

Ontario Recycler Workshop

June 4, 2014

ORW begins at 9:30 a.m. ET



Ontario Recycler Workshop

June 4th, 2014

Mike Birett

CIF

Intro & Welcome

- Good morning & welcome to the 18th ORW
- 140+ participants registered to participate online & in person
- Thank you all for taking the time out of your busy schedules to join us today

For Webcast Viewers

- Webcast controls

- ① sound slider
(hover over black bar)
- ② “questions & comments for speakers”
 - not seen on other screens
- ③ click to go to full screen; ‘esc’ to go back
- ④ webcast technical assistance

- Agenda on CIF website

- ORW page; slides & archive to be posted



Housekeeping Items: In-house

- Please check attendance at registration desk
 - Eligibility for Datacall training credit for municipal staff
 - Confirm:
 - Inclusion on CIF's email list
 - Use of photo in CIF materials: online/print



Ontario Recycler Workshop: June 4, 2014

1



Last Name	First Name	Attended ORW	Keep me on CIF email list	You may use my photo in CIF materials
Birett	Mike		✓	✓

Snapshot...Today's Program

Morning Session

- CIF & Partner Updates
- REOI & Centre of Excellence
- *Morning Break*
- Advances in Public Spaces Recycling
- Waste Reduction Planning: Planning Ahead to Get Results
- *Lunch*

Afternoon Session

- A New Look at P&E for Recycling
- Factors Affecting Processing
- *Afternoon Break*
- Problematic Materials & Consistency: Costs & Challenges
- Factors Affecting Collection
- *Summary & Concluding Remarks*

A Sincere Thank You To Today's Speakers!

- Alyssa Broadfoot
- Barbara McConnell
- Brad Whitelaw
- Cameron Wright
- Daniel Orr
- Elizabeth Ramsay
- Francis Veilleux
- Gary Burroughs
- George South
- Kevin Mehlenbacher
- Kyle Labbett
- Lori Andrews
- Michelle Shannon
- Monika Turner
- Naz Ritchie
- Paulina Leung
- Rob Orpin
- Sherry Arcaro
- Stephanie Sidler

*Special thanks to Chair Gary Burroughs
for helping us launch today's session!*



Welcome to the Niagara Region!



Gary Burroughs
Regional Chair, Niagara Region

CIF Update

Mike Birett

CIF

Mid Year Summary – Business as Usual?

- The arbitration has made some aspects of CIF's operations challenging
 - Operating under an Interim Operations Plan
 - Routine approvals may become an issue
 - We're behind schedule on project work

Spring AMO/CIF consultation proved to be very successful

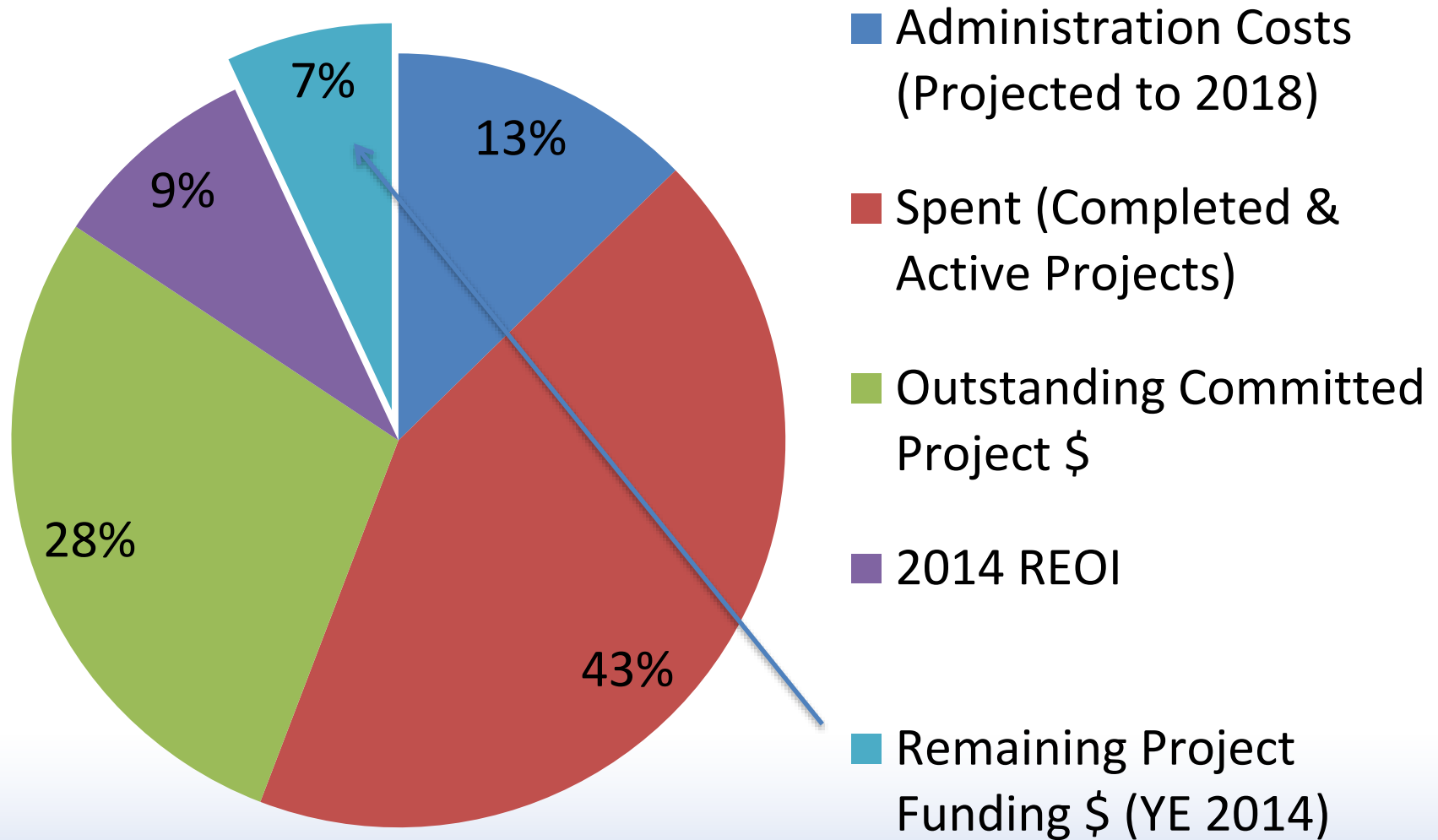
- What we heard:
 - Municipalities were generally happy with CIF focus
 - Concerns are being heard & addressed
 - Current CIF reserves will meet municipal needs
 - 2014 will be a year of limited engagement
 - 2015 budget should not change dramatically
 - Some concerns but overall support for new Best Practice (BP) questions
 - Concerns with impact of the arbitration
 - Sessions are valuable & should be continued

Current Internal Projects

- Continued effort to move regionalization projects forward
- Blue box (BB) procurement RFP is wrapping up
- Depot RFP closed last Friday
- 2014 REOI closed earlier in May
- Closed project review underway



CIF Current Financial Status



Looking Ahead – Fund Admin

- MIPC will need to deal with the CIF MOA
- Closure of 2010 projects
- Signed agreements for 2013 projects
- Approvals for 2014 REOI projects
- Approval of revised evaluation format
- Closed project review

Issues We're Seeking Feedback On

- Depot BP project
- 2015 budget



For More Information

Website: <http://cif.wdo.ca>

Mike Birett – Director, CIF

mbirett@wdo.ca (905) 936-5661

Carrie Nash – Project Manager, CIF

CarrieNash@wdo.ca (519) 858-239

Gary Everett – Project Manager, CIF

Gary@Egroup1.com (519) 533-1939

Alec Scott – Project Manager, CIF

archenv@sympatico.ca (705) 722-0225



Working Together to Optimize Markets & Revenue

Sherry Arcaro
Stewardship Ontario






Stewardship Ontario's Role






- Assist municipalities in finding markets for materials
- Work with markets & municipalities to help solve contamination & other issues resulting from BB program
- Work with stewards to identify optimal materials to use in packaging
- Fund markets R&D for new or problematic materials



Mixed & Film Plastics

Material	General Specifications	ON Processing Capacity
Curbside Mixed Plastics 	<ul style="list-style-type: none">• Primarily PP (#5), HDPE (#2), LDPE (#4) containers	40,000+ TPY
Curbside Film 	<ul style="list-style-type: none">• Primarily grocery & retail bags, newspaper bags, dry cleaning bags, milk, produce & other bags used as packaging for household items	~5,000 TPY
Bulky Rigid Plastics 	<ul style="list-style-type: none">• Note: Not BB Program material for funding purposes• Plastic buckets & pails, plastic crates, trays, laundry baskets, plastic lawn furniture, plastic pots, plastic garbage cans & recycling bins, large plastic toy (playhouses)	20,000+ TPY

Market Concerns & Opportunities

Material	Potential Contamination	Key Contaminants/ Issues	Financial Implications
#8 Old Newspaper 	10-20%	<ul style="list-style-type: none"> • Cardboard • Boxboard • Plastics • Metal • Wood 	Processors: bleaching costs for brown grades; residue disposal costs MRF's: lost revenue from OCC, plastics, metal
Plastics 	20-40%	<ul style="list-style-type: none"> • Non-conforming plastic grades • Aluminum & steel containers • Bale integrity, light loads 	Processors: residue disposal costs; cross-contamination, handling costs MRF's: lost revenue from metal, charges
Aluminum & Steel 	2-10%	<ul style="list-style-type: none"> • Plastics • Glass • Fiber • Moisture 	Processors: furnace fires MRF's: downgrades, rejections, freight costs

End Market Challenges (1)



- Reluctance or inability by MRF's to follow specifications
 - Contamination & yield loss = higher disposal costs for end markets
- Need to support local end markets – significant investments made by private companies
- Local capacity may not be sustainable if MRF operators continue to sell to markets outside ON for small, short term revenue gains

End Market Challenges (2)

- Continuous supply – monthly bid process by some MRF's prevents consistent material flow to end markets
- Need standardized basket of goods to offer markets standardized commodities = Increased value of materials
- Inconsistent processing systems results in different bale sizes & freight challenges – light loads for some plastics



MRF Opportunities



- Seasonal residue studies – identify capture opportunities
- Outbound bale studies – identify contamination & potential items to be captured (or combined) for improved net
 - OCC (\$150/MT) from ONP (\$75/MT)
 - CPP (\$85/MT) from mixed paper (\$50/MT)
- Maintenance to maximize MRF efficiency
 - Ensure optical sorters are cleaned frequently
 - Monitor baler pressure levels & eddy current effectiveness

Stewardship Ontario Annual MRF Material Studies

- In 2013, spring & fall in 11 facilities representing ~20 municipal programs
- Paid for by Stewardship Ontario; data provided to municipalities & their contractors
- Completing RFQ for 2014 two-season
 - looking for more sites to study





Thank-you!

Sherry Arcaro

Director of Field Services

Email: sarcaro@stewardshipontario.ca

Phone: 416-725-3156



WDO Update

Lori Andrews, WDO
Data Manager

Presentation Will Cover

- Updates
 - Municipal Datacall Roundtable
 - ISPs (Industry Stewardship Plans)
 - Blue Box (BB) funding & arbitration
- Looking Ahead

Municipal Datacall Roundtable

- WDO residential diversion rate methodology mostly unchanged since 2003
- During our CEO's spring community visits, we heard ideas from stakeholders to help WDO tell a more accurate story on residential waste diversion in Ontario (e.g., how we document reuse and measure diversion results)
- WDO to work with municipalities to find solutions for residential waste data gaps (e.g., multi-family data)

Municipal Datacall Roundtable

- All are welcome to participate
- Future meeting dates to be determined
- To participate, please contact Sarrah Young at WDO
syoung@wdo.ca

- Call2Recycle Canada (single-use batteries)
- Product Care Association (paints and coatings)
- Product Care Association (pesticides, solvents & fertilizers)

<http://wdo.ca/programs/industry-stewardship-plans/>

Blue Box Arbitration

- AMO/City of Toronto & Stewardship Ontario are currently in arbitration to determine the 2014 BB steward obligation
- WDO has continued to work with AMO/City Toronto & SO to ensure that any extended timeline to conclude the arbitration process does not affect the flow of 2014 BB funding to municipalities

Looking Ahead

- Verification of the 2013 Municipal Datacall is underway
- We encourage continued feedback on the recent Datacall redesign
- WDO will continue to work with municipalities to improve how we measure residential waste diversion in Ontario

Canadian Anti-Spam Law

- Canada's "Anti-Spam Law" takes effect July 1, 2014
- A WDO email is forthcoming to request your consent to continue receiving WDO emails
- WDO website **NEWS** section also has a link to submit your consent (CEO Update Report for May)
<http://wdo.ca/news/>

www.wdo.ca

LinkedIn: WasteDiversiOntario

Twitter: @WDOntario

LoriAndrews@wdo.ca





AMO Update

Monika Turner

AMO Director of Policy

Policy Update

- Waste Diversion Activities
- Provincial Election observations
- Blue Box Arbitration
 - Status update
 - Interim 2014 payments
- ISPs

Questions



2014 CIF REOI

Request For Expressions of Interest

Gary Everett
CIF

Key Dates

*Submission
Deadline*

*Friday,
May 23*

*Project
Awards*

*October
2014*

Overview

- Fifth REOI
- Over \$44M already invested in Ontario
- More than 530 projects funded
- Designed to encourage municipalities to undertake new effectiveness & efficiency projects
- 2014 REOI will build on past success

What's New: More Online Support

- REOI documents, sample application & fillable forms
- CIF Funding Process Guide
- Monitoring/Measuring and Reporting Guidebook
- Cost & payback analysis model
- Frequently asked questions
- Updated evaluation form
- <http://cif.wdo.ca>
 - 1st item under Resources



What's New: REOI Evaluation Form

REOI Evaluation Form:

Use green tabs 1-5 to evaluate COST SAVING projects.
Use Blue tabs 6-10 for INCREASED DIVERSION projects.
Use red tabs 11-12 for CENTRE of EXCELLENCE projects.

Applicant:

Review Date:

Project Name:

CIF Project #:

999

Criterion	Overall Criteria Score	Criterion Weighting	Overall Weighted Score	Overall Percentage Score
1: Increased Cost Effectiveness	0	35	0.0	35%
2: Increased Blue Box Diversion	100	10	10.0	10%
3: Regionalization Benefits	100	10	10.0	10%
4: Payback Period and Return On Investment	0	30	0.0	30%
5: Project Implementation Measures/Aspects	100	15	15.0	15%
Total:		100	35.0	100%

Funding Recommendation

Project Payback

Did the project have a payback period less than 8 years(Yes/No)?

Yes

Minimum Acceptable Scoring Level

Did the project have a Consensus Criterion Total score of at least 25

Yes

Summary Cost Savings

1 2 3 4

Summary Diversion

6 7 8 9 10

Summary C of E

11 12

What's New: Available Funding by Priority Areas

\$5.425M in potential project awards

Priority Areas	Available Funding
System rationalization	\$1,750,000
Projects achieving cost savings	\$1,750,000
Blue box harmonization	\$300,000
Addressing problematic materials	\$800,000
Centre of Excellence	\$825,000

What Happened: Applications & Funding Requests

\$6.5M

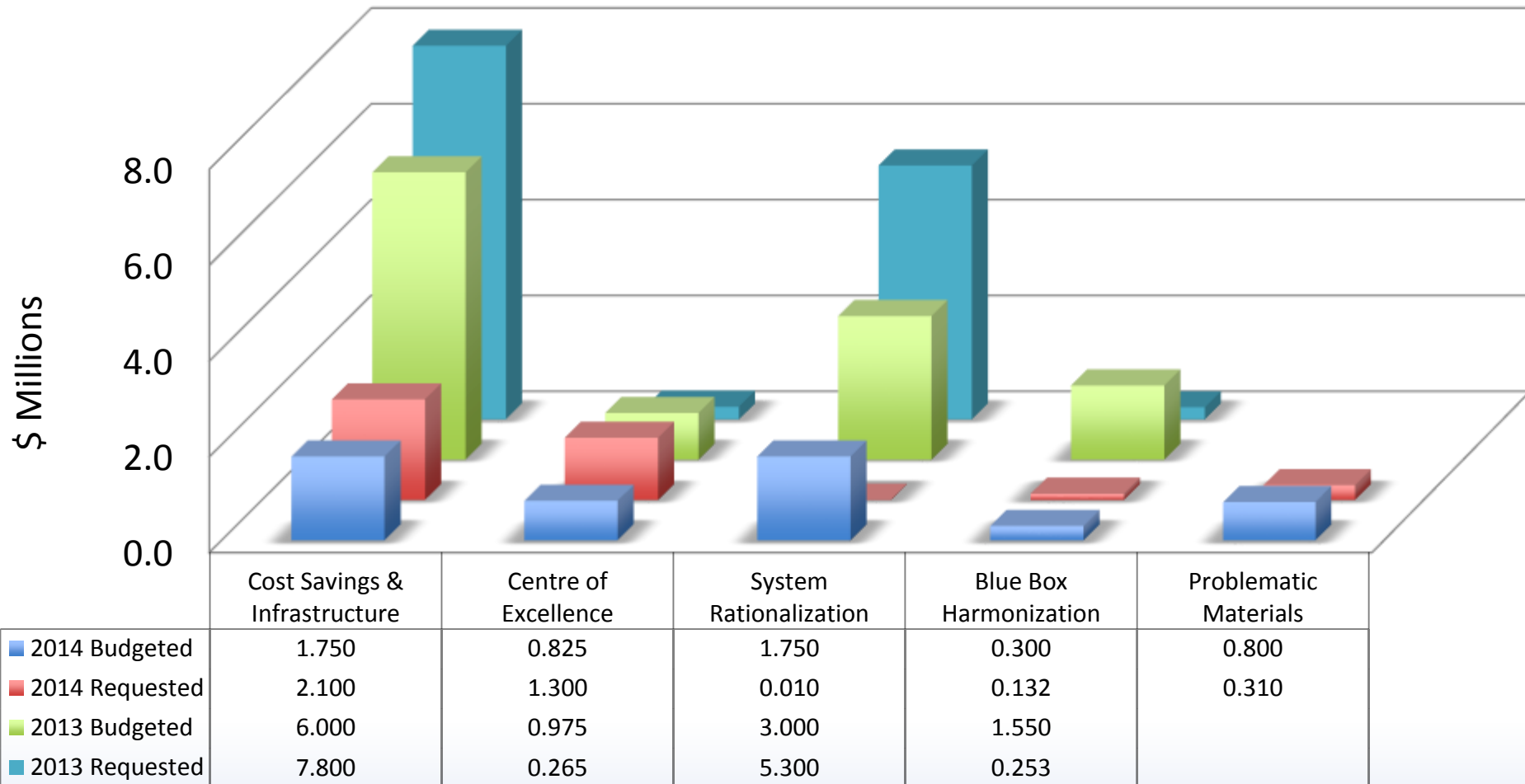
Total
Project
Value

Cost Savings
Applications
(\$4.2M)

Centre of
Excellence
Applications
(\$1.3M)

36 Applications Submitted

What Happened: 2014 Subscription Level (vs. 2013)



2014 Applications

11

17

1

4

3

What's Next?

- ① All applications & projects reviewed
- ② Applications strengthened, supported, finalized
- ③ Applications evaluated
- ④ Funding Committee meeting
- ⑤ Approval/rejection letters sent
- ⑥ Agreements signed
- ⑦ Get started!



Contact: Gary Everett
email: Gary@Egroup1.com
phone: 519-533-1939



Want more? Talk to us!

Centre of Excellence Updates

Carrie Nash, CIF

Centre of Excellence

- A knowledge based centre of expertise dedicated to:
 - Best Practice compliance & datacall support
 - Better Practices toolkit
 - Marketing materials
 - RFP & tender development
 - Training opportunities
 - Outreach Services
 - Performance auditing

Current Activity: Training

- Contract Management
 - 40+ participants
 - Plan to help reduce risk & control cost
- Benchmarking & Assessing
 - 35+ participants
 - Identifying cost saving opportunities & related, easy-to-use measuring & monitoring plan



Current Activity: Tool Kits

- Small Depot Guide Book
 - “How to” depot guidebook aimed at small municipalities
 - RFP closed May 30; received 8 proposals
 - Evaluation in progress; award pending
 - Guidebook delivery: Fall 2014



Rural depot at Elizabethtown-Kitley

Current Activity: Cooperative Procurement

- Blue Boxes, 83L
 - Sceptre (30% PCR)
 - Gracious Living (70% PCR)
- Carts, 360L
 - IPL
- In Unit Containers, 30L
 - InStore Productions
- Details to be circulated via CIF eBulletin & posted to CIF website



2014 & 2015 Activities (1)

- P&E Shop update
 - Updated guidance documents, templates & samples
 - Samples to be available via social media (Pinterest or other)
- New course delivery
 - RFP Development; advanced program analysis & planning
 - Fall 2014
- Fundamental Principles
 - Early 2015

2014 & 2015 Activities (2)

- Curbside audits
 - Continuation of 2012 efforts to update waste composition data throughout the province
- MRF audit protocol
 - Protocol for audits at private sector facilities
- Continued outreach
 - BB consultation session, Fall ORW, eBulletins, eNewsletter

Questions



Break



Welcome Back



Advances in Public Spaces Recycling

Stephanie Sidler
Regional Municipality of
Durham



Public Space Recycling: Why It Matters

- “Final frontier” for BB materials
- Increases diversion potential
- Reinforces at home recycling behaviors
- Added resource to addresses litter concerns
- Lends welcoming aspect to downtown, park or special event



Public space bins in Kenora, ON
Source: Mike Mostow, April 2013 ORW

Public Space Recycling: What's Involved

- Developing programming for Public Space requires consideration of:
 - Containers – type, size, number
 - Signage
 - Collection
 - P&E – to prevent contamination
 - Budget

Speakers

- Rob Orpin, City of Toronto
 - Signage, semi automated collection, health & safety
- Cameron Wright, Essex-Windsor Solid Waste Authority (EWSWA)
 - Container choices & dealing with contamination
- Michelle Shannon, City of St. Thomas
 - Exploring differences between parks, special events & downtown business areas



Public Space Recycling in Parks

CIF Project #: 548.7 & 396 - Update

Rob Orpin
City of Toronto

Project Highlights

- Project goal: increase diversion by providing recycling options in Toronto parks
- Anticipated impacts: greater operating efficiency, increased diversion, lower health & safety impacts
- More information:
 - email: rorpin@toronto.ca
 - website: www.toronto.ca



Background (1)

- Why this project?
- Maintain clean & safe parks
- Health & safety, reduce injuries
- Improve operating efficiency
- Increase diversion from landfill



Background (2)

Waste Management System in Parks prior to SMWS collection

- Waste Materials collected in 2 streams
- Litter & Recycling collected in plastic bags in metal mesh containers or barrels



Program & Service Changes (1)

- Operational Changes Implemented
 1. Installation of approx. 6,000 (95 gallon) waste and approx. 6,000 (95 gallon) recycling domed & non-domed bins



Program & Service Changes (2)

2. 24 vehicles retrofitted with lifters (semi-automated collection)



Program & Service Changes (3)

3. Introduction of new signage for Recycling (two signs tested)
 - One recycling & one waste bin per sign
 - Signs mounted on post



Project Funding Breakdown

- Total funds for project \$1,193,185
- CIF funding (approx. 40%) \$479,801
- City of Toronto funding (approx. 60%) \$713,383

Materials	Quantity	Average Unit Cost	Total Cost	CIF Funding
XL Blue bins	6,000	\$125	\$774,546	\$296,161
Semi-Automated Lifters	24	\$5,740	\$138,097	\$52,398
Signs & Posts	3,600	\$78	\$280,542	\$107,074
Audit, Analysis & Report				\$24,168
Grand Total			\$1,193,185	\$479,801

Audit Methodology

- Audit 340 litter & recycling bins in 54 parks in 2013
- Sorted into 24 recyclable material categories
- Determine effectiveness of signage
- Contamination & capture rate of Recyclables



Project Findings (1)

- Capture rate improved from 51% in 2008 to 68% in 2013
- Diversion rate increased since bin program was fully implemented in 2011
 - Diversion rate 2012: 14%; 2013 20%
- Reduction in worker injuries
- Automated collection is more effective & efficient than manual collection
 - Single Operator/No Bags/Plastic bins less expensive than metal baskets
- Ease of access to recycling significantly influences diversion rate
- Ensuring signage is present at bins seems to have more impact on recycling rates than type of sign which is present
- Lids are important for preventing the contamination of the litter in recycling stream & preventing rain from saturating recyclables

Project Findings (2)

- Project challenges:
 - Graffiti on bins
 - Arson
 - Aesthetics
 - Cleaning





Large Containers in Public Space CIF Project #340

Cameron Wright
Essex-Windsor Solid Waste Authority

Project Highlights

- Project goal: Implement recycling in public spaces to promote recycling behavior in parks & at home
- Anticipated impacts: Improve overall diversion in effort to reach provincial standards & increase capture rate of Blue Box (BB) material
- More information:
 - Email: cwright@ewswa.org
 - Website www.ewswa.org OR wecanrecyclemore.ca

Why this Project?

- Increase The City of Windsor's residential recycling rate
 - Outlined in the City's Environmental Master Plan
- Work towards EWSWA goal of 60% diversion as outlined in Master Plan
- Reinforce at home recycling behaviors
- Provide same service for recycling as garbage in parks, while making use of existing equipment



Parks Targeted for Recycling



Riverfront Park



Ganatchio Trail



Mic Mac Park



Twinned Bins

Key Elements

- 90 large capacity bins to minimize service
 - 2013: bins were serviced only 4 times
- Costs to implement program \$143,000
 - Purchase of 90 containers = \$112,000
 - Installation = \$31,000
- Bags
 - \$7 per bag
 - 3m³ storage capacity
- Issues with Lexan wraps



Impacts/Results

Park	Annual Tonnes	Capture	Contamination
Mic Mac Park	1.20	82.5%	32.0%
River Front Park	4.46	53.5%	31.5%
Ganatchio Park	0.48	67.0%	20.5%
Total:	6.14	67.7%	28.0%



Successes & Key Learnings

- Contamination was high = 28%
 - Recyclable fibre was a large portion (nearly half)
- Unsure if frequency of garbage service was sufficient
 - Possible contributor to contamination
 - 2014 operations to monitor container fullness
- Goal to achieve operational sustainability:
 - Costs to service = \$10,800
 - Revenue from sale of materials = \$4,800
 - Tipping fee cost avoidance = \$600
 - 2013 net operational loss of \$5,400

Next Steps

- Expansion of recycling
 - Additional 10 containers in Riverfront park
- Contamination & capture
 - New stickers on bins
 - High visibility logo
- Further evaluate sustainability





City of St Thomas Public Space Recycling CIF Project #666.13

Michelle Shannon

City of St. Thomas

Project Highlights

- Project goal: Develop & implement recycling programming for downtown, park, & special events
- Anticipated impacts: Support City's goal to reach 50% waste diversion by January 2014 & 65% by January 2016
- More information:
 - email: mshannon@stthomas.ca
 - website: www.stthomas.ca

Why this Project?

- 2011 Integrated Waste Management Master Plan
- Increase diversion to provincial goal of 65%
- Pressure from Downtown development board to replace existing garbage cans due to age
- Promoting at home recycling behaviours & creating a more welcoming town for tourists
- Funding received from multiple sources
 - It was the right time to do this

Public Space Area Profiles

- 3 areas for phases of implementation
 - Downtown
 - Pinafore Park
 - Special Events

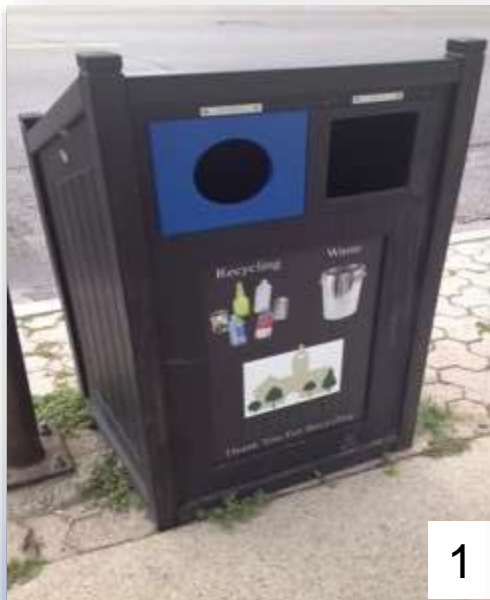


Containers

- Container types

1. Dual sort – 50
2. Single Sort – 12
3. Recycling Carts – 10

Item	Costs
Containers	\$69,500
Waste Audits	\$4,000
Total	\$73,500



Results – Waste Audits

Location	Diversion	Capture	Contamination
Downtown	19%	97%	43% ¹
Pinafore Park	4%	21% ²	18%
Special Events	20%	75%	8%
Annual Blue Box diversion	~1.5 – 2 MT		

¹Contamination = non-recyclable material and cross contamination ²Capture = recyclables



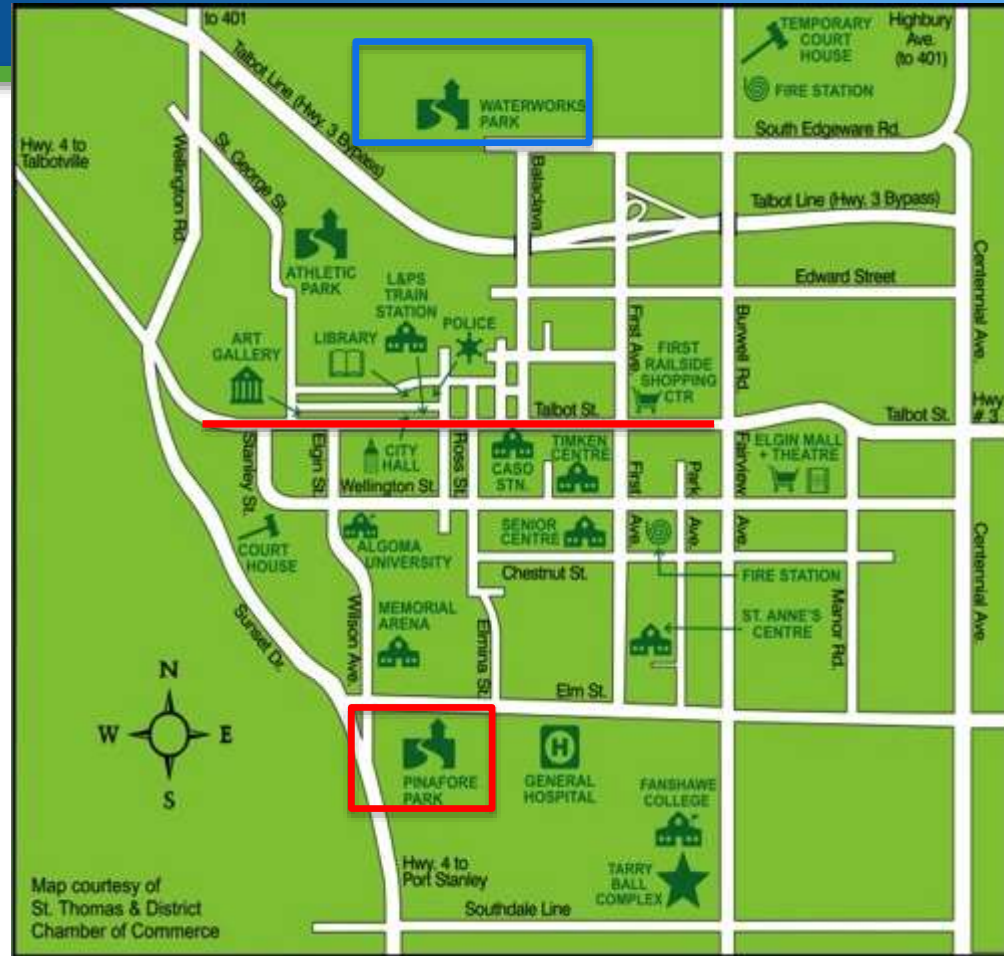
Evaluation of Programming

- Excellent capture downtown
- High contamination downtown
 - Recyclable fibres largest contributor
- Low diversion in parks
 - Result of incomplete twinning
- Special events are a success
 - 100% capture
- ‘Soft bins’ –vandalism target
 - Front panel would be kicked in



Moving Forward

- Twinning every bin in Pinafore Park
- Introducing recycling into Waterworks Park
- New materials into recycling stream
- Identify costs to operate current system
 - Evaluate costs to implement & operate recycling in parkettes



Questions



CIF

CONTINUOUS
IMPROVEMENT FUND

Waste Reduction Plans: Planning Ahead to Get Results

Alec Scott, CIF



“Failing to plan is planning to fail”

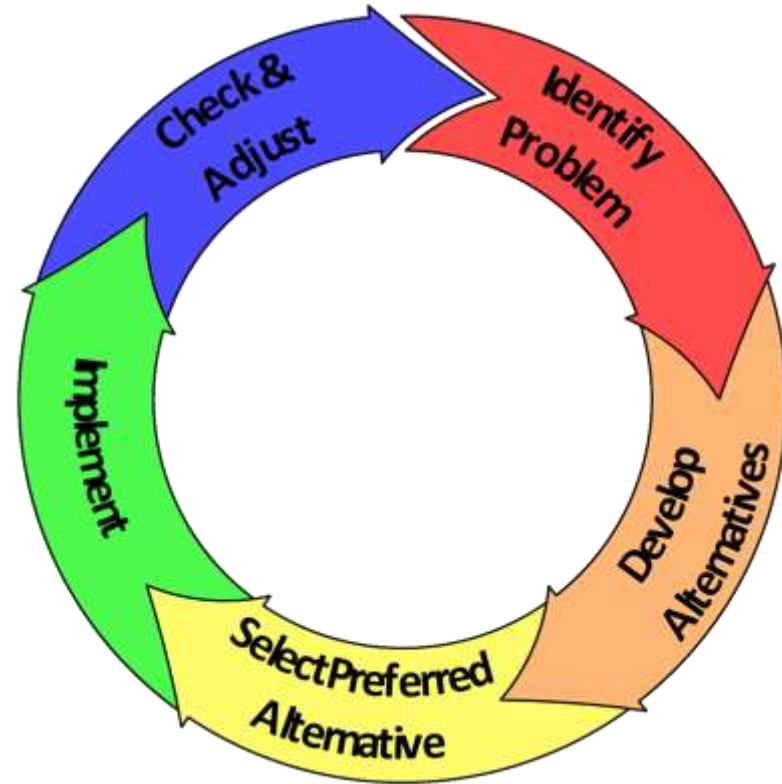
Quote: Alan Lakein



“My question is: Are we making an impact?”

Planning is a Cyclical Process

- Nice job! Now do it better!
 - Set goals
 - Define benchmarks
 - Improve
 - Measure...and do it again!
- Balancing conflicting interests
 - Recovery
 - Net cost
 - What looks good politically



There Is No Universal Plan

- Waste Reduction Plans are unique
 - Local conditions
 - Local priorities
 - Local constraints
- Look around – see what's working & not working
- Borrow successes and tailor them to your needs
- Improve & redefine – don't "reinvent the wheel"
- Select your goal, define your path, identify critical points, monitor, re-adjust & re-plan as necessary

Getting Access to Information

- **Background & Benchmark Information**
 - WDO Datacall – information from 2002 to present
 - Custom searches available by request
 - SO reports & PIM
 - Gross & net costs per material
 - Densities
 - RSE Price Sheet
 - Revenues for selected material classes
 - CIF Project Reports
 - Information on project contacts, successes & valiant attempts

Today's Speakers

- Brad Whitelaw, Regional Municipality of Niagara
 - Niagara Region's 2011-15 Blue Box Recycling Plan
- Kyle Labbett, Township of Central Frontenac
 - Blue Box Recycling in Central Frontenac



Niagara Region's 2011-15 Blue Box Recycling Plan

Brad Whitelaw
Regional Municipality of Niagara
CIF Project #648.11

Project Highlights

- Project Goals:
 - Increase diversion of residential Blue Box (BB)/Grey Box (GB) materials from disposal
 - Extend life of existing landfills
- Anticipated Impacts:
 - Fulfill BP requirements of WDO Datacall
 - Achieve 65% diversion from disposal by 2012
- More Information:
 - Email: brad.whitelaw@niagararegion.ca

Goal: Improve BB Program Performance

- Requires continuous improvement
 - Optimize collection & processing
 - Monitor & report on BB diversion against recycling targets
 - Develop/implement social marketing & education plan
 - Increase program participation & customer satisfaction



Recycle and Win Contest
niagararegion.ca



Test your recycling knowledge – Play "Recycle and Win" for a chance to win a Kobo eReader.

Comprehensive P&E to encourage new material recycling



Developing 2011-2015 BB Recycling Plan

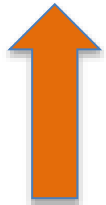
- Niagara Council approved BB Strategy development in place of Long-Term WM Strategic Plan (2011)
- Staff researched/developed 2011-2015 BB Recycling Plan (Plan)
 - Used results of extensive public consultation & waste audits
- Plan approved by Niagara Council (January 19, 2012)
- CIF provided ~\$10K towards Plan



*Waste audit curbside
prep & measurements*

Interim/Target Results

WDO-Related Performance Measures*	2010 (Actual)	2012 (Actual)	2015 (Targets)
Residential Diversion Rate	42%	50%	57%
BB Diversion (Recovery) Rate	74%	77%	80%
BB Residue Rate	4.2%	2.0%	2.5%
Net Cost/Tonne Marketed	\$162	\$195	\$150



**Additional data will be available through completion of new waste audits in 2015*

Successes & Learnings to Date (1)

- Key elements to monitor & assess
 - Residue, net cost/tonne, audit defined data
- May need to adjust plan
 - Address future changes (related to Bill 91)
 - WDO Datacall BP requirements



Auditing is vital to program monitoring

Successes & Learnings to Date (2)

- Niagara recommends municipalities develop a Plan to:
 - Track performance measurement targets
 - Develop long-term strategy to achieve waste diversion goals
 - Streamline reporting process to Council



Starting P&E early!



*QC on the
containers line*

Next Steps for Niagara

- Optimized System Design – Comparative Assessment RFP
 - Collection options analysis
 - MRF/transfer station analysis
 - System analysis
 - Additional requirements
 - Timeline: mid-2014–mid-2015
- Optimize Niagara's WM system
 - Identify most cost-effective system with greatest potential for diversion
- Results will be used to develop Niagara's new Plan



Blue Box Recycling in Central Frontenac CIF Project #318

Kyle Labbett

Township of Central Frontenac

Project Highlights

- Project goal: Improve performance of Blue Box (BB) program & extend life of the landfill
- Anticipated impacts: Increase diversion of BB materials from landfill
- More information:
 - Email: klabbett@centralfrontenac.com
 - Website: www.centralfrontenac.com



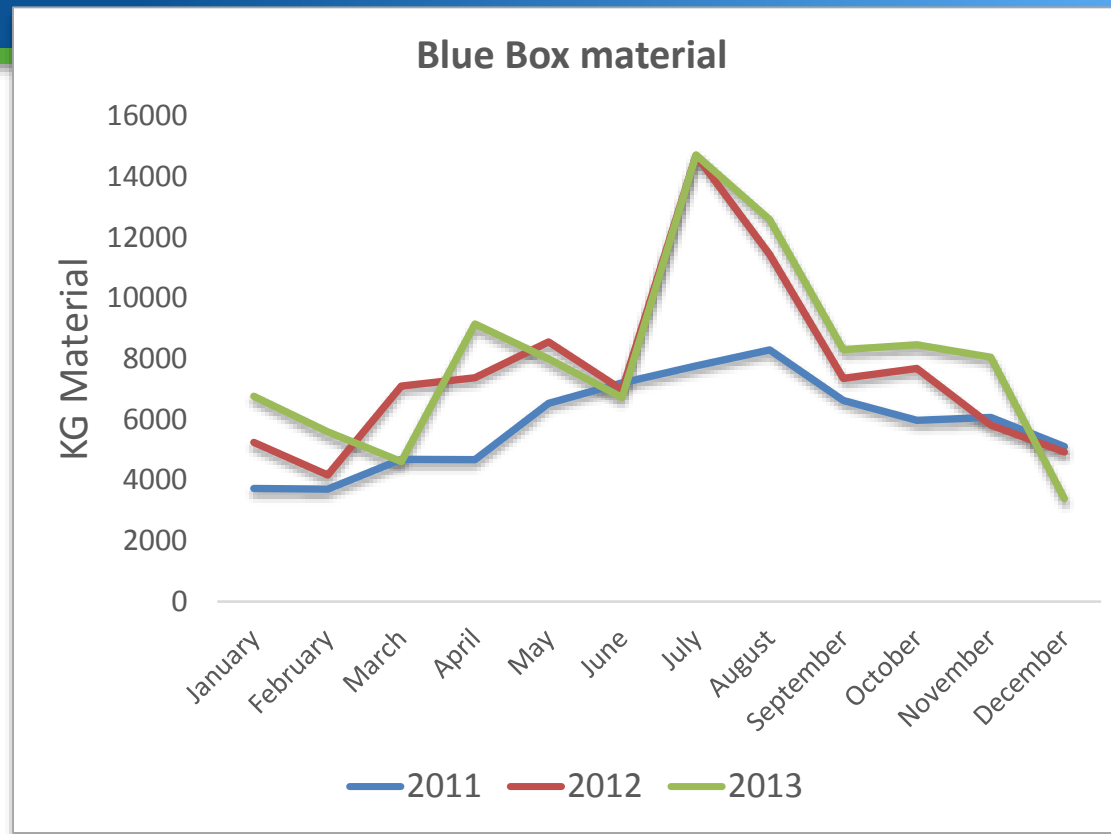
Developing the Plan

- Compliance with Best Practices (BP)
- Public Survey
- Council approval on clear bags July 13, 2011
- Priority Initiatives
 1. Clear bags
 2. P&E & signage
 3. Staff training
 4. Hire summer staff



Impact of Clear Bags

- Clear bag switch
 - Huge success
 - Transition period took 1 year
 - Focus on staff training
 - Summer students essential to success
- Success encouraged residents
 - Public pressure to increase diversion
 - Increased the list of targeted materials



Programming Changes Impacted Costs

Key Performance Indicators	Baseline (2009)	2012
Diversion	18%	42%
BP performance	12.5%	70.4%
BP funding	\$495	\$4,126 ¹
Annual tonnes marketed	209	244
Net cost/tonne	\$437	\$688
Hauling costs	\$50,365	\$64,250
Number of lifts	275	358

¹ Funding for 2013 based off of scores from 2011 Datacall

Purchase Bins to Control Hauling Costs

- Focus: Reduce hauling costs
- Existing bins
 - 18 small 16 yard bins owned by contractor
- Purchase 18 – 40 cubic yard bins
 - Reduce # of lifts
 - Improved streaming
 - Generate revenue



*40 cubic yard roll-offs in place
at Central Frontenac depot*

Successes & Key Learnings

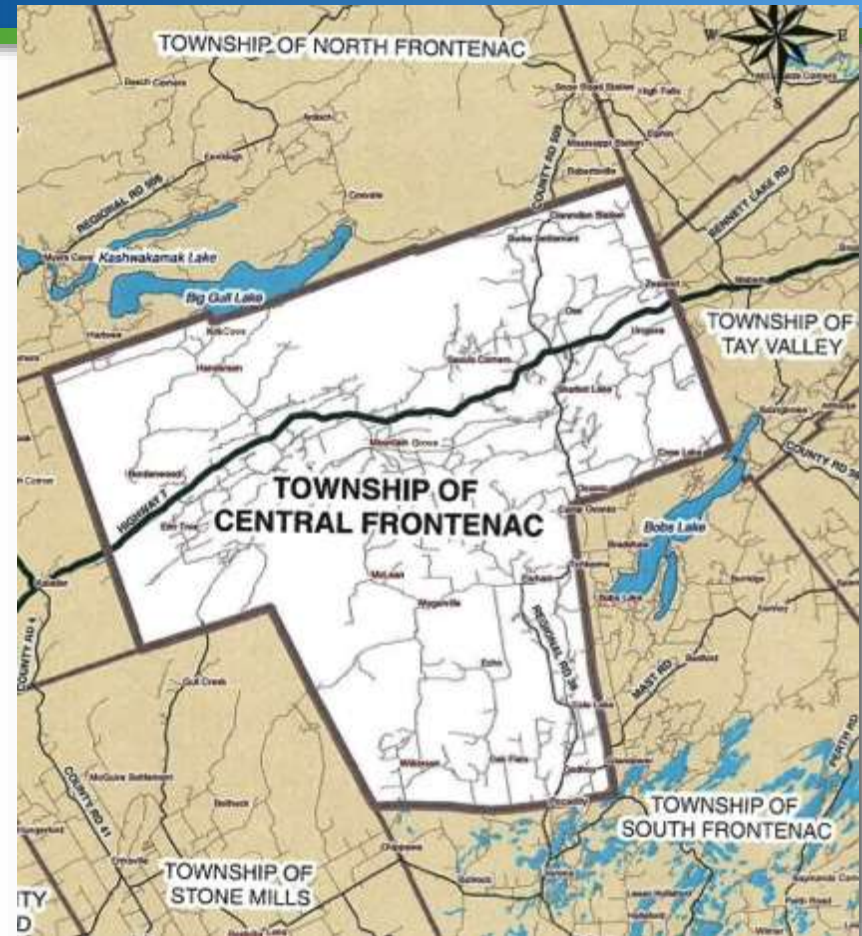
- Goals & Objectives
 - Initially diversion-focused
 - Successful diversion & BP performance improvements
 - Transitioned to cost focus
- 40 Cubic Yard Bins
 - Realized immediate payback
 - Site organization
 - Resident safety
 - Room for contractor improvements



Increased visibility makes for cleaner recyclables in the new bins

Next Steps

- Optimize hauling system
 - Working with neighbours
 - Evaluate contractor options
- Optimize processing
 - Evaluate options
- Optimize collections
 - Drop problem materials
- Waste Recycling Planning is evolving & becoming a collaborate effort



Central Frontenac is surrounded by good neighbours & potential partners

Questions



In Summary...



Enjoy Your Lunch!



**We're Starting Up
Again Soon...**



Welcome Back...



Afternoon Agenda

- Afternoon Session
 - A New Look at P&E for Recycling
 - Factors Affecting Processing
 - *Afternoon Break*
 - Managing Problem Materials
 - Factors Affecting Collection
 - *Summary & Concluding Remarks*

A New Look at Promotion & Education for Recycling

Barbara McConnell

McConnell Weaver Strategic
Communications



A New Era for Recycling P&E

Today you must contend with:

- Often doing more with less
- Complex messages; more diverse subject area
- Developing strategies based on research & logic
- Choosing from an endless list of paid & unpaid, traditional & contemporary tactics:
 - newspaper ads, radio, tv, transportation ads, billboards, mail inserts, videos, websites, smart phone apps, blogs, facebook, twitter, pinterest, etc.

P&E Continues to be a Priority

Here's why...

- P&E has the power to affect every aspect of the business: participation, tonnage, capture & contamination
- It's what turns our projections, goals, objectives & aspirations...into results

Recycling P&E Challenges – Then & Now

Then?

- Introducing new ideas to eager citizens

Today?

- Audience mix:
 - Started recycling 30 years ago – got a pretty good handle on it
 - Young adults – never lived in a world without recycling

How do we successfully reach these diverse audiences?

Today

Four Speakers to share with us:

- How they fine tuned their messages, defined their target audiences, selected their messaging tactics & evaluated their campaigns
- What their results were
- What worked, what didn't work & what's next

Speakers

- Cameron Wright, Essex Windsor Solid Waste Authority (EWSWA)
 - Benefits of Rebranding
- Alyssa Broadfoot, Dufferin County
 - 2013 Transition
- Elizabeth Ramsay, City of Brantford
 - Adding Capacity & Increasing Diversion
- Daniel Orr, Quinte Waste Solutions
 - Plastics Around the House



Benefits of Rebranding CIF Project #308

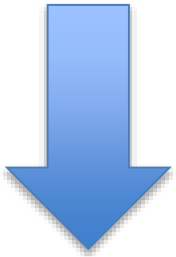
Cameron Wright
Essex Windsor Solid Waste Authority

Project Highlights

- Project Goal: Rebrand recycling program to promote participation & therefore diversion
- Anticipated Impacts: Increase capture of recyclable materials curbside by 10%, increase participation, & decrease contamination
- More information: cgriffin@ewswa.org
- Website www.ewswa.org



Re-Branding Process



- 2010: Blue Box (BB) climate declining
- January 2011: Decision to rebrand
- Honey Design study & IPSOS-Reid
- Rebranding of communications
- Baseline waste audits conducted
- Program launched
- Evaluation of promotion & education (P&E) programming

Project Costs/50% Funded by CIF

Waste Audits (\$20,000)	Baseline & follow-up audits
Surveys (\$8,500)	Research, telephone surveys, website surveys, & consolidation
P&E Strategy (\$5,000)	Strategy, tactics, plan
Website (\$11,000)	Design & development
Marketing Development (\$4,000)	Refreshing corporate look, new logo & other branding
Video (\$10,000)	Videographer, editing, animation
School Curriculum (\$5,000)	Frog logo, smart board, footprint calculator, etc.

Creating the Brand

Branding



“Hop to it”

Messaging



“We Can Recycle More”

Education



A Day in the Life of Wally Water Bottle

School Focus: Creating Recycling Ambassadors

Philmore Says... We Can RECYCLE More!
School Recycling Guide

PAPER

The Paper Rule: If you can RIP it, you can RECYCLE it.

Place the items listed below LOOSE in the paper cart or Red Recycle Box.

- Writing Paper (all types)
- Photocopy Paper
- Newspapers / Inserts
- Magazines / Photos
- Brown Paper
- Construction Paper (all colors)
- Posters / Calendars
- Tissue Paper / Paper Towels
- Chart / Graph Paper
- Old Folders / Notebooks
- Paperback Books
- Tin Horton's Cups (if sold)
- Paper Straws
- Book Tubes (empty)
- Paper Packaging
- Post It Notes / Cue Cards
- Scrap Paper
- Shredded Paper
- Taps, Exams, Homework
- Book Order Forms
- Paper Bags (Tin Horton's)
- Paper Plates / Paper Cups
- Old Paper & Bags
- Envelopes

Cardboard: Cardboard should be flattened (where possible), banded and placed inside the paper cart. 30" x 30" x 30".

All paper can be recycled (the only exception being laminated paper). NO paper should be found in ANY garbage can / pail in your school.

CONTAINERS

Place the items listed below LOOSE in the container cart, or Blue Recycle Box. Empty, remove & discard PLASTIC caps / lids / straws.

- Plastic Cups
- Plastic Clamshells
- Plastic Food Trays
- Milk / Juice Cartons
- Aluminum Plates, Trays, & Pots
- Tubs & Lids
- Pop Cans / Juice Cans
- Metal Food Cans (empty, not
- Fruit Cans (metal / plastic)
- Yogurt Cups
- Aerosol Cans (empty)
- Glass Bottles & Jars
- Paint Cans
- Vaseline / Lip Balm
- Elmer's Glue Bottles
- Beach Bottles
- Shampoo Bottles
- Cleaner / Lubricant Bottles
- Drinkable Yogurt (e.g. Yoplait)
- Hand Sanitizer Bottles

COMPOSTING

Organic matter can be composted. This includes meat, fish, poultry, bones, cheese, breads, pastas, etc. Most digestible materials in schools will be generated in lunches (e.g. half eaten sandwiches, breads, pizza, etc).

- Tea Bags
- Coffee Grounds
- Coffee Filters
- Banana Peels
- Orange Peels
- Fruit Cakes
- Cakes
- Candy

SCHOOL COMPOSTING

Your school may or may not have a composting program. If it does, try to ensure that as much of the leftover food waste ends up in the digester as possible.

If you would like to set up a composting program at your school call the Waste Reduction Hotline: 1-800-563-3377.

DIGESTING

Food waste can also be digested. This includes meat, fish, poultry, bones, cheese, breads, pastas, etc. Most digestible materials in schools will be generated in lunches (e.g. half eaten sandwiches, breads, pizza, etc).

- Leftover Meat / Fish / Poultry
- Cheese
- Bones
- Bread
- Pasta / Pizza
- Cookies / Candy

GARBAGE

Place the items listed below in the garbage, plus any other items normally thrown in the garbage. (e.g. broken pens, pencils, etc.)

- Sign up at TerraCycle to exchange some of the items below for cash!
- Styrofoam™
- Styrofoam Cups
- Styrofoam Take Out Containers
- Styrofoam Peanut / Packaging
- Drinks
- Drink Pouches (e.g. Good-N-Juice)
- Plastic Bags / Wrap
- Plastic Shopping Bags
- Plastic Food Wrap
- Miscellaneous
- Gum Wrappers
- Metallic Wrappers (candy bars, pencil bars & fruit roll-ups)
- Glue Sticks
- Broken Glass
- Plastic Lids / Straws
- Ziploc Bags
- Plastic Pumps (from water bottles)
- Wax Paper
- Laminated Paper

EW SWA Essex-Windor Solid Waste Authority
1-800-563-3377 / ask@ewswa.org
www.ewswa.org

EW SWA ENVIROTIPS

ENVIROTIPS

The Garbage Study We Can Recycle More!

How Much Garbage Do We Throw Away?

Recycling is easy to do, but many "hidden" materials are not recycled. These materials are often found in the garbage can. They include:

- Styrofoam
- Plastic
- Glass
- Paper
- Metal
- Textiles
- Electronics
- Appliances
- Furniture
- Automobiles
- Tires
- Refrigerators
- Air Conditioners
- Stoves
- Washers
- Dryers
- Dishwashers
- Freezers
- Ice Makers
- Coffee Makers
- Toasters
- Blenders
- Juicers
- Food Processors
- Mixers
- Grinders
- Blenders
- Juicers
- Food Processors
- Mixers
- Grinders

EW SWA Essex-Windor Solid Waste Authority
1-800-563-3377 / ask@ewswa.org
www.ewswa.org

EW SWA HOW TO CLEAN A STREAM

SCHOOL RECYCLING TIP

Do You Know?

Recycling is easy to do, but many "hidden" materials are not recycled. These materials are often found in the garbage can. They include:

- Styrofoam
- Plastic
- Glass
- Paper
- Metal
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- Toasters
- Blenders
- Juicers
- Food Processors
- Mixers
- Grinders

EW SWA Essex-Windor Solid Waste Authority
1-800-563-3377 / ask@ewswa.org
www.ewswa.org

Results & Analysis

Blue Box Performance	2011	2013
Capture Rate (%)	69.09	69.22
Participation Rate (%)	72.75	74.49
Contamination (%)	4.25	5.54
Tonnage	28,287.4	28,436.8



Results & Analysis (2)



Capture (%)	2011	2013	%
PET	68.6	71.3	4.0%
HDPE	62.3	62.2	0.27%
Mixed Plastics	32.0	36.1	12.8%
Cartons & Tetra	61.8	68.9	11.5%
Aluminum	72.3	72.7	1.9%
Glass	68.0	71.4	5.0%
ONP	83.7	85.8	2.6%
OCC	84.5	88.5	4.7%
OBB	56.5	62.9	6.4%
Mixed Paper	25.9	44.1	70.2%

Successes & Key Learnings

- Key Learning: Choose your headline carefully
 - Recycle More! Just not shovels & fry-pans
- We're confident that branding matters
 - It's a slow, but consistent, building process
 - Great feedback from residents & web traffic is growing
- Measuring and Monitoring informs data for decisions
 - Identified issue with contamination; corrections made
 - Identified that 25% of households are not recycling

*"We don't want to figure out what goes in each bin,
we want to recycle everything & have you sort it out"*

Next Steps

- Currently developing updated 3-year recycling plan
- P&E will continue to play a key role in:
 - Establishing the EWSWA brand
 - Developing recycling ambassadors through school program
 - Keeping our messaging current & contemporary
- Key Messaging:
 - Benefits of recycling (community & personal)
 - Why it's important to recycle **properly**
 - We have 2-stream system – residents need to separate materials



2013 Transition

Alyssa Broadfoot

Communications Coordinator

Dufferin County Waste Services

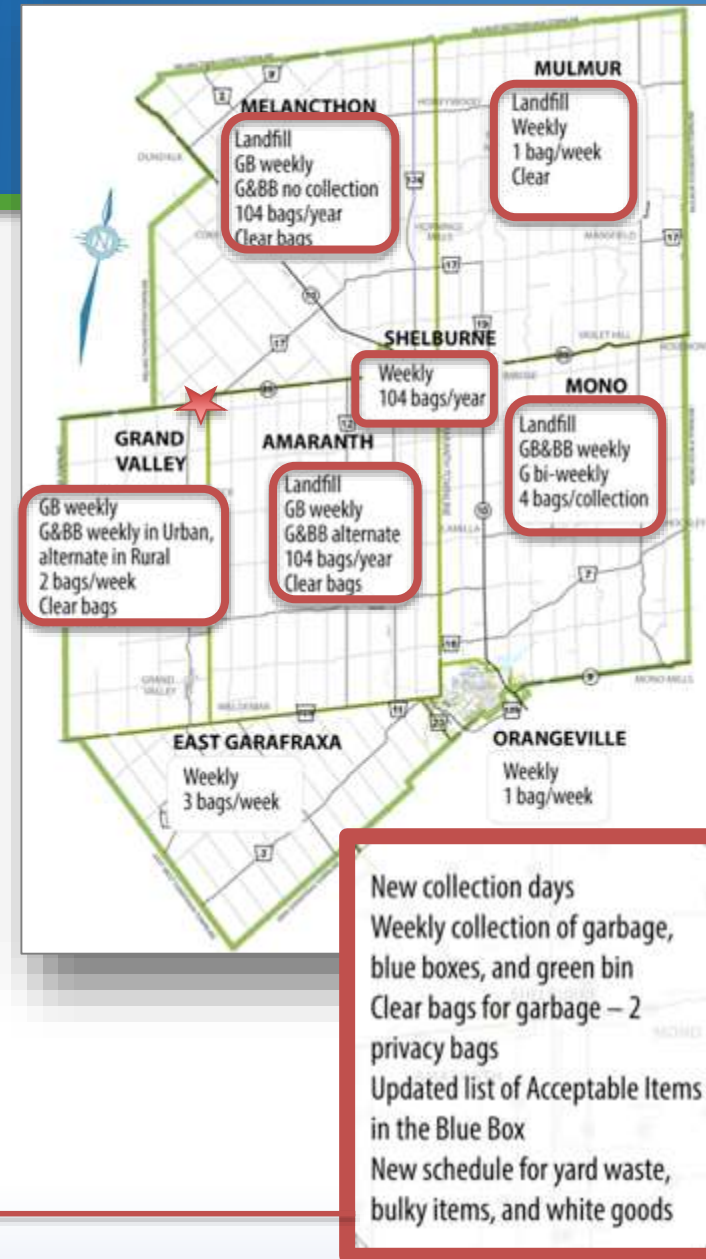
Project Highlights

- Project goal: inform residents of changes to waste collection system
- Anticipated impacts: smoother transition – less confusion, less service disruption
- More information:
 - email: abroadfoot@dufferincounty.ca
 - website: www.dufferincounty.ca/waste



Why this project? Background

- ▶ **1988** Local municipalities begin Waste Management Master Plan
- ▶ **1990** County assumes responsibility to develop a landfill
- ▶ **1997** Landfill site purchased ★
- ▶ **2000** County decides to look at alternatives
- ▶ **2002** Vision of DEEP emerges – EFW, Composting & more...
- ▶ **2007** Green Bin program expands
- ▶ **January 2013** County assumes all waste collection services – takes over existing programs ◻
- ▶ **June 2013** New amalgamated program began



Considerations

- Need to communicate THAT it's changing & WHAT is changing
- Jan-May – 8 different programs = 8 calendars
- For June 1 – reach as many people as possible
 - All ages, all demographics
 - Urban, rural, weekenders, commuters, farmers
- Limited local media – no radio or TV





NEW WASTE PROGRAM STARTS JUNE 1, 2013

the start of a new curbside collection program in Dufferin County.
Keep in mind that starting June 1:

Green Bins and garbage will be collected every week.
Collection day may change (the map is now available online). With new
rules, it is important to have your waste at the curb by 7 a.m. on the
your scheduled collection.
will now be collected in rural areas on a call-in basis.
and white goods will be collected on a monthly call-in basis for a fee.
will be required for garbage. Each clear bag can contain two small
opaque "privacy" bags and garbage can be placed at the
curb in a container, if desired.

Want more information? Attend a coffee chat.

Tues. May 7
5 to 7 p.m.
Wed. May 8
2 to 7 p.m.
Tues. May 14
3 to 7 p.m.
Wed. May 15
5 to 7 p.m.
Thurs. May 16
5 to 7 p.m.

Alder Street Arena
275 Alder Street, Orangeville
Melancthon Municipal Office
157101 Highway 10, Melancthon
East Garafraxa Public School
063066 County Road 3, Marsville
Dufferin County Museum and
Corner of Highway 89 & Airport Rd.
Hyland Heights Public School
200 Fourth Ave, Shelburne

If you'd like a free sample and coupon for clear garbage bags, contact Dufferin County Waste Services.

DUFFERIN
CA

The Waste Services Guide, with full details about the new
program, is being mailed to all households. If you do not receive
yours by May 15th, please contact Dufferin County Waste Services.

Waste Services for more information.

dufferinwaste@dufferincounty.ca | 519.941.2816 ext. 2620 | Sign up for the Dufferin Waste Bulletin e-Newsletter at: expurl.com/vt2Pv



New Waste Program Starts June 1, 2013!

Dufferin County Waste Services sent by Dufferin County Waste Services
Sent: Tuesday, March 26, 2013 at 9:47 AM
To: Alyssa



NEW WASTE PROGRAM TO BEGIN JUNE 1

We're gearing up for the start of a new curbside waste collection program, set to begin on
June 1, 2013! Head on to find out what's happening or visit dufferincounty.ca/waste for
more information.

In order to make collection routes
more efficient, some collection
days will be shifted to another
day. The new collection schedule
and map with collection days will be
available in the 'My Waste' app.



Impacts/Anticipated Results

Metric	Before	Goal	As of Jan. 2014
Contamination Rate of BB	9.6%	7%	6.9%
BB Tonnage	5,640 tonnes (2011)	6,204 tonnes	6,166 tonnes (2013)
BB Participation	80%	90%	94.8%
Smartphone App		2,000 downloads	448
Social Media		<ul style="list-style-type: none"> • 10 new Twitter followers/month • 10 new Facebook fans/month 	<ul style="list-style-type: none"> • 1,800 interactions by 1,200 unique users • 24 Twitter followers/month • 21 Facebook fans/month



Findings

- Value
 - Newspaper ads
 - Smartphone app
 - Free/low cost mediums
 - Location specific – downtown cores & along roadways
- Help people help themselves
- Lesson learned: don't expect people to read more than headline

NEW WASTE PROGRAM STARTS JUNE 1, 2013

COLLECTION DAYS

- MONDAY
- TUESDAY
- WEDNESDAY
- THURSDAY

With new collection routes, it is important to have your waste at the curb by 7 a.m. on the morning of your scheduled collection.

June 1 marks the start of a new curbside collection program in Dufferin County. Keep in mind that starting June 1:

- Blue Boxes, Green Bins and garbage will be collected every week.
- Your current municipal bag limit will remain in effect and be converted to a weekly limit (as opposed to a bi-weekly or yearly limit) where applicable.
- Your collection day may change (see map).
- Yard waste will now be collected in rural areas on a call-in basis.
- Bulky items and white goods will be collected on a monthly call-in basis for a fee.
- Clear bags will be required for garbage. Each clear bag can contain two small opaque "privacy" bags and garbage can be placed at the curb in a container, if desired.

If you'd like a free sample and coupon for clear garbage bags, contact Dufferin County Waste Services.

detail of Orangeville

WASTE SERVICES GUIDE

The Waste Services Guide, with full details about the new program, has been mailed to all households. If you did not receive yours, please contact Dufferin County Waste Services.

MY WASTE Managing your household waste in Dufferin County just got easier!

Download the 'my-waste' app and never again lose track of your collection day. Find out the proper way to get rid of hundreds of materials, learn the locations, dates and times of special collection events, and much more.

Download the 'my-waste' app from your favourite App Store.

It's FREE!

Available on the App Store

ANDROID APP ON Google play

Contact Dufferin County Waste Services for more information.
dufferincounty.ca/waste | dufferinwaste@dufferincounty.ca | 519-941-2816 ext. 2620 | Sign up for the Dufferin Waste Bulletin e-Newsletter at equest.com/v2/v

Space provided through a partnership between industry and Ontario municipalities to support waste diversion programs.

Next steps

- 1 year later – still in transition
 - Bag limit remained in place for 1 year
 - Just transitioned to “1 bag a week” county-wide
 - Using lessons learned – simple messaging, location specific
- Moving forward
 - A shift to improving performance





Adding Capacity & Increasing Diversion CIF Project #419 & 534.3

Elizabeth Ramsay
City of Brantford

Project Highlights

- Project goal: New bigger blue boxes (BB) to reinforce 2-stream sorting curbside & promote introduction of new plastic packaging
- Anticipated impacts: Increase participation, capture of new plastic packaging & tonnage
- For more information:
 - email: ERamsay@brantford.ca
 - website: www.myBrantford.ca



Why this project?

- Long Term Sustainability Solid Waste Plan
- Increase Diversion:
 1. Expand list of materials
 2. Provide bigger boxes
 3. P&E campaign



Two streams = Two Blue Boxes

Before: 16 gallon box overflowing & not sorted properly



After: 16 gallon box & 22 gallon box sorted properly



P&E Campaigns

- Multi-media campaign: newspaper, radio, calendar, bus ads
- Advertising campaign: Oct. 2012 – Jan. 2013
- Container rollout: Nov. 5 2013
- Budget: - Plastic is In!: \$11,700 or 0.47¢/household
- Large Container: \$15,600 or 0.63¢/household



Roll-out

- Delivery of 25,000 large boxes (22 gallon)
 - Bin purchases cost \$159,000 or \$5.85/bin
 - Delivery costs at \$29,549 or \$1.18/bin delivery
- Some issues with subcontractors
- Follow up survey:

Blue Box Use

1 large, 1 Small	53.8%
1 large, only	20.5%
1 small, only	21.8%
1 large, 2 small	3.6%



Interim Results

Data Collection Point	Baseline (2012)	Actual (2013)	Goal (2015)
Participation	70%	82%	85%
Diversion (MT)	6,600	7,550	6,930
Residual (MT)	257	549	244
Plastics (MT)	768	862	806
Aluminum (MT)	129	210	none
Steel (MT)	180	287	none

Did you receive your new LARGER Blue Box today?

Yeah, what do I use it for?

You can now recycle plastics 1 through 7. Just remember to put paper products in the smaller blue box and containers in the larger blue box!

So now I can recycle even more!

Exactly!

NEW
Brantford has expanded their recycling program to include more plastics, 1 through 7!

The City of Brantford is pleased to provide you with a new **BIGGER Blue Box.**

Current Blue Box 60 litres (16 gallon) **PAPER**

New Blue Box - 84 litres (22 gallon) **CONTAINERS**

NEW LARGER BOX

THE CORPORATION OF THE CITY OF
BRANTFORD
SOLID WASTE OPERATIONS

RECYCLING Can Make A Difference!

Successes and Key Learnings

- Short multi media campaign yields immediate results
 - High exposure campaign
- Plastic capture is up
- Bigger recycling profile has increased capture of other materials
- Residual has doubled
 - New processor
 - Sorting curbside

NOW YOU CAN RECYCLE MORE MATERIALS IN YOUR BLUE BOX!

Keep Them Separated Use Two BLUE BOXES

MORE PLASTICS:
All plastic* bottles, jugs, tubs and trays with the numbers 1 through 7 on the bottom, can be recycled. This includes clear plastic "clamshell" containers.

PAPER PRODUCTS:
Magazines, catalogues, phone books, soft & hard cover books (remove hard covers)
Household paper
Boxes, egg cartons, tubes (flatten)
Newspapers, flyers
Cardboard boxes, flattened. Bundle large quantities, size no larger than 75cm x 75cm x 20cm (30" x 30" x 8")

CONTAINERS:
Spiral cardboard tubes and cans
Cartons & drink boxes
Steel & aluminum cans (empty), clean aluminum foil and pie plates
Glass, beverage and food, bottles and jars
1 through 7 Plastic bottles, tubs and clamshell containers (No Styrofoam)

PAPER MILK AND JUICE CARTONS, DRINKING BOXES

PLASTIC TUBS AND LIDS

ALL PLASTIC BOTTLES WITH TWIST OFF TOPS

***There are exceptions: Please do not include foam plastic packaging (e.g. Styrofoam), plastic bags, plastic wrap (e.g. bubble wrap), and "blister pack" plastics (e.g. the rigid clear plastic cover on toys and other products)**

Solid Waste Operations • Questions? call 519.750.1350 • or visit: brunford.ca

Take-Aways & Next Steps

- Capacity increases diversion
- Plan for logistic problems
- Plan for residual
- Transition P&E focus from curbside to Multi-Residential sector
 - Include key learnings: multi media campaigning works

PAPER PRODUCTS



Magazines, catalogues,
phone books, soft &
hard cover books
(remove hard covers)



Household paper



Boxes, egg cartons,
tubes (Flatten)



Newspapers, flyers



Cardboard boxes
Flatten & place large pieces between carts.
Bundle large quantities. Bundles no larger
than 75cm x 75cm x 20cm (30" x 30" x 8")



CONTAINERS



Plastic bottles, tubs, jugs



Aerosol cans
(empty)



Plastic clamshell
containers
No Styrofoam™



Spiral wound
(cardboard) cans



Glass bottles
& jars



Cartons
& drink boxes



Steel & aluminum cans, metal paint cans
(empty), aluminum foil and pie plates



Plastics Around the House

CIF Project #660.4

Daniel Orr

Quinte Waste Solutions

Project Goal

- Project Goal: To increase capture of desirable plastic containers
- Anticipated impacts: Reach a broader audience leading to increased capture rate
- For more information:
 - email: dan@quinterecycling.org
 - website: www.quinterecycling.org

Is There a Blue Box In Your...?

**Is there a Blue Box
in *your* Bathroom?**



Approach

quinterecycling.org

Is there a Blue Box
in *your* Bathroom?



 **QUINTE WASTE SOLUTIONS**
inspired by the Greater & South Hastings Waste Services Board



2754 **ROGERS**

CASH & MAX

308

FOR LEASE
366-7907
800-808-0046



Budget Breakdown – Total cost \$17,664



Item	Hours	Costs
Billboards		\$3,841
Mall Posters		\$3,785
Newspaper Ads		\$6,406
Rink Boards		\$1,500
HDPE Poles		\$98
Staff – design time		\$2,064
Newspaper	24	
Billboard	24	
Mall ad	24	
Rink board	5	
Social Media graphics	1	
Blogging	6	
	TOTAL	\$17,664

Is there a Blue Box in *your* Bathroom?



What's Missing in Your Bathroom?

[Read More](#)


Upcoming Events

November						
Month:	November		Year:	2013		Go
Sun	Mon	Tues	Wed	Thurs	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

News & Events Blog



Hazardous Waste is Horrifying!
 No Comments – 28/10/2013



The Case of Hazardous Waste Video
 No Comments – 22/10/2013



Madoc Township – Last Mobile Collection Event for 2013!
 No Comments – 22/10/2013

Take our Poll

Do you recycle in your bathroom?

☐ Yes
☐ No

[Vote](#)
[View](#)

[Results](#)

The Results

Input Material Weight (tonnes) Plastics 1,2,4,5,6

September 2012
103.3

September 2013
89.71

October 2012
96.71

October 2013
141.95

Contract Change/Baler Breakdown

November 2012
171.56

November 2013
188.24

December 2012
96.05

December 2013
96.56

Moving Forward

- Focus on bathroom, longer period of time
- Actively sell/promote smaller desk side BB for under sink
- Continue with billboards/mall posters in conjunction with traditional & social media





CIF
CONTINUOUS
IMPROVEMENT FUND

Questions



Factors Affecting Processing: Cost vs. Diversion Potential

Carrie Nash, CIF



What are Top Factors in Cost/Diversion?

- Response from the experts:
 - Responsiveness
 - Technology
 - Operational efficiency
- Knowing key factors allows for better RFPs & contracts



We Heard: Contract Management is Key

- Embrace change
 - Municipalities need technology & performance metrics to keep pace with collection activity & material changes
 - Be open to contract amendments
- Adjust your perspective
 - Are you marketing everything you can?
- Make informed choices when selecting a processor
 - Seek out processors who prioritize operational efficiency

Speakers

- Paulina Leung, Emterra Environmental
 - Post-Collection Operations: A MRF Operator's Perspective
- Kevin Mehlenbacher, The Region of Peel
 - MRF Upgrades for Mixed Rigid Plastics Recovery
- Naz Ritchie, The Region of Waterloo
 - MRF Upgrade: Balancing Current & Future Needs



EMTERRA[®]
Environmental

Post-Collection Operations: A MRF Operator's Perspective

Paulina Leung

Emterra Environmental

CIF
CONTINUOUS
IMPROVEMENT FUND

Highlights

Key Factors Affecting BB Processing Changes:

1. Harmonization
2. Residual
3. P&E
4. RFPs & contracts
5. Single vs. dual stream
6. Evaluation & compensation metrics

Contact Info:

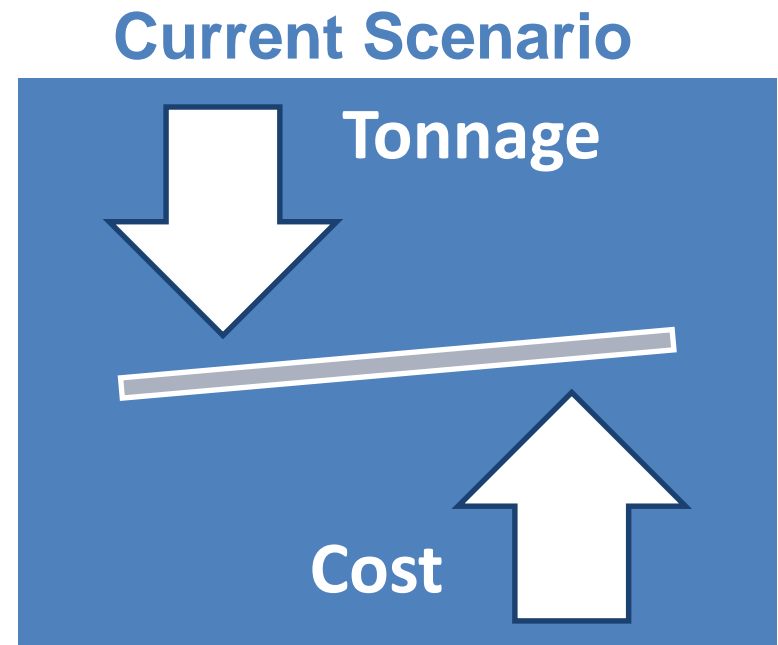
Email: Paulina.Leung@emterra.ca

Phone: 905-336-9084 ext. 130

Website: www.emterra.ca

Tonnage

- Basis of municipal evaluation & contractor compensation
- If tonnes are down, why are costs up?
 - Fewer tonnes over which to amortize capital and fixed costs largely unchanged
 - Higher demands on processor to deal with complex material groups and shrinking quantity of heavier material groups



Fewer Tonnes & Complex Material Groups

- Changes in most abundant stream – fibres
 - Shift to electronic media
 - Yellow Pages to discontinue print directories
 - Online shopping may result in more OCC
- Increase in new types of packaging
 - Out of home and ready cooked meals growing
 - Shrink wrapped products
 - Multi layered packaging
 - New packaging uses for plastics
- Light weighting
 - Substitution of lighter packaging for heavier glass and steel
 - Lighter packaging; smaller portions



Fewer Tonnes & Complex Material Groups: A Closer Look at What's Happening

Year Over Year Change by Weight (MT)

	2011	2012	% Change
Paper-Based Packaging	169,413	169,413	1.0%
Polycoat	4,956	5,567	14.1%
Printed Paper	508,269	493,966	-2.8%
Mixed Papers	27,767	22,998	-17.2%
Glass	88,335	87,224	-1.3%
Aluminum	10,314	11,208	8.7%
Steel	30,800	30,825	0.1%
Plastic	66,720	71,634	7.4%
Totals	904,850	892,924	-1.3%

*WDO Municipal Datacall of 230 municipal residential blue box programs marketed tonnes

Counteracting Tonnage Decreases (1)

1. Harmonize P&E
2. Stop residual at curb; bridge gap between haulers & processors

Every box is turned over



But not necessarily empty...



Counteracting Tonnage Decreases (2)

3. Use simple but **clear** P&E for residents

Does your P&E really say what you mean?



Counteracting Tonnage Decreases (3)

- Use clear & evocative images
 - They can't/won't be comprehensive
- Choose words & media carefully
 - Simple, accessible, visible, appropriate



Counteracting Tonnage Decreases (4)

Use Practical P&E

What goes in the recycling cart?

Yes Put these items in your recycling cart.

Milk jugs
Plastic bottles (necks smaller than base)
Paper milk-style cartons
Phone books
Shredded paper
Mail, magazines, mixed paper and catalogs
Metal cans
Newspaper & inserts
Paper bags
Aluminum cans
Cereal boxes
Cardboard
Paper or frozen food boxes

No DO NOT put these items in your recycling cart.

No Styrofoam or Plastic Bags!

Styrofoam peanuts
Styrofoam containers
Styrofoam blocks
Plastic bags
Glass
Batteries
Pill bottles
Toxic product containers
Plastic tubs
Plastic lids & caps
Frozen food bags
Juice boxes
Foil
Food-contaminated paper plates and napkins
Plastic cups
Glassware
Ceramics
Light bulbs
Metal hangers
Chip bags
Aerosol cans

Preparing recyclables is easy

- Recyclables should be clean, rinsed, dry and empty. (Milk sours and will leave odors in the cart. It also can contaminate the paper.)
- Rinse containers with water and leave no food residue.
- Do not bag items, unless it is shredded paper. Put shredded paper in a paper bag.
- Labels can stay on.
- Plastic lids & caps must come off. Throw them away.

PLASTIC BAGS WILL CAUSE MACHINERY TO JAM! After placing recyclables in bin, put plastic bags in garbage or recycle them at your local grocery store.

 **Pierce County**
Public Works and Utilities
Solid Waste Division

www.piercecountywa.org/recycle

Counteracting Tonnage Decreases (5)

4. RFP & contract language that:

- Allows flexibility to respond to changes in packaging composition, weight & volume
 - Change is rapid; be prepared to keep pace
- Promotes partnership
 - Encourages discussion/negotiation about potential changes (e.g. PPP to expand targeted materials, increase capture or improve end product value)
- Establishes re-negotiation terms & conditions
 - Set thresholds, timelines & both parties' obligations

Counteracting Tonnage Decreases (6)

5. Single stream (SS) or dual stream?

- SS MRF operators have 10+ years human capital, processes & systems, etc.) in effective/efficient operations
- SS collection makes cart usage viable
- SS is growing, esp. in Western Canada & USA
 - Half of BC, all of SK, Calgary, Edmonton, most of MB
- SS not the work of the devil!



**Single Stream
Recycling**

Counteracting Tonnage Decreases (7)

6. Commodity markets are international
 - Allow for overseas sales
 - The municipality & processor responsible for due diligence
7. Consider new payment & evaluation model
 - Then: \$/tonne
 - Now: \$/piece

And here are 3 reasons to consider...

Rationale for New Payment/Evaluation Model

1: Product Light Weighting

Increase in number of pieces
needed to generate 1 tonne



Rationale for New Payment/Evaluation Model

1: Product Light Weighting

Year over year INCREASE by piece count for the SAME tonne

Material	# Pieces/Tonne*		
	2008	2009	% Increase
Aluminum	70,000	71,000	1.4%
Plastic 1L	34,000	38,000	12.0%
Pouches	167,000	176,000	5.4%
Gable Top 500ML	52,000	69,000	33.0%

*Encorp Pacific Annual Report 2009

Rationale for New Payment/Evaluation Model

2: Proliferation of Packaging Formats

Packaging Innovation = Recycling Challenges



3: Composition Changes in PPP Basket

- Less heavy items (e.g., newspapers, glass bottles, and heavier plastic bottles)
- More plastic packaging
- More multi-layer composite packaging
 - Many/most not “accepted” in BB programs

We Can Do This Better...!

- Challenges:

- Light-weighting
- Proliferation of packaging formats
- Changing material composition
- Residual entering MRF
- Lag time & lack of consultation w/MRF operators

- Solutions:

- Keep residual out of MRFs
- Consider change to performance measures
- Be open to partnerships, contract amendments & re-negotiation
- Earlier consultations between packaging producers, municipalities & MRF operators



MRF Operations - Improving Efficiency

MRF Upgrades for Mixed Rigid Plastic Recovery

CIF Project #439

Kevin Mehlenbacher

Region of Peel



Project Summary

- Project goal: Recovery of Mixed Rigid Plastics
- Anticipated impacts:
 - Recovery of MRPs
 - Improved material recovery (all materials)
 - Improved material throughput
 - Improved material quality (all materials)
- More information:
 - email: kevin.mehlenbacher@peelregion.ca
 - website: www.peelregion.ca

The Issue (1)

- Other local Blue Box (BB) Recycling Programs already added or were adding MRPs to their programs
- Large volumes of unsolicited MRP's being collected & ultimately shipped as residue
- P&E for not including MRP's with others recyclables ineffective
- Operational concerns with adding MRP's:
 - Reduced MRF throughput, material recovery and quality
 - MRF capacity reached in 2016
 - Additional labour costs for recovering MRP
 - Increased maintenance costs for aging MRF equipment

The Issue (2)

- MRF upgrades required to successfully recover MRP's if added to the Region's Recycling Program
- Business case for MRF upgrades less expensive than alternatives
- Other Considerations
 - MRF equipment downtime increasing with age
 - Bi-weekly cart collection beginning in 2016 projected an additional 10,000 tonnes of recyclable material requiring processing

New MRF Equipment

- New Glass Screen & Overhead Magnet for improved separation of Glass, Metals & Plastics
- New secondary Glass Cleanup Screen for improved Glass quality
- New Ballistic Screen for improved separation of Fibre & Container material
- New Eddy Current for improved Aluminum recovery & quality
- 2 new Optical Sorters for improved recovery of all Plastics, including MRP's
- Modifications to chutes & transfer conveyors for more efficient movement of material

New MRF Equipment



Optical Sorter



Equipment Overview



Glass Cleanup



Ballistic Screen

Joint Project Between MRF Operator & Region

- Key factors in project success:
 - Clearly defined project management roles & responsibilities for MRF Operator & Region
 - Open 2-way communications by all parties involved
 - Time spent pre-planning project scope of work, MRF operational impacts during construction & associated project risks
- Project & budget approved by Regional Council July 2013
- Construction began mid February 2014 & was completed by end of March 2014

Projected Impacts

Financial Impact	<ul style="list-style-type: none">• Total project budget: \$3,107,500• Business case identified potential cost savings: \$2.2M/yr. vs. manual recovery of MRPs• CIF approved funding: 48% of project costs – \$1,511,528 (max)
Tonnage Impact	<ul style="list-style-type: none">• Project 1,500–2,000 tonnes MRP• Estimate 300–500 additional tonnes of other recyclables
MRF Throughput	<ul style="list-style-type: none">• Adding MRP's without upgrades: est. reduction of 3.5 TPH MRF capacity (~13,500 TPY)• Est. reduction in MRF downtime will increase overall MRF capacity by 7,500 –11,000 TPY

Before & After Upgrades



Actual Impacts

Financial Impact	<ul style="list-style-type: none">• \$42,000 in additional revenues
Tonnage Impact	<ul style="list-style-type: none">• 180 tonnes of MRP recovered• 100 additional tonnes of other materials recovered
MRF Throughput	<ul style="list-style-type: none">• MRF throughput increased by 10.5%• 55.3% reduction in MRF downtime

Note: Based on two months of post upgrade operations

Preliminary Results & Findings

- Overall, upgrade project has been successful
- New MRF processing equipment performing well
- Ongoing equipment adjustments & fine-tuning
- Initial analysis indicates improved MRF operations:
 - Improved recovery of material
 - Improved material quality
 - Reduced MRF downtime
 - Reduced sorting staff
 - Increased material throughput

Next Steps

- Commissioning of new MRF equipment
 - Does new equipment achieve equipment suppliers' guarantees?
 - Does MRF achieve specified contractual requirements with new process equipment?
- Continued analysis of equipment performance & operational impacts
 - Identification of potential operating efficiencies to reduce costs



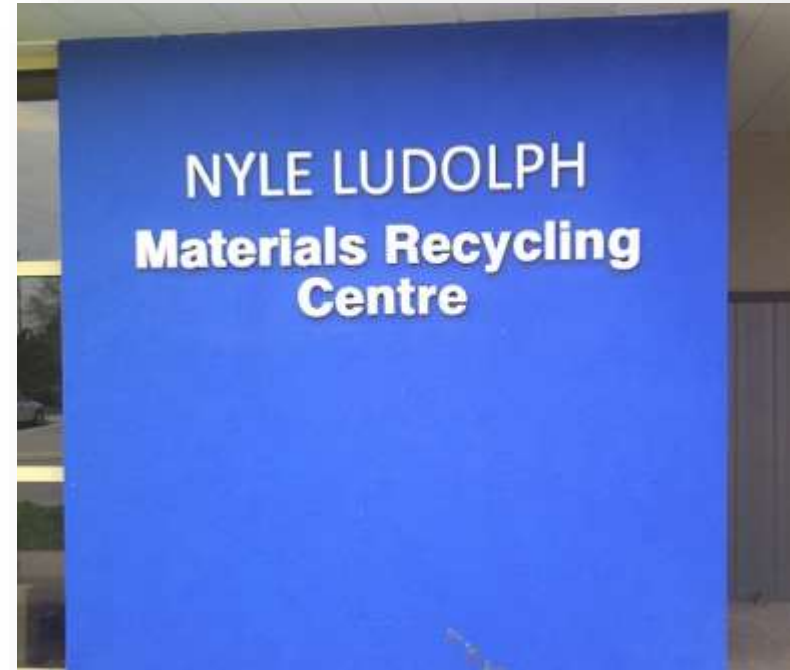
Region of Waterloo

Material Recycling Centre Baler Upgrade CIF Project # 829.3

Naz Ritchie, M.Eng., P.Eng.
Region of Waterloo

Project Goals

- Project goal:
 - Install Energy Efficient Baler
 - Find right balance between current & future needs
- For more information:
 - email: nritchie@regionofwaterloo.ca
 - website: www.regionofwaterloo.ca



Baler Selection Process



Considerations for Baler Selection

- Population growth
- Trends in recycling industry
 - new streams & fibres
- Technical:
 - Bale Dimensions & Density
 - Cycle Time
 - Energy Usage
- Other: Vendor Experience, Service, Life Cycle Price



Evaluation of Options

- Different types of balers
- Spoke to other municipalities
- Baler manufacturer reps
- Conducted site tours
- Issued competitive RFP with critical factors



Selected Baler

- Harris HRB 240T Twin Motor Baler
- Energy efficient 25-30% less power than other 200 HP
- Flooded pump suction hydraulic system



Installation & Commissioning



Installation and Commissioning

- Tight schedule to minimize MRC downtime
- Equipment removal & installation <1 week
- Issues during Commissioning with hydraulic valve



The Culprit!!!



Project Outcomes & Impacts



Cost Savings Opportunities

- Energy savings
- Less bale wires
- Bale density
- Machine Speed
- Labour savings
- Preventative maintenance

Material	Gorilla Baler	Harris 240T HRB
HDPE and PET	650 lbs (295 kg)	725 lb (329 kg)
Mixed Plastics	600 lbs (272 kg)	650 lbs (295 kg)
Tetrapak	550 lbs(250 kg)	600 lbs (272 kg)

Project Highlights: Anticipated Impacts

- Reduce operation costs
- Total price: ~1M – installed/commissioned
 - Capital cost – \$50,000 more than smaller model
- Payback on Energy Savings:
 - 5 to 6 years based on estimated saving \$8,500/yr



Consideration for Similar Projects

- What are the key considerations & timing for equipment upgrades?
- How are new equipment selected?
 - What are the cost/benefits?
 - Is the processor looking at various options?
 - Will selected equipment improve efficiency of overall operations
- Are there other benefits – labour savings, more revenue?
- Is there a benefit to the client/owner?

Questions



Break



Welcome Back



The “Problem Children”

Problematic Materials & Consistency: Costs & Challenges

Mike Birett, CIF

You've Heard Us Talking About Them



Some of You Have Them In Your Program

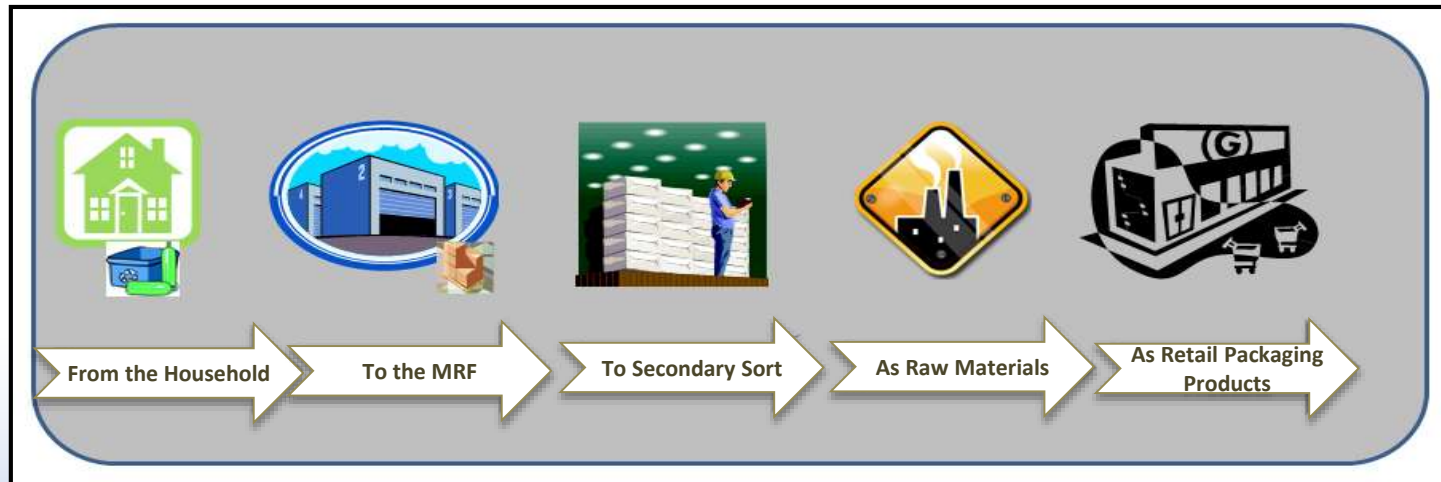


Everyone Recognizes the Benefits of Program Harmonization



So How Do We Move Forward?

- We need to:
 - Develop stable, domestic markets
 - Develop & implement best practices
 - Understand cost implications of various collection/processing options



EPS as an example

- Joint REOI (CIF/SO/CPIA) July 2012 for EPS management
 - HGC selected as successful proponent
 - Issues with non-EPS contamination in bales
- CPIA – Ontario PS Foam MRF & Recycling System Audits, Sept. 2013



Key CPIA Conclusions (1)

- CIF wanted to understand the cost implications
- Densification required to economically access markets
- EPS must be positively sorted before densification to meet domestic markets



Key CPIA Conclusions (2)

- Baling in an undedicated MRF baler reintroduces significant contamination
- MRF sorters focus on large clean EPS pieces



Key CPIA Conclusions (3)

- Depot foam is cleaner than curbside but needs to be monitored
- Additional P&E is required
- Packaging design is key



CIF #715 Examined the Cost Implications

- Develop and test a model for allocating full costs by material, not just incremental costs
- Advance our understanding of EPS cost management



The Methodology Builds on Existing Frameworks

- 12 collection & processing scenarios were modelled
 - Curbside, depot, collection in bags, loose shipment vs. densification



Methodology (Cont'd)

- Datasets:
 - WDO muni groupings (urban/rural) & costs
 - SO cost allocation principles
 - CIF #711 Curbside Single Family Audits, MRF Commodity Bale & Residue Audits & MRF Composite Paper or Packaging Observations
 - 2013 Stewardship Ontario Fee-Setting Model



Operating Costs Were Based on Existing EPS Programs

- Factors considered:
 - Collection & processing costs
 - Existing/additional capital, sorting, storage & shipping costs
 - Debugging and densification costs where appropriate



Limited Data Resulted In Broad Cost Ranges

Urban Collection:

Collection Location	Collection Method	Densification	Estimated Cost Range (\$/tonne)	
			Low	High
Curbside	Comingled Loose	No densification	\$ 1,653	\$ 2,849
		Densification	\$ 1,507	\$ 2,707
	Comingled in Bags	Shipped in bags	\$ 1,653	\$ 2,849
		Debag, Densification	\$ 1,522	\$ 2,747
Depot	Comingled Loose	No densification	\$ 769	\$ 1,573
		Densification	\$ 627	\$ 1,411
	Comingled in Bags	Shipped in bags	\$ 769	\$ 1,573
		Debag, Densification	\$ 637	\$ 1,461
	Segregated in Bags	Shipped in bags	\$ 523	\$ 559
		Debag, Densification	\$ 401	\$ 457
	Segregated Loose	Shipped loose	\$ 523	\$ 559
		Densification	\$ 361	\$ 417

Limited Data Resulted In Broad Cost Ranges (2)

Rural & Depot Collection

Collection Location	Collection Method	Densification	Estimated Cost Range (\$/tonne)	
			Low	High
Curbside	Comingled Loose	No densification	\$ 1,139	\$ 4,139
		Densification	\$ 787	\$ 3,787
	Comingled in Bags	Shipped in bags	\$ 1,139	\$ 4,139
		Debag, Densification	\$ 807	\$ 3,807
Depot	Comingled Loose	No densification	\$ 1,593	\$ 7,639
		Densification	\$ 1,346	\$ 7,287
	Comingled in Bags	Shipped in bags	\$ 1,593	\$ 7,639
		Debag, Densification	\$ 1,375	\$ 7,307
	Segregated in Bags	Shipped in bags	\$ 989	\$ 7,219
		Debag, Densification	\$ 771	\$ 6,887
	Segregated Loose	Shipped loose	\$ 989	\$ 7,219
		Densification	\$ 742	\$ 6,867

Next Steps

- Refine the modeling
- Refine our dataset
- Refine costs by municipal groupings
- Build on our understanding of depot ops

Contact Info

- Mike Birett, CIF
 - mbirett@wdo.ca, 905-936-9551
- Liz Parry
 - parry.e.a@gmail.com
- Joe Hruska, CPIA
 - jhruska@cogeco.ca, 416-930-1796 (c)
- Thanks also to Phil Jensen & Dave Thomson for their contributions

Questions



Factors Affecting Collection

Gary Everett, CIF



Managing Collection Costs Pays Off

- Collections are part of our everyday activity
- ~60% of costs are collections related
- Infrequent opportunities for change infrequent; contracts last 7 years (avg.)
- Knowing key factors allows for better RFPs & contracts



Ongoing Initiatives

- Automation
 - Collecting more material, faster
- Health & safety
 - Protecting health, preventing risk
- Technology
 - Vehicle options, fuel considerations
- Contract management
 - RFP & contract improvements

Speakers

- Francis Veilleux, Bluewater Recycling Association
 - Transitioning from Manual to Automated Collections: A Case Study
- George South, Progressive Waste Solutions
 - The Future of Curbside Collection



Automated Collection Conversion CIF Project 559.3

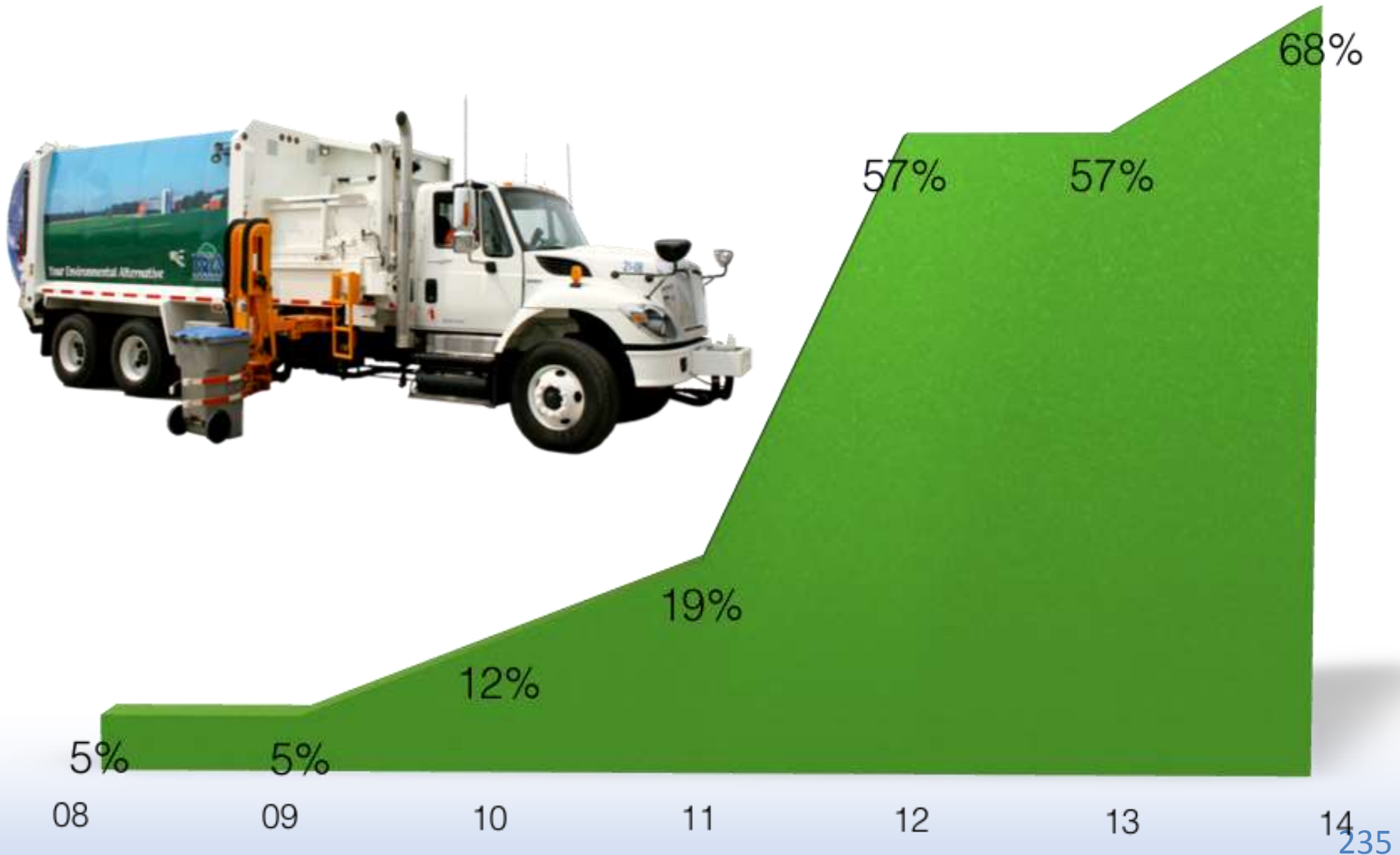
Francis Veilleux

Bluewater Recycling Association

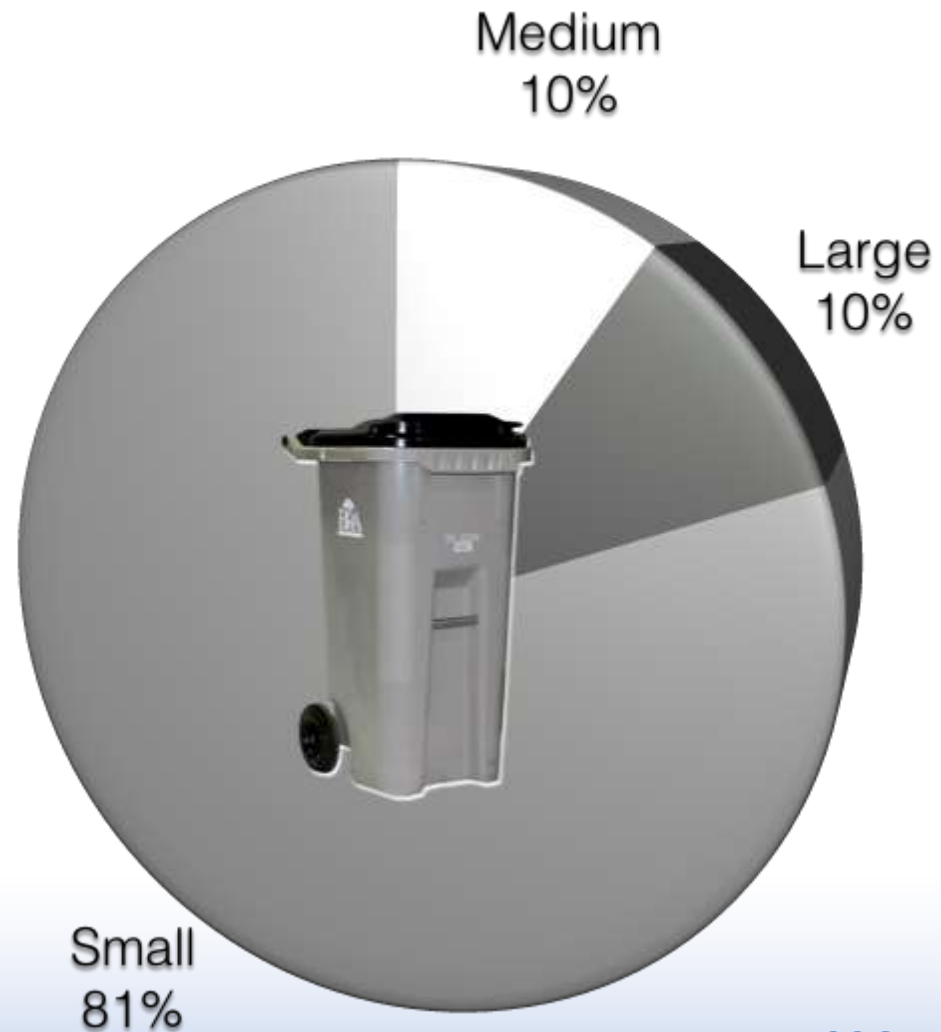
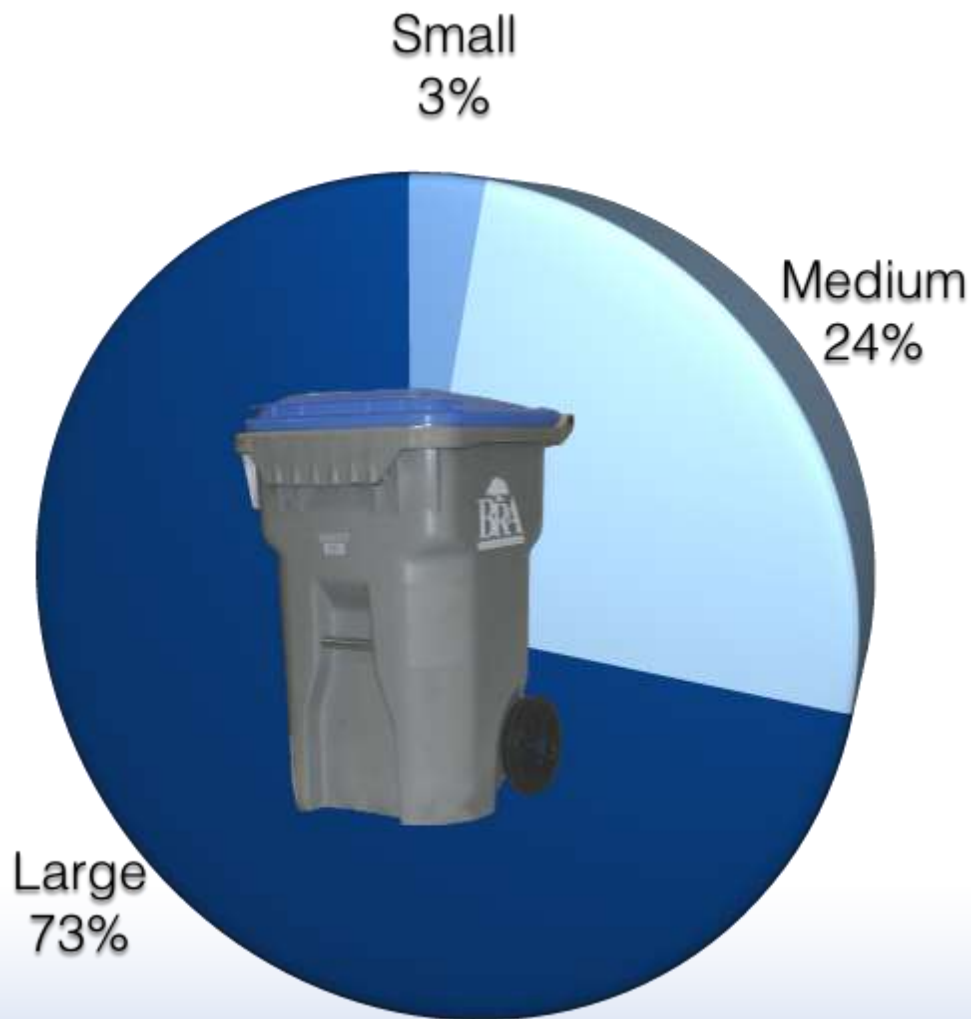
Project Highlights

- Goal Today:
 - Program Update since November 23, 2011
- More information:
 - email: bluebox@bra.org
 - website: www.bra.org

Automated Conversion Progress



Container Distribution



Not a One Size Fits All Program



Material Variety

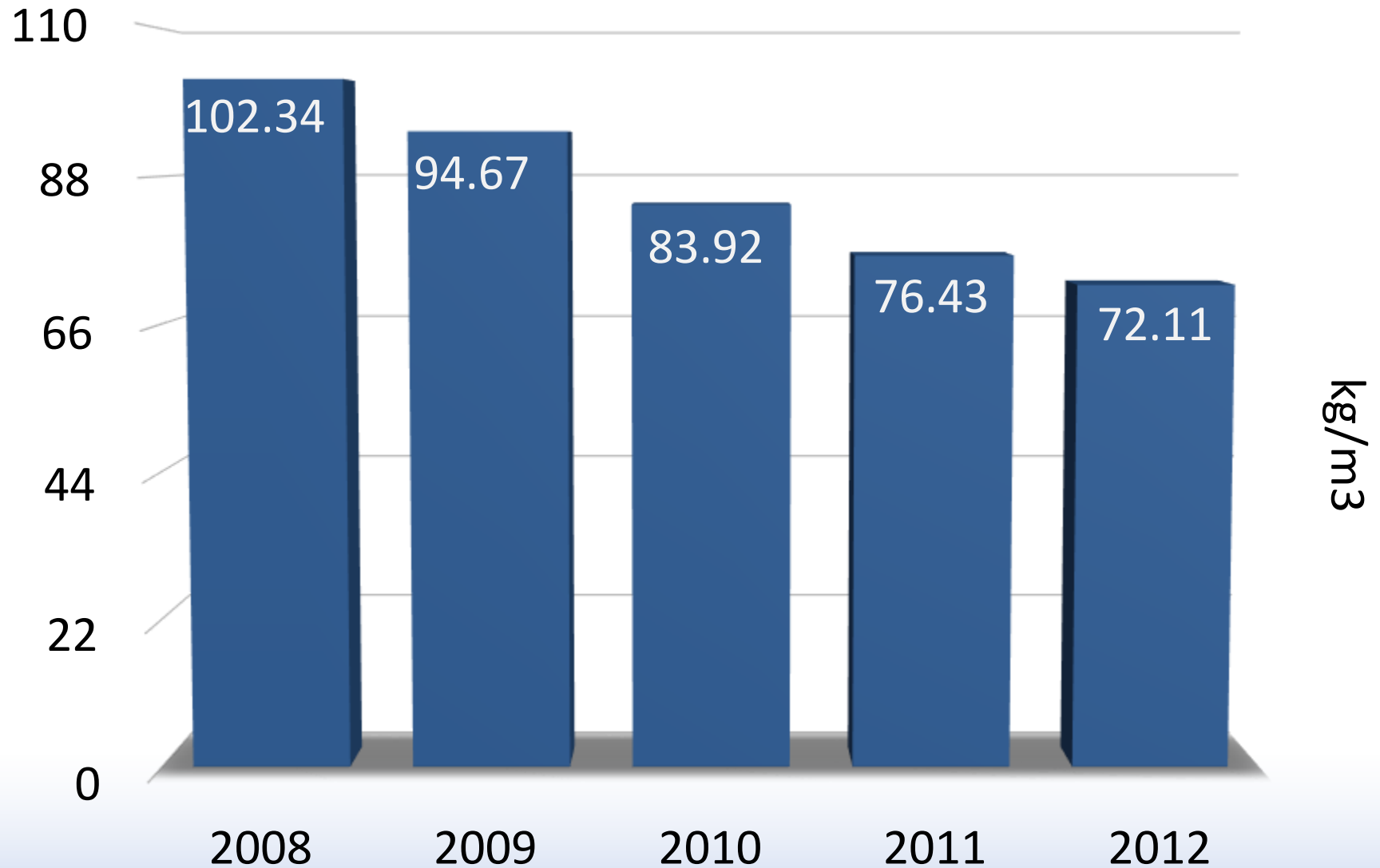
Then



Now



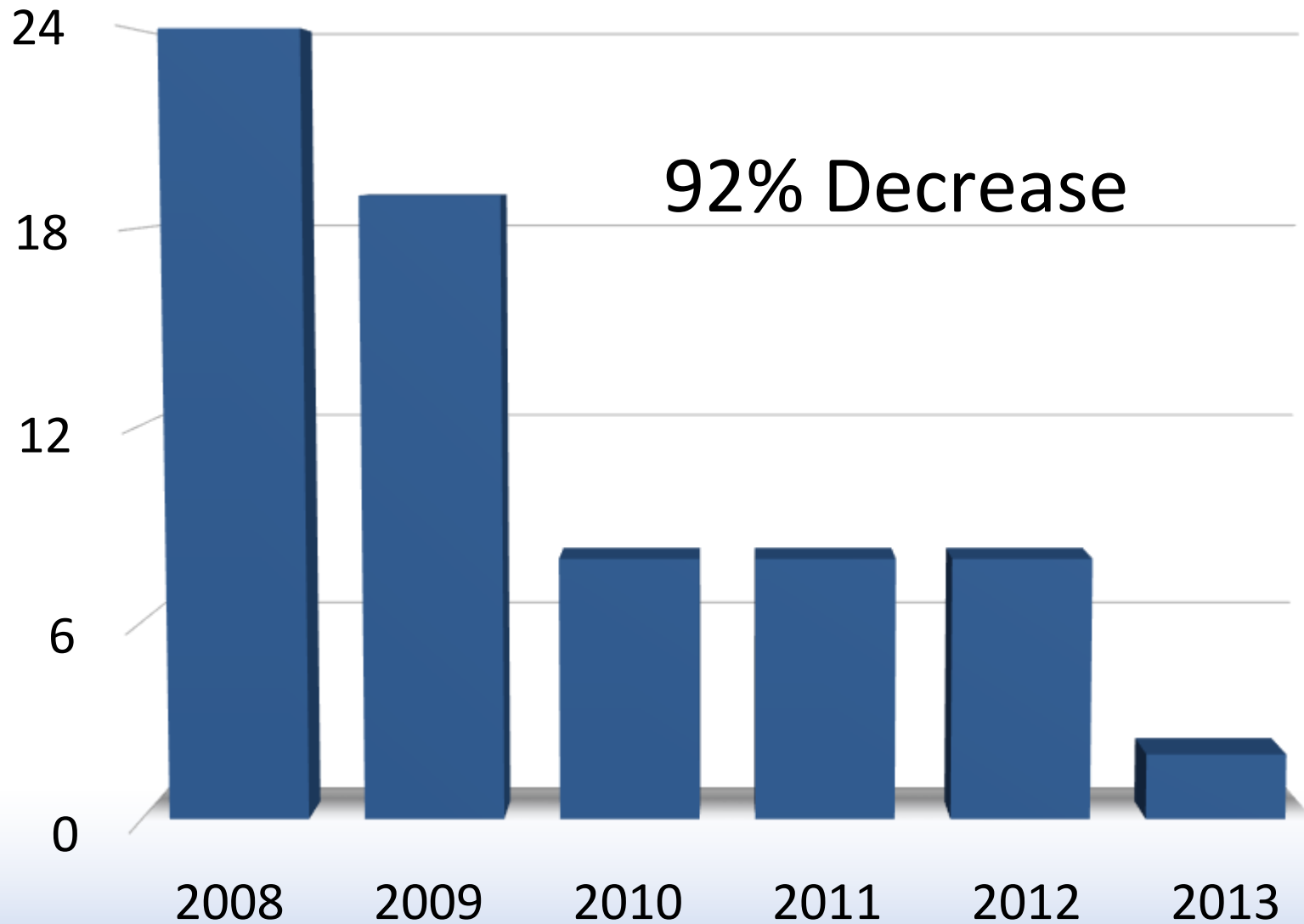
Material Density



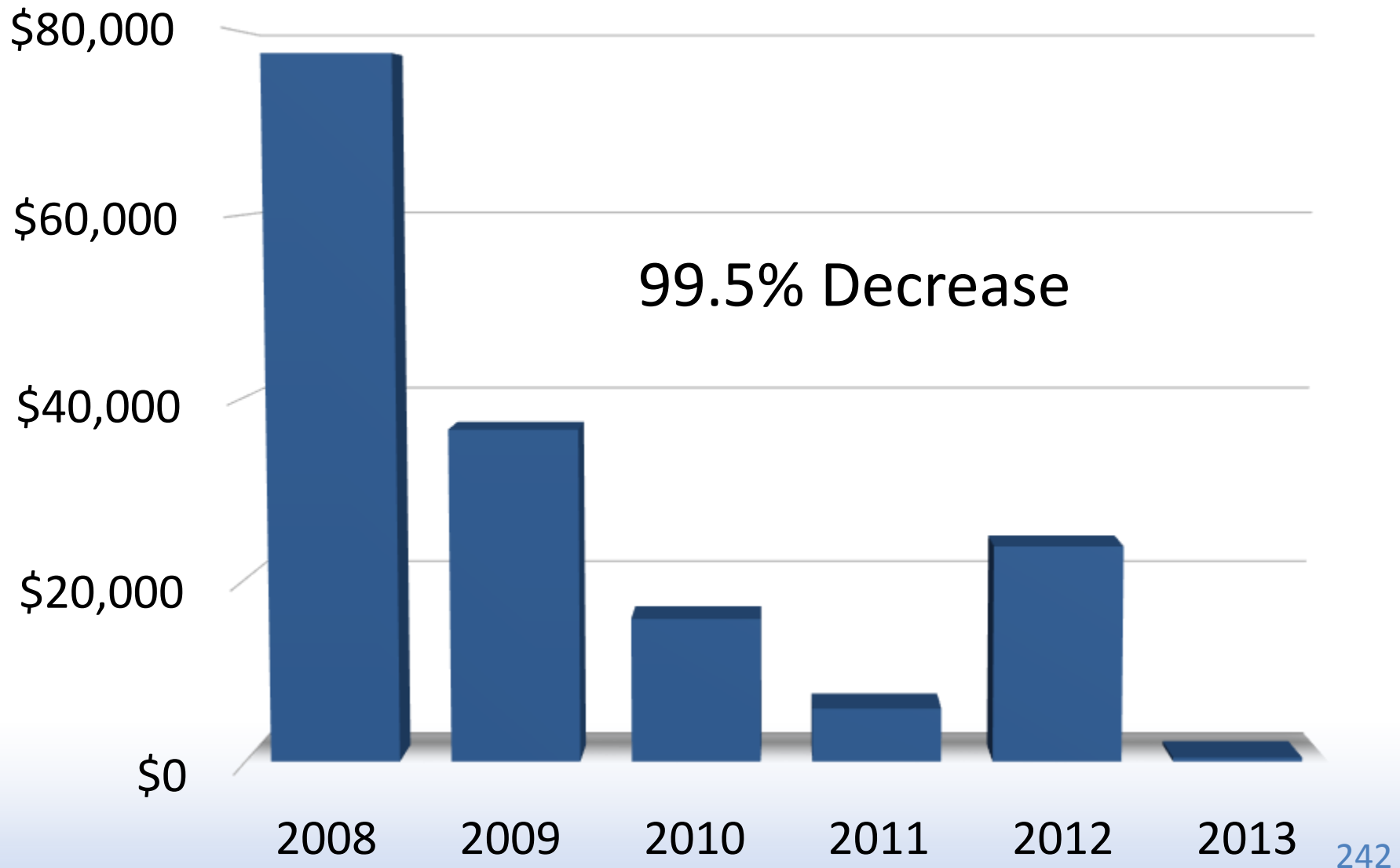
Recovery Increase

Service Area	Launched	Increase
St. Marys	October 2008	37%
Central Huron	November 2010	39%
Goderich	June 2010	59%
Strathroy-Caradoc	January 2013	40%
Lucan Biddulph	August 2012	71%
Seaforth	June 2010	79%
West Perth	August 2013	57%
Brooke Alvinston	October 2011	18%
South Huron	May 2013	65%

Health & Safety Performance (WSIB Claims)



Health & Safety Performance (WSIB Costs)



Delivery Cost



Wind Tolerance



In Mold Labels

RECYCLING INFORMATION



Paper



Newspapers, Magazines, Pizza Boxes,
Flattened Cardboard, Flyers, Egg Cartons,
Paper Towel Rolls, Bagged Shredded Paper

Glass



Clear and Coloured Glass, Food and
Beverage Containers with lids and/or labels

Plastic



All rigid plastic packaging labeled through
Retail bags must be bagged and kept separate
No plastic lids smaller than 3" are accepted
See important exceptions below

Metal



Aluminum and Steel
Food Cans, Lids, and Closures

Not Acceptable Plastic



- No foam coolers or cups
- No containers or products with hazardous materials
- No pots or buckets or anything with a handle
- No biological containers such as glass, plastic, metal, or wood
- No other plastic items such as toys, tools, lawn furniture, etc.
- No construction materials such as pipes, hoses, roofing, siding, etc.

DO NOT bag - except plastic bags for shredded paper
DO NOT tie recyclables together
Keep lid closed when not in use to keep water out
Do not compact materials to ensure complete rejection
Deposit only clean acceptable materials
Do not place hazardous materials or hot ashes in the bin
Wash out periodically with water
Remove from curb after service
Do not place bin on an elevated platform, bin might fall off
Do not place bin on a steep slope - bin may roll away
Do not tilt or roll container with the lid open
Do not place sand, soil, or other heavy materials in the bin
Do not overload the container (max load 220 lbs or 100 kg)

BIN PLACEMENT

Please place your bin at the roadside with at least 3 feet
from any other bins or obstacles such as trees, cars, or
mailboxes. Do not place the bin onto the road surface.

Bin lid opening should be facing the street while the bin
handle should face the house.



Bluewater Recycling Association - P.O. Box 547, Huron Park, Ontario N0M 1Y0
Tel: 519.228.6678 | 1.800.265.9799 Fax: 519.228.6656 Web: www.bra.org

Identity Crisis

	ACCEPTABLE	NOT ACCEPTABLE
PAPER		
GLASS		
PLASTIC		
METAL		

RECYCLING INFORMATION

DO NOT bag recyclables - except plastic bags
 DO NOT mix recyclables together
 Keep lid closed when not in use to keep water out
 Do not compact materials to ensure complete rejection
 Deposit only clean acceptable materials
 Do not place hazardous materials or hot ashes in the cart
 Wash out periodically with water
 Remove from cart after service
 Do not place bin on an elevated platform, bin might fall off
 Do not place bin on a steep slope - bin may roll away
 Do not tilt or fill container with the lid open
 Do not place sand, soil or other heavy materials in the bin
 Do not overload this container (max. load 220 lbs or 100 l)

PLASTIC INFO	ACCEPTABLE	NOT ACCEPTABLE
Recycle Top Containers	All screw top containers marked:	All screw top containers marked:
Wine Mouth Tubs	All wide mouth tubs marked:	Pale beer bottles, no any 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000
Plastic Film	Clean and dry plastic film - marked:	All plastic - no clearly marked:

Bin Placement

Please place your bin at the curb with **front 3/4" face** from any other bin or obstacles such as trees. Bin lid opening should be facing the street. Half the bin should be visible from the street.

No Vandalism Warranty



Split Personality



RFID Technology

- Useful for Service Verification
- Good Performance Metric
- Assist In Maintaining Inventory
- Required to Control Contamination



GPS Technology

- Good Directional Tool
- Not accurate enough to find missing bins
- Subject to cell network connectivity for live data



Overall...Pleased with Results



The Future of Curbside Collection

George South - Ontario Region
Progressive Waste Solutions

- Safety is the overriding priority
- Key operating principles through times of change
 - Focus on the wildly important
 - Act on lead measures
 - Keep compelling scorecard
 - Create cadence of accountability

Source: McChesney, Chris, Sean Covey, & Jim Huling. *The 4 Disciplines of Execution: Achieving Your Wildly Important Goals*. Print.

Collection: How we Manage Our Business

- Driver manages minute to minute
- Dispatcher manages hour to hour
- Supervisor manages day to day
- Operations manager manages week to week
- District manager manages month to month
- Area manager manages quarter to quarter
- Regional VP manages year to year
- Executive team focuses on a 3 year plan

*Everybody wants to get better...
But nobody wants to change*

*We need to change daily behaviour, re-evaluate
behaviour & strive to set best standards*

Planning for Change: How Do We Get Better?

Operational model leads to:

- The right type of trucks
- Technology
- Labour/supervisory competency
- Maintenance standards
- Procedures that lead to safety culture outcome



Priorities

Investments in:

- Safety – essential & translates into our community & organization
- Training, role definition & responsibility
- Maintenance programs & systems

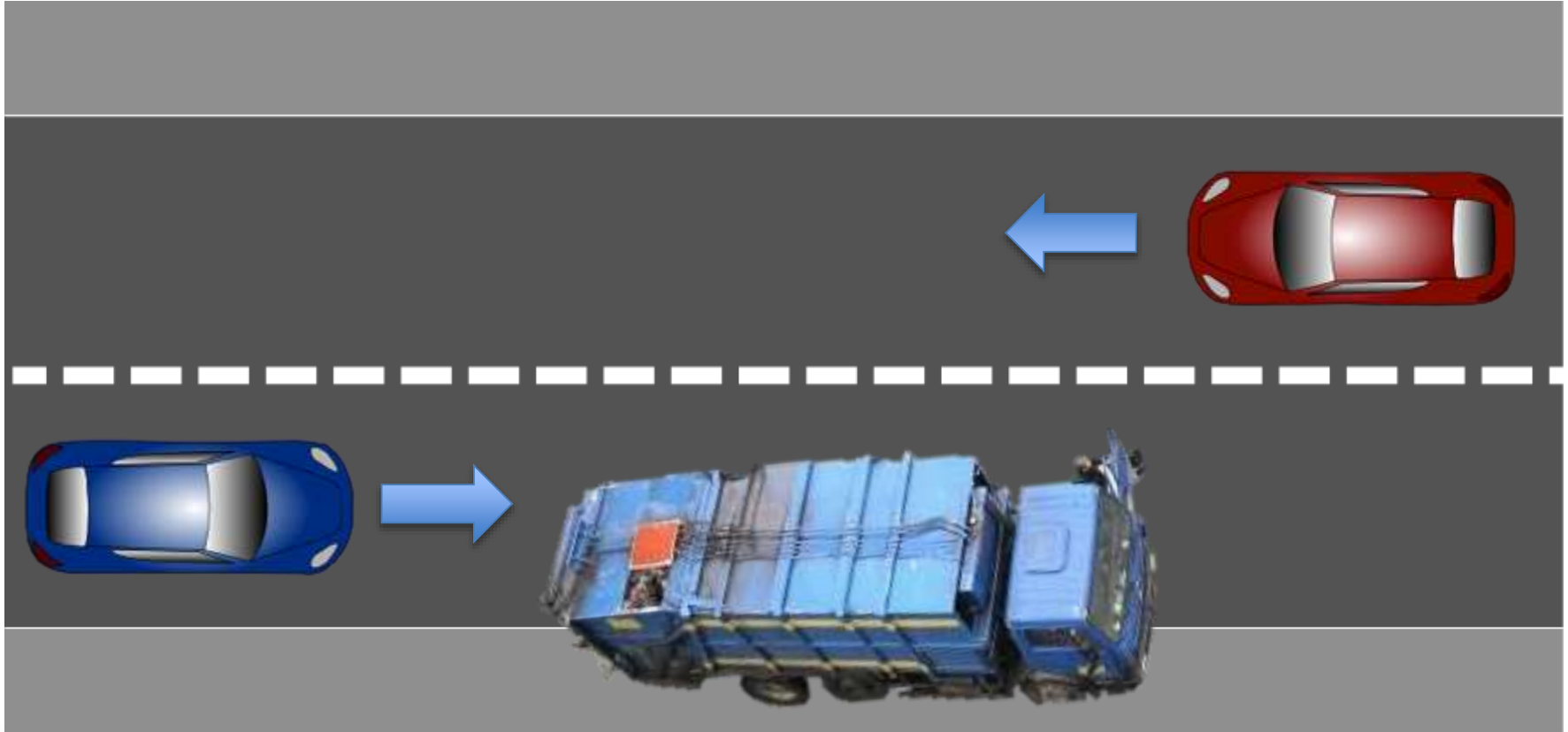
Equipment: Present & Future

- Present
 - Rear-loader has been king
 - Most ubiquitous & productive curbside vehicle in N.A.
- Prediction: Rear-loader's days as industry mainstay are over
- New direction focused on:
 - Enhanced operator safety
 - Right piece of equipment for the right job
 - Automation – infrastructure dependent
 - Compressed Natural Gas (CNG) – but be careful!



End of an era for the rear loader?

Equipment: Rear-loaders Put Drivers In Harm's Way



Quick-view on Rear-loaders

- Pros
 - Productive; dependable; less moving parts
 - Adaptable for changing waste streams
 - Capital & operating costs lower than the options
- Considerations
 - Safety issues
 - WSIB: rear-loader is a young-person's game

Equipment: Automated Side-loader (ASL) Styles



Automated Side-loaders: more productive than ever before but infrastructure-dependent



Automated systems for single & 2-stream

Quick-View on ASL Trucks

- Pros

- ASL comes in single or co-collection form; based on:
 - waste stream splits
 - distance to transfer/landfill/processing
 - whether multiple streams means multiple tip facilities

- Considerations

- Ergonomic constraints: driving ahead & looking behind at all times/split attention
- Little to no opportunity to handle bulky items
- Need for “chaser” truck

Equipment: Other Automated Options – “Curotto-Can”



Single or 2-stream trucks; front box can split longitudinally to accommodate different streams



Quick-view on “Currotto-Can” Automation

- Pros

- High productivity
- Can pick up carts & manual loads
- All activity takes place in front of driver position & on curbside with truck between public & driver
- Driver in cab; eyes forward
- Ease of overflow & bulky item loading

- Considerations

- Higher capital cost





Powered by Compressed Natural Gas

Progressive's Waste Fleet

4987

On-road vehicles



826

Post-collection vehicles



Progressives' CNG Waste Fleet



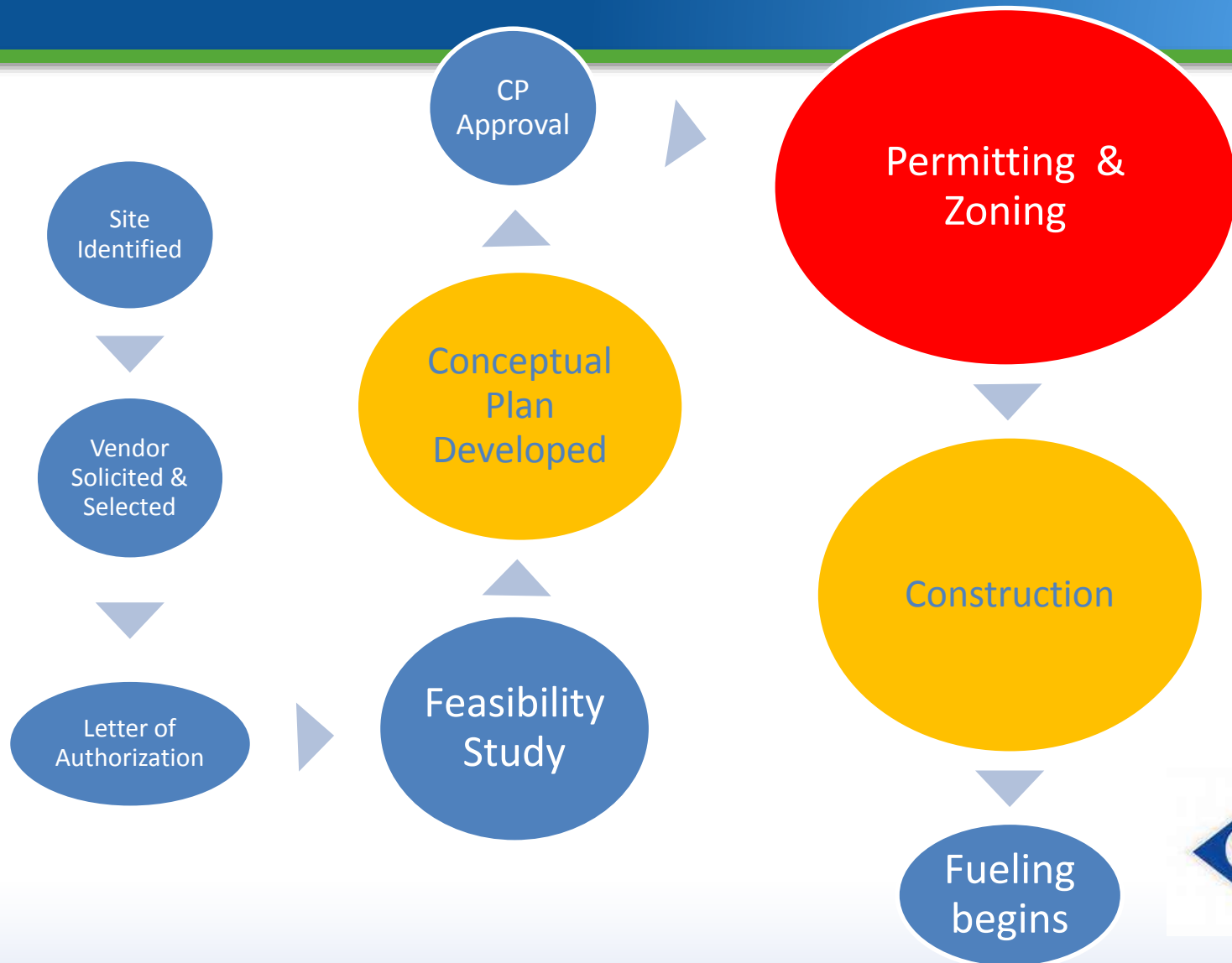
391

CNG powered trucks *

Current	
Vancouver, BC 90 units	St Louis, MO (Bridgeton) 12 units (adding 18 in 2014)
Barrie, ON (Simcoe) 90 units (adding 20 in 2014)	Montreal (Laval) PQ 30 units
Dallas, TX (expanding) 12 units (adding 11 in 2014)	Tampa 44 units (add 4 in 2014)
Haltom City, TX 32 units	McKinney, TX Adding 25 units in 2014
New Orleans (Bridge City) 12 units (adding 18 in 2014)	Pompano Beach, FL 11 units

*2014

CNG Sites & Future Planning



Average lead time is 12 months – start to finish

CNG: Siting to Start-up (1)



Trenching



Rebar section for compressor stations



Concrete pad



Slow-fill fueling standpipes

CNG: Siting to Start-up (2)



In-ground pipeworks



Finished standpipes



Compressor arrives on skids



Finished compressor

CNG: Siting to Start-up (3)

Finished CNG system



Dryers remove moisture from CNG system

Top, Bubble & Cab Mounts

Compressed natural fuel tank
on top



Compressed natural fuel tank in tailgate
area; shielding prevents safety concerns

Quick-view: CNG Vehicles



- Pros:
 - CNG onboard tanks becoming more innovative
 - Quieter with lower carbon footprint
- Considerations
 - Cold weather challenges
 - Watch new diesel truck fuel use
 - Some are 30% more efficient than first diesel particulate fuel (DPF) systems (2008)
 - Throws out CNG economics

Summary: Future Predictions

- Rear Loader significance will decline in our industry
- Where there are carts there will be automation
- Safety focus will drive activity in front of operator
- Efficiency will drive special collections to be combined (bulky)
 - Necessitates adaptable truck body design
- Diesel prices will influence CNG inroads, but can all be derailed by taxes & diesel efficiency improvements
- Evolution in cart systems
 - Front-load automated collection, powered by CNG

Your Future RFP Considerations

- Safety
 - Have specific CVOR requirements & stick to them
- Economies of Scale
 - Consider cross-municipal cooperation
 - Optimal equipment usage:
 - 1,200 hh/day urban
 - 500-600 hh/day rural

RFP Tips

- Set performance expectations in RFP & enforce them
- Consider your options
 - 5 stream, dual stream, single stream
 - Weekly, bi-weekly, alternating rotational days

Pre-screen up front to get better contractors:

- Check CVOR
 - Historical performance & safety records
- Check references
- Look for red flags
 - Low price not always best contract

Info is available; find it online or ask for it

When we execute, we win & deliver on the promise

For more information:

George South, Progressive Waste Solutions
Area Manager, Southwest Ontario
george.south@progressivewaste.com
www.progressive.com

Questions



In Summary...



Closing Remarks

Mike Birett

CIF

See You at the Fall 2014 ORW!

*Thank you to ORW
speakers, attendees
& support team*



For More Information

Website: <http://cif.wdo.ca>

Mike Birett – Director, CIF

mbirett@wdo.ca (905) 936-5661

Carrie Nash – Project Manager, CIF

CarrieNash@wdo.ca (519) 858-239

Gary Everett – Project Manager, CIF

Gary@Egroup1.com (519) 533-1939

Alec Scott – Project Manager, CIF

archenv@sympatico.ca (705) 722-0225