based Approach

- The Recycle BC system provides producers with best long-term opportunity for producers to manage their obligations for PPP in light of increasing costs, volatile commodity markets and continued innovations in packaging types and materials
- Recycle BC represents a model of the circular economy in action where producers have influence on both the creation and end-of-life management of their materials that can provide the basis for more holistic decisions as new innovations in packaging are developed and implemented.



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Making a difference together.



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