

Starting Up Soon...



Welcome Back!



This Afternoon's Agenda

- Obstacles & Opportunities in Optimizing Recycling
- The Power of Policy: Impacts on Diversion, Program Costs & Funding
- *Afternoon Break*
- Discussion - Planning for the Future of Glass Recycling in Ontario
- *Summary & Concluding Remarks*

2015 CIF REOI

Request For Expressions of Interest

Gary Everett
CIF

Key Dates

**Submission
Deadline**

**Friday,
May 8**

**Project
Awards**

**October
2015**

Overview

- Designed to encourage municipalities to undertake new effectiveness & efficiency projects
- Sixth REOI
- 576 projects to date
- 116 million in total project value

Budget Recap by Priority Areas

Priority Areas	Available Funding
System rationalization	\$1,200,000
Projects achieving cost savings	\$2,500,000
BB harmonization	\$300,000
Addressing problematic materials	\$500,000
Centre of Excellence (C of E)	\$965,000
Total Funding Budget	\$5,465,000

What Happened: Applications & Funding Request Highlights

\$40.136M
Total Project Value

\$17.930M
Funding Requested

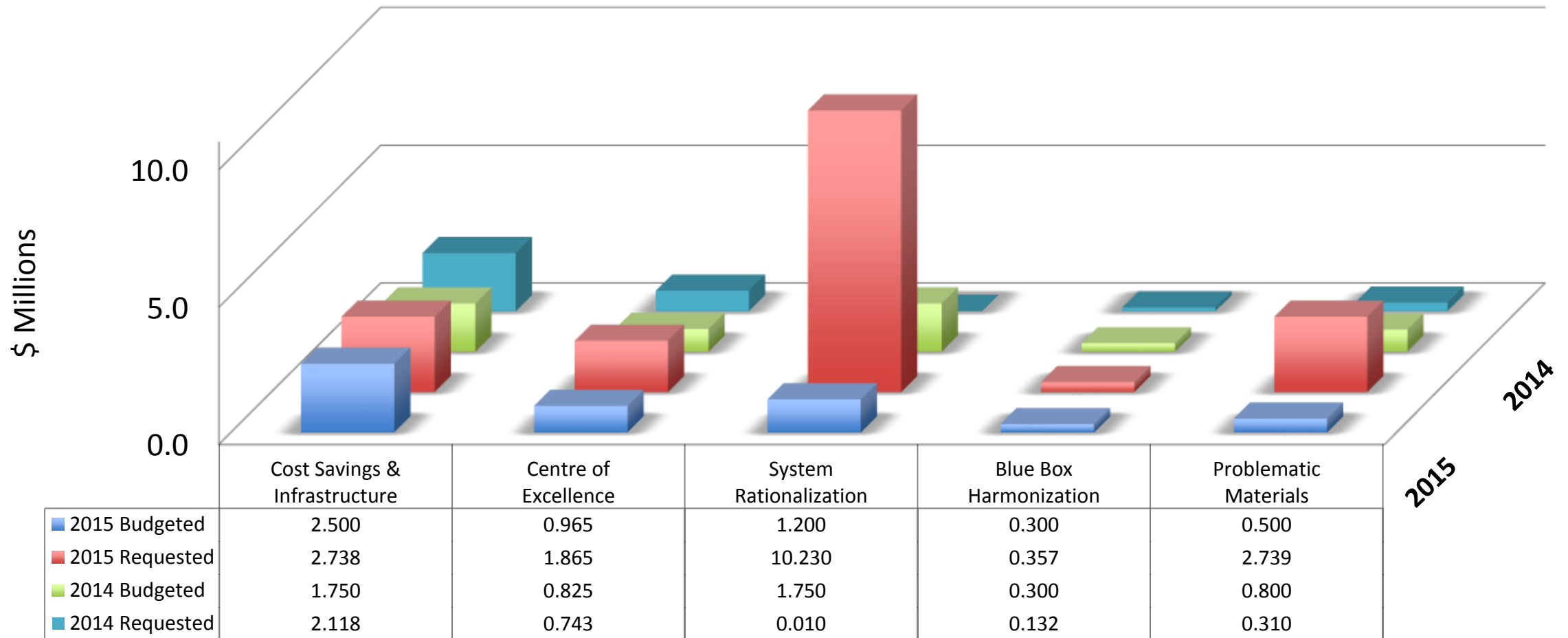
73 Applications Submitted

Trends

- Strong multi-year commitment to cost savings
- C of E interest building especially BP & toolkits
- Large spike in regionalization projects
- Problematic materials projects on the rise



2015 & 2014 REOI Applications vs. Budget



Applications Breakdown

Priority Initiatives	Budget	Subscribed	Difference	Apps	Project Value
System rationalization	\$1,200,000	\$10,230,500	-\$9,030,500	7	\$21,529,000
Projects achieving cost savings	\$2,500,000	\$2,738,401	-\$238,401	16	\$5,137,315
BB harmonization	\$300,000	\$356,752	-\$56,752	4	\$844,040
Addressing problematic materials	\$500,000	\$2,739,475	-\$2,239,475	10	\$10,361,600
Centre of Excellence	\$965,000	\$1,865,067	-\$900,067	36	\$2,264,518
TOTAL	\$5,465,000	\$17,930,195	-\$12,465,195	73	\$40,136,473

Center of Excellence Breakdown

C of E Priorities	Budget	Subscribed	Difference
Development of BP & tool kits	\$200,000	\$366,550	-\$166,550
Materials management research	\$100,000	\$231,862	-\$131,862
RFP/tender support development	\$75,000	\$175,000	-\$100,000
Training initiatives	\$200,000	\$214,000	-\$14,000
Outreach services	\$140,000	\$145,000	-\$5,000
Audits/monitoring & measurement	\$250,000	\$732,655	-\$482,655
TOTAL	\$965,000	\$1,865,067	-\$900,067

What's Next?

- ① All applications & projects reviewed
- ② Applications strengthened, supported, finalized
- ③ Applications evaluated
- ④ CIF Committee meeting June 9th
- ⑤ Resolve the funding gap
- ⑥ Approval/rejection letters sent
- ⑦ Agreements signed
- ⑧ Get started!



Questions

Gary Everett

Gary@Egroup1.com | 519-533-1939

Obstacles & Opportunities in Optimizing Recycling

Gary Everett

CIF

Program Optimization

- Data – the root of optimization efforts
- First 4 Datacall BP Objectives require Data/M Measurement focus

- ▶ Obj. 1: Program Performance Projections and Analysis (13.3% of BP score)
- ▶ Obj. 2: Efficiency Assessments (13.3% of BP score)
- ▶ Obj. 3: System Optimization Initiatives (6.7% of BP score)
- ▶ Obj. 4: Program Performance Outcomes (13.3% of BP score)?

CIF – 737 Density Toolkit

- Monitor your performance
 - Meet standards
- Indicators/red flags
 - Investigate when below the standard

Material	Fibre + OCC			Fibre No OCC			OCC		
	Average			Average			Average		
Bin Size yd ³	t/load	kg/m ³	t/m ³	t/load	kg/m ³	t/m ³	t/load	kg/m ³	t/m ³
20	1.22	83.10	0.08				0.61	39.10	0.04
compacted 20									
30									
compacted 30									
35							0.54	17.20	0.02
compacted 35							2.94	111.70	0.11
40	3.36	106.90	0.11	3.36	110.60	0.11	1.22	41.60	0.04
compacted 40	5.20	166.90	0.17	4.89	198.91	0.16			
Truck Size yd ³									
35				2.41	93.20	0.09			
compacted 35									

Two Approaches

- John Giles, City of Kingston
 - Kingston MRF: How Big is Big Enough?
 - What size MRF is the right size MRF
 - How do I determine this?
- Peter Kalogerakos, The Region of Peel
 - How to Use Technology to Measure Diversion Performance – RFID Integration with Onboard Weigh Scales
 - What is going on in MR buildings?
 - How will I know my efforts improve performance?
 - Do I need to change my policies within this sector?



Kingston MRF: How Big is Big Enough?

CIF Project # 817.2 – Kingston Optimization Study Analysis

John Giles, Solid Waste Manager
City of Kingston

Project Highlights

- Project goal
 - Confirm our role as a regional MRF within Eastern Ontario
- Anticipated Impacts
 - Reduced processing costs for stakeholders
 - Increased diversion rates – expanded list of materials
- More information:
 - John Giles: jgiles@cityofkingston.ca
 - Heather Roberts: hroberts@cityofkingston.ca
 - www.cityofkingston.ca

Why this Project?

- We needed to decide what to do with our MRF
 - Upgrade current facility
 - Build new – what size?



Exploring Options

- In order to decide, needed to know
 - Viability to act as regional hub
 - Determine tonnes needed for each MRF scenario



Project Steps

- Review MIPC Study
 - Apply local analysis
- Municipal data collection, interest & engagement
- Technical plan & business case development



where history and innovation thrive

Request for Proposal

F31-PWS-SW-2014-03

**Consulting Engineering Services
for a Regional Material Recovery Facility Study**

Requesting Municipal Input

- 49 of 67 municipalities responded – 73%
- Challenges/quirks/unexpected issues
 - Some responded to confirm they are “*discussing options for regional optimization*” – a Datacall Best Practices question
 - Some responded to “*stay in the loop*” – responses are non-committal



Reviewing the MIPC Study

- Option 1 – new MRF – not an upgrade of the existing MRF
- Modeled single stream processing – not dual stream
- Assumed private MRFs would convert to transfer stations



Critical Appraisal of Available Material

- MIPC study suggested 35,000 tpy available in wasteshed
- Results of Municipal Data Collection, Interest & Engagement
 1. 22,600 tpy from municipalities expressing interest
 - excluding 2 largest – not likely to participate
 2. 2,100 tpy from municipalities within 100 km
 - “maybe” interested or did not respond
 3. 25,000 tpy potentially available



Technical Analysis & Planning

- Technical Plan & Business Case
 - Costs for 15,000 & 25,000 tpy single & dual stream MRFs, as rebuilds & greenfields
- Results
 - Dual stream MRFs are least expensive
 - Upgrade of existing facility could accommodate up to 15,000 tpy in dual stream system
 - >15,000 tpy would require additions to building



Financial Analysis

- Projected operating costs
 - Lower in all MRF scenarios
- Capital costs
 - Capital cost to upgrade to 15,000 tpy dual-stream MRF
 - total costs about same as current annual costs
 - Minimum tonnage needed in a 25,000 tpy design
 - to keep unit costs at current level, will be established
- Lesson learned: Make sure you consider total costs
 - Capital + operating
 - Consider overbuilding, but know tonnage required to meet current costs
 - anything more & you are in the black



Where Are We At Today?

- Final Regional MRF Study Report
 - Being prepared by HDR
- EITP Report
 - Introduction & recommendations report being prepared by staff
 - Will include the HDR report
- EITP Committee
 - Consider staff & consultant reports
 - Decide on “Go/No Go” recommendation to Council



Next Steps

- Municipalities will be contacted to advise Council's decision
- If decision is to Go
 - Seek long-term processing commitments to justify capital expenditure
- Governance model
 - Processing & marketing at cost
 - Plus an administrative overhead
 - Share risks & rewards



Key Message & Take-away

- Bigger is better...unit costs are lower for larger MRFs
 - If you can secure the tonnage
- 100% EPR – increases risk for capital investment
 - Know your costs & think like a private sector MRF
 - Securing tonnage may be difficult
- Advantage
 - Not driven by profit margins
 - We are planning long-term



Is This Approach a Better Or Best Practice?

- Regional MRFs are a better practice
 - Reduced unit costs
 - Long-term commitments needed
- Other issues to consider
 - Local employment
 - Private MRF competition
 - Regionalization is happening



How to Use Technology to Measure Diversion Performance

CIF Project #328

“RFID Integration with Onboard Weigh Scales”

Peter Kalogerakos
Region of Peel

Project Highlights

- Project goal:
 - Increase accuracy of diversion performance measurement
 - Provide regular feedback to multi-res (MR) property managers (PMs) & superintendents (Supers) through the use of report cards
- Anticipated Impacts: Encourage PMs & Supers to support/facilitate recycling to increase recycling capture rates & resource recovery
- More information:
 - peter.kalogerakos@peelregion.ca
 - www.peelregion.ca/waste

Problem Statement

- Peel Region is 25% MR
- MR lags behind single family diversion performance
 - How do we encourage this sector to recycle more?
- No way to know how much material is coming out of each building specifically
- Some BP have been implemented, but how do we get to the next level?

Project Steps

- Develop, issue & award RFP
- Pilot-test system: 6 months; 20 buildings
 - Send out Report Cards
- Transition to full scale implementation: 6 months to 1 year
- Analyze collection data to determine trends including average generation rates: 1 year
- Assess the potential for user-pay program & seek Council approval



RFID Waste Collection Reporting System

RFID system components include:

- RFID tags on bins
- On-truck hardware & software
- WiFi equipment at transfer station
- RFID back office software (Radiobin)



RFID Tags

- Attached to metal front-end containers & plastic carts
- Programmed using handheld terminal computer to associate with container & service location



Truck Hardware

- Reader antenna detect the container's RFID tag
- Antenna on windshield in cab of truck (front-end truck) or over rear packer hopper

Truck Software

- Records associated data
 - e.g., volume of bin, weight of material & service location
- Computer touch screen displays data & allows driver input where required



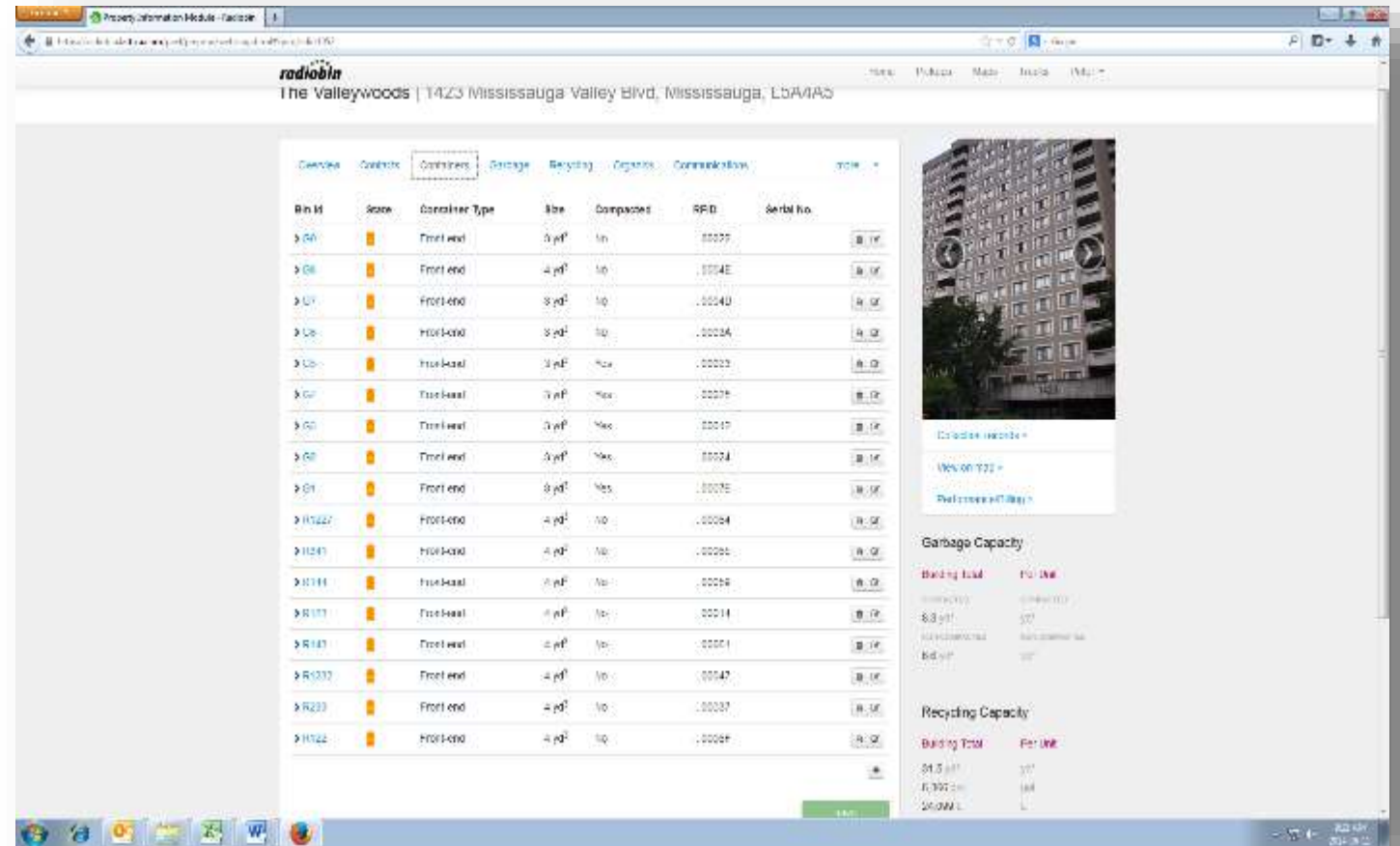
Data Transfer/Communication

- WiFi equipment located near weighscale detects collection vehicle
- Day's data is transferred to main server as collection vehicle is weighed
- Moving to real time data communication
 - Handhelds & collection data



Back Office Software (Radiobin) - 1

- Main software package includes:
 - Database with property data, bin data & collection records
 - Detailed reporting & analysis features
 - Mapping capabilities



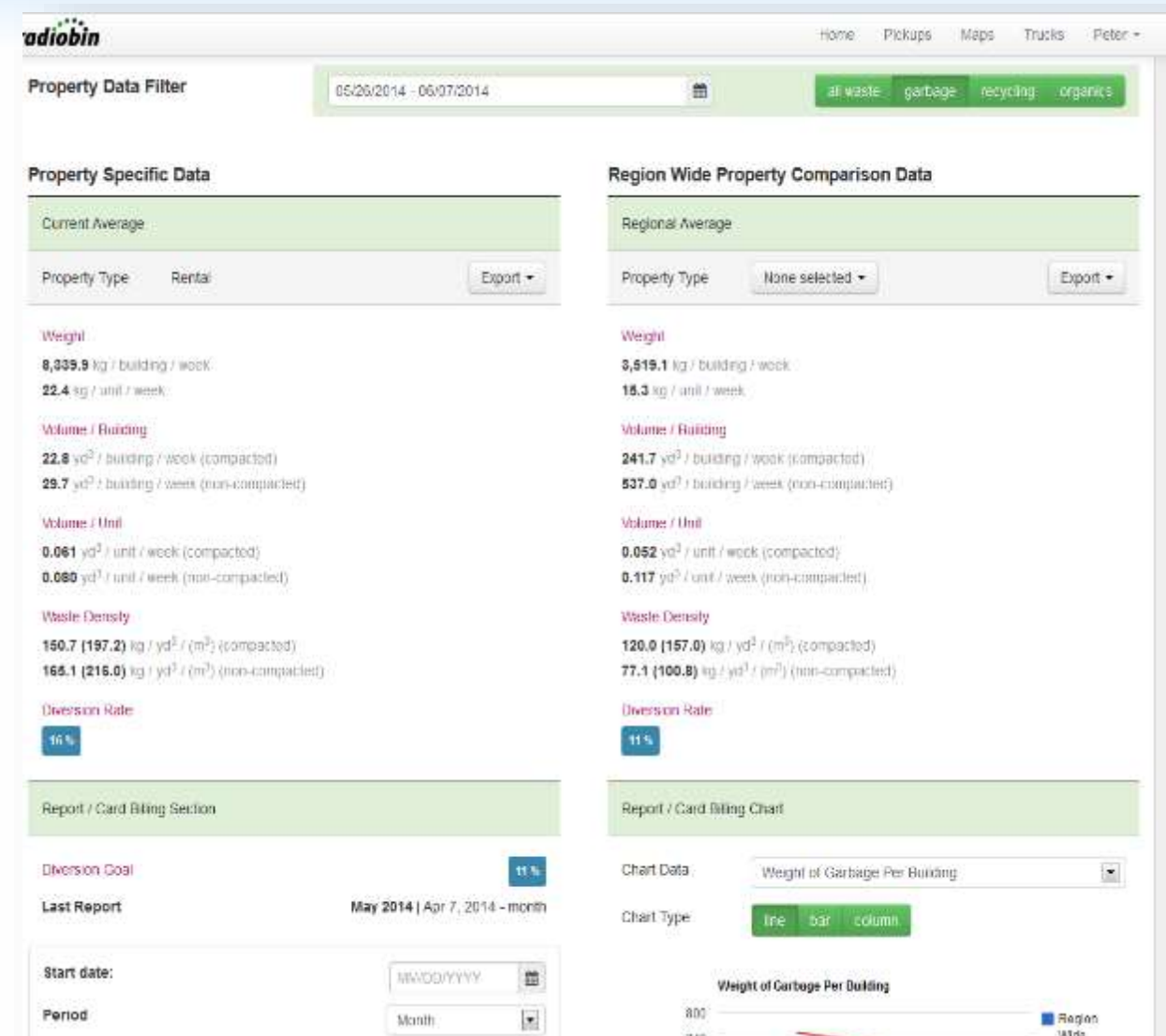
Back Office Software (Radiobin) - 2

System Output

- System can generate reports showing:
 - Weight of material collected (kg)
 - Volume of material collected (yd3)
 - Waste density (kg/yd3)
 - Waste generation rate (kg/unit/week)
 - Diversion rate (%)
 - Comparisons to similar buildings
 - Comparisons by geographic area etc.

Report Card

- Generated by system
- Details waste collection services & lists key system outputs



Monthly Report Card

Waste Management Report Card

7795 Torbram Rd, Brampton, ON



Minfo Properties
Brampton On

Property Address: [REDACTED]
Brampton ON [REDACTED]
Number of Units: 323
Bin Inventory: R - 1x3yd³
G - 1x3yd³, 4x3yd³(s), 3x3yd³

Suggested Maximum Limit for Garbage:

49 yd³/week (adjusted uncompacted volume)

Suggested Minimum Recycling Capacity:

23 yd³/week

Resource Recovery Rate Goal:

24%

Waste Collection Service Summary: Sep 8 - Oct 5, 2014 Reporting Period

- Your average resource recovery rate was 22.0%
- Your Property was above the average resource recovery rate of all properties (13.0%) and above all Rental properties (13.4%)
- Your Property recycled 2446 kg (approx. 2.4 tonnes) of material
- By recycling during this reporting period it is estimated that your property saved 25 trees; if your property reached the resource recovery goal you could have saved 27 trees.

Week	Volume of Material Collected (yd ³)			Resource Recovery Rate (based on weight) *
	Compacted Garbage	Uncompacted Garbage	Recycling	
Sep 8 - 14, 2014	9 yd ³	20 yd ³	19 yd ³	26%
Your property was 116 yd ³ under the suggested limit for garbage. Well done.				
Sep 15 - 21, 2014	9 yd ³	20 yd ³	16 yd ³	19%
Your property was 116 yd ³ under the suggested limit for garbage. Well done.				
Sep 22 - 28, 2014	12 yd ³	14 yd ³	19 yd ³	25%
Your property was 112 yd ³ under the suggested limit for garbage. Well done.				
Sep 29 - Oct 5, 2014	9 yd ³	25 yd ³	19 yd ³	20%
Your property was 53 yd ³ under the suggested limit for garbage. Well done.				

Note: Resource Recovery Rate is the amount of material collected for recycling compared to the total amount of material collected, expressed as a percentage

Recycling Tips

- Make recycling as convenient as possible for residents/tenants
- Promote recycling in newsletters and common areas
- Recruit a volunteer to champion the recycling program and provide incentives to recycle

If you need more information or have any questions about this report card or the Region's waste management programs or services, call 905-791-7800, extension 4914. Visit our website at peelregion.ca/waste.

Quarterly Report Card

Waste Management Report Card

7795 Torbram Rd, Brampton, ON



Minto Properties
 Brampton On

Property Address: [REDACTED]
 Number of Units: 323
 Bin Inventory: B - 60yd³
 G - 20yd³, 60yd³(1), 20yd³

Suggested Maximum Limit for Garbage:

49 yd³/week (adjusted uncompacted volume)

Suggested Minimum Recycling Capacity:

23 yd²/week

Resource Recovery Rate Goal:

246

Waste Collection Service Summary: Jun 30 - Sep 28, 2014 Reporting Period

 Recycling Benefits

- Your average resource recovery rate was 18.0%
- Your Property was above the average resource recovery rate of all properties (12.9%) and above all Rental properties (10.2%).
- Your Property recycled 7185 kg (approx. 7.2 tonnes) of material
- By recycling during this reporting period it is estimated that your property saved 74 trees: if your property reached the resource recovery goal you could have saved 94 trees

Recycling Tips

- Make recycling as convenient as possible for residents/tenants
- Promote recycling in newsletters and common areas
- Recruit a volunteer to champion the recycling program and provide incentives to recycle

Note: Resource Recovery Rate is the amount of material collected for recycling compared to the total amount of material collected, expressed as a percentage

If you need more information or have any questions about this report card or the Region's waste management programs or services, call 905-791-7800, extension 4914. Visit our website at peelregion.ca/waste.

So What?

- System offers unprecedented information to Region waste staff, building PMs, superintendents & residents - knowledge is power!
- Report Cards anticipated to incent building management to engage in recycling
- By adding estimated costs to Report Cards, PMs will be better prepared for user pay system
- Buildings can be ranked on diversion performance
 - Will allow staff to target specific buildings & provide program support



Diversion Impacts

- Current diversion rate is 13%; capture rate is 41%
- Anticipated impacts of current Reports Cards:
 - Increase Diversion Rate to 16-18%, with capture rates increasing to 50-60%
 - If estimated costs added to Report Cards, diversion rates may increase slightly
 - To achieve diversion rate goal currently set in system (24%), user pay system would likely have to be implemented
- Diversion rates linked to generation rates:
 - Audit data: 10.84 kg/unit/wk of garbage; 1.79 kg/unit/wk of recycling
 - 24% diversion goal = 9.39 kg/unit/wk of garbage; 3.24 kg/unit/wk of recycling
 - Tonnage impact= from 8,700 to 15,700 tonnes (80% increase)

Project Costs

- Project costs include: hardware, software, installations & support & maintenance
- Pilot Project: \$20,000/building
- Full Scale Implementation: \$900/building or \$6.50/MR unit
- Support & Maintenance (5 years): \$170/building annually



Key Learnings

- Develop agreement with collection contractors of the requirements of the project well before the project start
- Even with meticulous specifications, some items will have to be tweaked or added
- When dealing with technology, expect the unexpected
- Proper installation & association of tags is critical
 - system only as good as accuracy of bin data
- Be aware of limitations of having only a select number of trucks equipped with RFID hardware

Next Steps

- *May 2015* – Full scale implementation approved & underway
- *June 2015* – Hiring 10 contract staff for installation & data collection
 - 5 teams of 2
- *June to December 2015* – Tag installations; truck hardware installations
- *January to March 2016* – Data collection period
- *April/May 2016* – Send out initial Region-wide Report Cards
- *January 2016 to May 2017* – Monitor & analyze collection data to determine User Pay impacts
- *Fall 2017* – Report back to Council on results to date of RFID system & user pay options



CIF

CONTINUOUS
IMPROVEMENT FUND



Power of Policy: Impacts on Diversion & Program Costs

Dave Douglas

VisionQuest Environmental Strategies Corp.

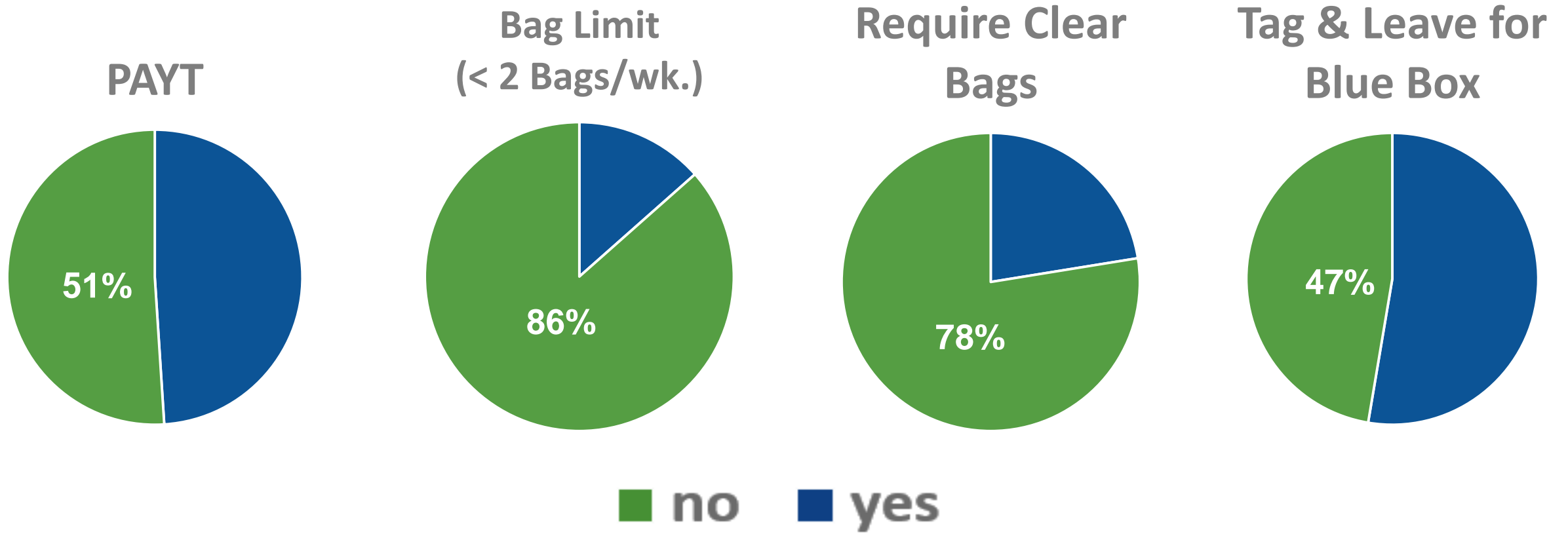
BP– Objective (6.7% BP scores)

■ Program policy BP

- PAYT
- Bag limit
- Clear Bags
- Tag & leave
- Free or subsidized BB
- Greater frequency of recycling collections
- Supervised depots
- Incentives & rewards



Program Policy BP – Focus for Today



Coming Soon: Project #748

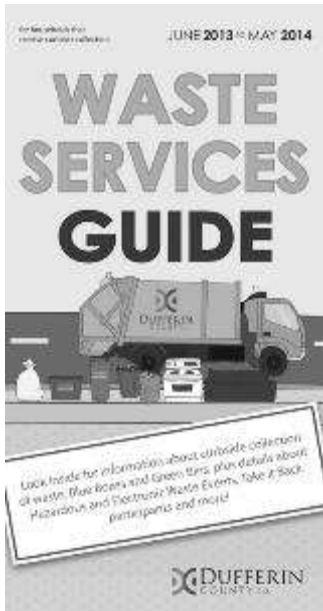
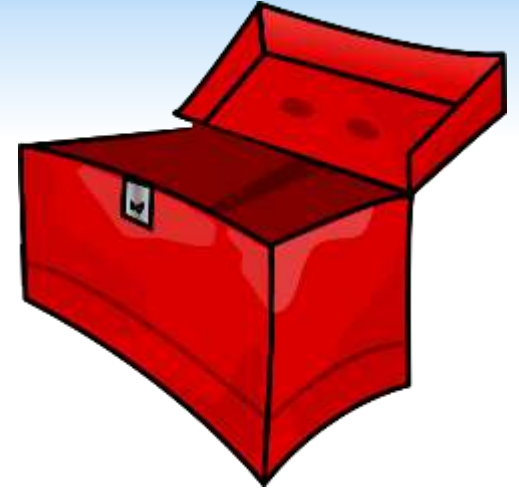
How To Implement a Clear Bag (Garbage) Collection Program Toolkit -The Ontario Experience

Project Goal

Provide Ontario municipal waste managers with clear roadmap that lays out a step-by-step strategy to develop, promote & launch a residential clear bag (garbage) collection and/or drop off program



A Quick Look Inside the Toolbox



Speakers

- Jeffrey Fletcher, The Blue Mountains
 - Bag limits & PAYT policies: Do they Affect Diversion?
- Carly Burt, Niagara Region
 - How To Actively Enforce A 'Tag & Leave' Program For Unacceptable Blue & Grey Box Set-Outs
- Claudia Marsales, City of Markham
 - How To Successfully Implement A Clear Bag Program & Increase Diversion
- Mike Ursu, Region of Waterloo
 - How To Manage Contamination Rates By Managing Your Collection Contractor



Bag Limits & PAYT Policies: Do They Affect Diversion?

Jeffery Fletcher
The Blue Mountains

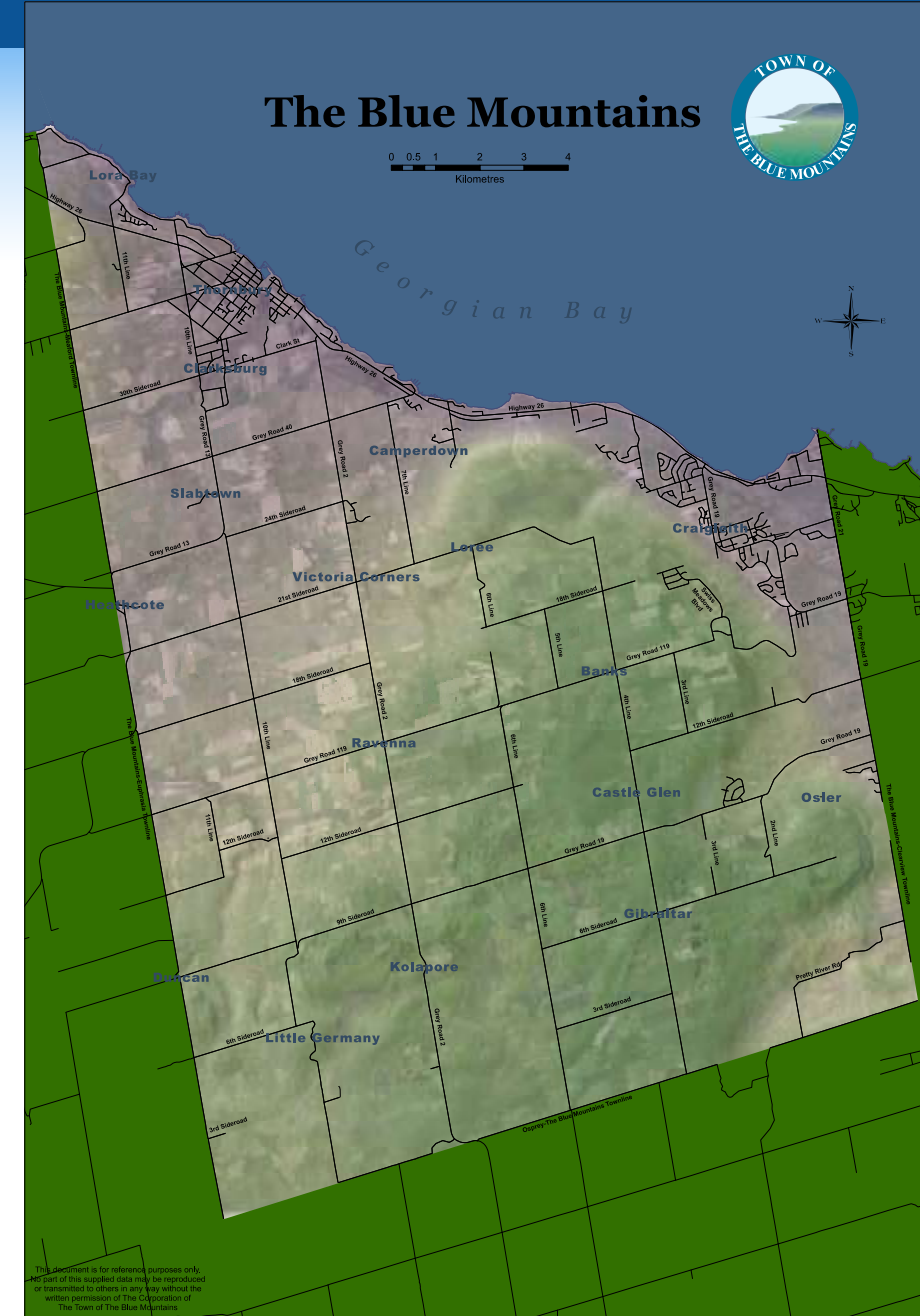
Project Highlights

- Project Goal: Sustained Behaviour Change
- Results: Blue box & composting participation
- Results: Extended landfill life through diversion of materials
- More information:
 - **e:** jfletcher@thebluemountains.ca
 - **t:** TBM Recycles@Mrwastewatcher
 - **w:** www.thebluemountains.ca



Birth of a Program

- Amalgamation “hang-over”
 - New population count & increasing
 - Discrepancy in service & regulatory compliance
- Status
 - 12 Years of landfill life/space
 - Generating 3,800 MT of residential waste
 - 480 tonnes of depot BB - 11% diversion rate
 - 5,350 hh, projecting 9,097 by 2016
 - 30% of hh are condos



Solution

- Public Committee 2002 reviews issue & acted as champions
 - Research indicated PAYT as option
 - New service plan – curbside BB, backyard composting, yard waste composting, etc.
 - Equitable condo collection
 - New program launched 2003



New Program Start in October 2003

- Limiting setout forces recycling but also forms new positive behaviour
- Bag tags & equivalent for condos
 - Single family
 - 1-bag limit, second bag tagged, no third bag
 - Condos
 - FEL sized to number of units (0.2 yd/unit)
 - Extra lifts pay contractor directly



The Blue Mountains Waste Management Co-ordinator Jeff Fletcher displays the new blue and grey bins that are being delivered to each home and business as the town readies for the September 29 start of its new curbside recycling collection program. Courier-Herald Photo

Communicating with Residents

- Launched Blue & Grey Box program
 - Included program guide, free token tag, placed between boxes
- Information sessions
- Fall Fair
- Newspaper
- Website?



Administratively-Speaking

- Coordinated points of purchase with local retailers
 - No cost to distribute
 - Minimized administrative work
 - no free tag allotment
- Complaints
 - Right to access 52 weeks of service – tax rebate
 - “My house can’t do this” & “I didn’t know”
 - Roadside dumping

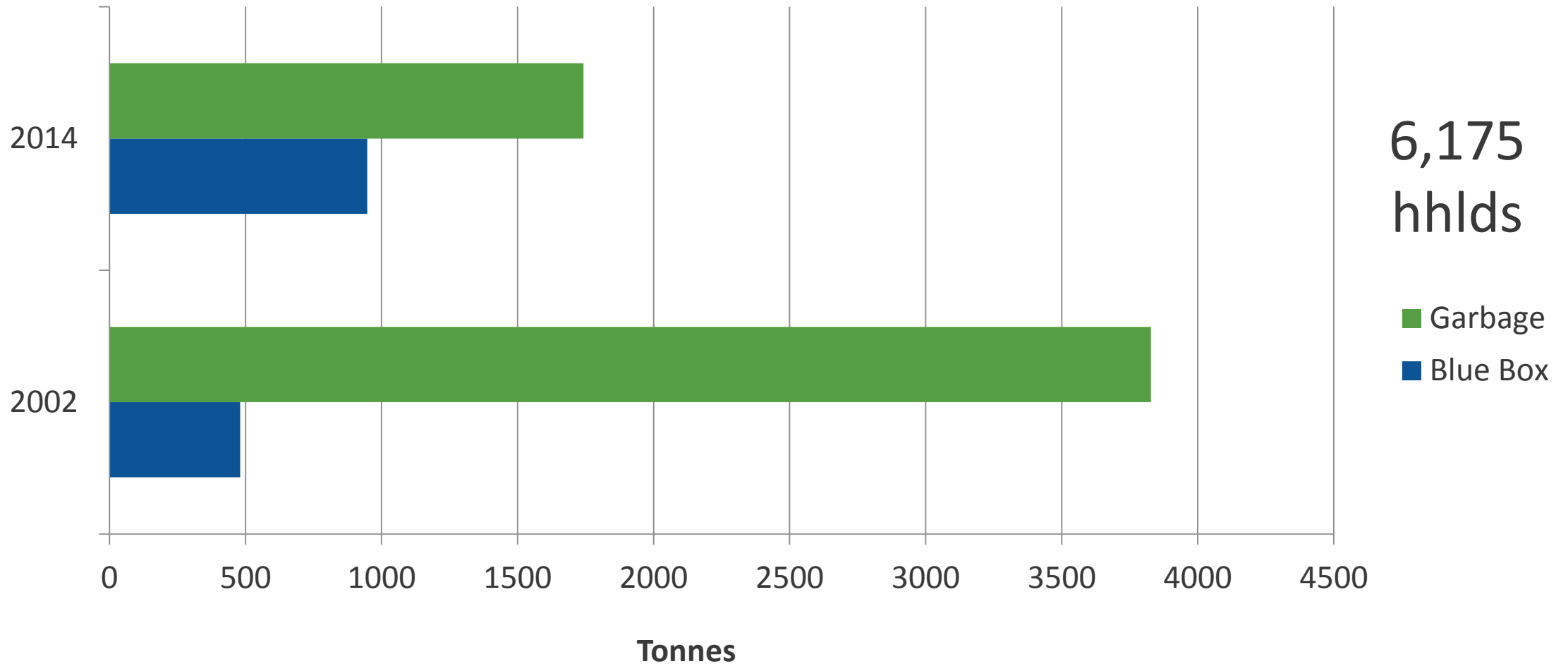


Collectors Become Enforcement

- No full-time by-law enforcement
- Compromise
 - Balancing enforcement & community appearance
- Actively monitoring set out
 - Spot enforcement of violations
 - Pick-up & leave warning – write letter
 - Fees & charges for clean-up
 - Enforcement blitz with municipal staff

NON-COMPLIANCE NOTICE: SOLID WASTE COLLECTION BYLAW (#16/2003)	
Description of offence:	Date / Time
Non-compliance may result in a \$400.00 fine. See opposite side of sheet for more information.	
Notice Issuer:	Notice 2013-TBM-

Comparison of Pre & Post Bag Limit - 2002 vs. 2014



Our 4 Crucial Steps to Bag Limit & PAYT Program

- Council approval
 - Get them to take ownership of process
- Connect with residents
 - At local events & newspaper
- Administration & Enforcement
 - Keep it simple
- Be ready & willing to take complaints
 - Expect some bumps in the road
 - **It is worth it!**





How To Actively Enforce A 'Tag & Leave' Program For Unacceptable Blue & Grey Box Set Outs

Carly Burt
Niagara Region

Project Highlights

- Project goal:
 - Address improper sorting of plastic film & ensure residents aware of acceptable materials
 - Ensure collection contractor compliance
- Impacts:
 - Reduce congestion & jam-ups on container line & residue rates (%)
 - Reduce daily downtime & maintenance at MRF (time)
 - Improve relationship with contractor through good contract oversight
- For more information:
 - carly.burt@niagararegion.ca | www.niagararegion.ca

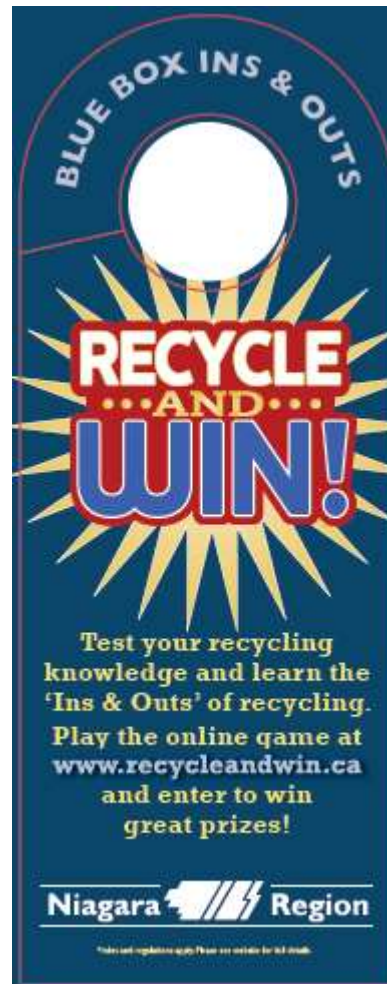
A Costly Problem

- MRF maintenance staff spend up to 10 hours per week repairing & cleaning equipment due to loose film
- Costs Niagara taxpayers ~\$85 K each year
 - Reallocation of manual labour to sort plastic bags & outer-wrap
 - Concentrate on other more valuable commodities: ~\$72K each year
 - Maintenance costs: ~\$10K/year
 - Collection of more plastic bags/outer-wrap will increase revenue: ~\$2,500/year

Solution

Tactic	Audience	Message
P&E Campaign – Ins & Outs	Residents	Inform residents of expanded list of materials
P&E Campaign – Odd Couple	Residents	Plastic bags & stretchy recyclable film into grey box
Training for collection crew	Contractor	Educate frontline collection staff on what is acceptable at the curb
Pre & Post Curbside Audits	Contractor	Region staff follow up with contractor
Contractor Blitzes	Residents	Contractor properly tag non-compliant material set out by residents

P&E Campaign – Blue Box Ins & Outs (1)



P&E Campaign – Blue Box Ins & Outs (2)



Niagara Region
Building Community. Building Lives.

OOPS!

You have placed an unacceptable item in your Blue Box

■ **Other unaccepted items:** Plastic bags and film/outer-wrap: ■

Only clean containers and plastic packaging are accepted in the Blue Box. Other items such as plastic toys, children's pools, lawn edging, hangers, water filters, broom handles, ice cube trays, dish racks and VHS tapes etc. are **NOT** accepted in Niagara's recycling program.

Although grocery bags and recyclable film/outer-wrap are made of plastic, these materials must be placed in the **Grey Box**. Plastic bags and film/outer-wrap can be recovered from the Grey Box sorting line much easier than from the Blue Box sorting line where it can become contaminated with food residue.

Place your plastic bags and recyclable film/outer-wrap together inside of one plastic bag, tie the handles together and then place it in the Grey Box for curbside pick-up.

Visit the "Where Does It Go?" search tool at www.niagararegion.ca for more information about how to properly dispose your materials.

Rethink YOUR Waste

Waste Info-Line
905-356-4141 or 1-800-594-5542
Monday through Friday 8 a.m. - 4:30 p.m.
www.niagararegion.ca



I'm a Gold Star Recycler

CONGRATULATIONS!
YOU ARE A GOLD STAR RECYCLER!

Your household was randomly selected to be part of a visual recycling audit. Results show you're one of the best in Niagara!

Niagara Region

P&E Campaign – Odd Couple



Engagement with Collection Contractor

- Regular meetings to confirm contract expectations
- Q&A page developed for contractor staff
 - Reinforced expectations for unacceptable items
- Shared with collection staff:
 - Campaign promo materials & new tags
 - Recycle & Win Game – asked all contractor staff to participate
 - Results of tipping floor & curbside visual audits
 - Informational display boards & posters



Pre & Post Curbside Audit – No Tagging



40 Diana Dr. – hanger, film,
rubber boots in blue box



40 Diana Dr. – all items collected

Pre & Post Curbside Audit – Properly Tagged & Left Behind



Example of Pre & Post Curbside Audit Summary

TRUCK 1117 - Henry St., Pine St., Bianca Dr., Diana Dr., Loretta Dr. –234 homes

- 31 homes did not set out material
- 174 homes had acceptable items in recycling
- 29 homes had unacceptable items in recycling
 - 1 had unacceptable items left behind (loose on ground, not placed back in container), no tag to indicate why
 - 15 had non-compliant material collected
 - 13 had no post route photo available; but there was nothing recorded on the driver's run sheet; assumption that non-compliant items were collected-to verify
- 40/234 homes had film properly packed in bags & placed in grey box
- Some drivers were not tagging all materials regularly

Contractor Communication & Blitzes

- Results of the audits are provided to the collection contractor
- Contractor volunteered to complete quarterly blitzes
- Blitz objective: improve driver tagging & increase improvement in set out
 - To date contractor has completed 4 blitzes
 - Blitz shows an average of 58% of homes improved with tagging
 - Will be completed quarterly for the duration of the contract
 - Contractor discusses results with staff at staff meetings

Blitz Results e.g.: Weekly Totals Secondary Blitz March & April 2015

- 2 weeks after being tagged:
 - 58.3% improved; 27.8% did not improve
 - 4.3% were better than before but still had film in BB; 2.2% were worse
 - 7.4% did not set out recycling for secondary blitz (vacation time expected)

# of Homes	Tagged or Not Collected: First Blitz	Improved From First Blitz & Collected	No Improvement From First Blitz	Improved From First Blitz But Still Not Collectable	Tagged First Collection & Not Collected	Not Out for Secondary Blitz
Monday	41	25	12	4	0	0
Tuesday	15	12	1	1	0	1
Wednesday	49	33	6	2	0	8
Thursday	92	48	37	1	1	5
Friday	33	16	8	2	4	3
Weekly Totals	230	134	64	10	5	17
Percentages		58.3%	27.8%	4.3%	2.2%	7.4%

Was it Successful? Audit Results

- Odd Couple Campaign
 - Decrease of loose plastic film in BB
 - Increase in grey box
- Blue Box Ins & Outs Campaign
 - Overall 15.7% drop in contamination in BB
 - Observation
 - decrease in number of processing difficulties at MRF
 - reduced residue resulting from container stream sorting

Was it Successful? Working with the Contractor

- Sharing information
 - Region provides audits results
 - Contractor provides blitz results
- Driver compliance
 - Contractor follows up with staff
 - Ongoing struggle - audits vary from driver to driver
 - Warning letters issued for repeat non-compliance
- Consistent tagging has assisted residents in understanding message

At the MRF

- Separating bags from container stream does make a difference & is worth the effort
- P&E & contractor tagging led to reduced contamination & daily down-time





How to Successfully Implement a Clear Bag Program & Increase Diversion

Claudia Marsales
City of Markham

Project Highlights - Clear Bag – Getting Started

- Project Goal:
 - Send as little waste as possible to landfill
 - Create programs to reduce, reuse & recycle in community
- Impacts: 2006 Mission Green – launch of Green Bin program
 - Diversion spiked then flat-lined
 - 2012 'Best of the Best' Markham's Roadmap to 80% Diversion
- More information:
 - cmarsales@markham.ca | www.markham.ca

Working Group of Councillors & Staff

Diversion Sub Committee

Deputy Mayor Jack Heath-Chair

Regional Councillor Joe Li

Councillor Valerie Burke

Councillor Logan Kanapathi

Mylene Bezerre, MEAC

Dave Gordon, York Region

Peter Loukes, Director, Environmental Services

Claudia Marsales, Senior Manager

Guests

Councillor Howard Shore

Councillor Alan Ho

Clear Bag Only 1 of Many Initiatives

- Mandatory Material Separation By-law – residential/MR
- Unlimited clear bags for residue – no more limits or tags
- Expanded textile/carpet diversion program
- Zero Waste for Schools Program
- Establish Retail Bag Policy for Markham
 - not moving forward
- Enhanced P&E – increase Social Media
- Reuse depot for renovation materials
- Curbside electronics & battery collection ban
- Establish Spring & Fall clean-up days
- Expanded Fall leaf/yard collection into December – climate change



Clear Bag Budget - \$35 K project

Steps	Audience	Message	Budget
Focus Group Sessions - 2012	Residents	Gage acceptance level & issues	\$8K
Pre-Education	Residents	Info on privacy – Green Bin tips Info on incineration	In house
Retail Plan - consultant	All stores in Markham selling garbage bags	Info	\$10K
Education - stickers	All residential curbside	Info	\$5K
Collection Schedule & annual newsletter	City -wide	All changes plus clear bag – April 2013	Part of annual operating budget
Supply of Clear Bags	Residents	Free samples	Donated

Pre-Education Ads



GREEN BIN TIPS

Do you know you can put these items in a paper, plastic or compostable bag and recycle them in your Green Bin?

Toilet paper rolls | Confidential bills and papers
Shredded paper | Diapers | Feminine hygiene products

If your Green Bin is full, you can put the rest of your organic material in a **clear plastic bag** and place it at the curb beside your Green Bin.

For more information on Markham's Recycling & Waste Program, visit www.markham.ca

Advertisement in local newspaper

In 2013 Collection Schedule December 2012

We Need Your help! New Garbage Bag Requirements

Starting April 30th, 2013 – No more tags or 3 bag limit! Residents can place out an unlimited amount of **non-recyclable** garbage in clear garbage bags every other week. Concerned about privacy?

- Tear or shred confidential papers/bills and place in Green Bin.
- Use a small opaque privacy bag in the clear garbage bag.
- Place the clear bag in a garbage can.

WHY? Markham together with York Region is shifting from land-filling garbage to processing garbage for energy recovery at facilities located in other communities. Clean garbage means clean fuel – free of hazardous and toxic materials. Using clear bags also keeps our collectors safe from potential injury. Clear bags can also be used for overflow organics placed **beside** your Green Bin.



***No More Limits* in Markham – Unlimited Amounts of Properly Separated Material Can Be Placed at the Curb!**

Education Ads

***NEW:* CLEAR BAGS FOR GARBAGE - NO MORE BAG LIMITS**

EFFECTIVE APRIL 30, 2013

- Markham will be eliminating the current 3 bag limit and tag program
- No bag limits for garbage in clear bags
- Dark/Tinted/Coloured/White bags for garbage are not accepted
- Clear bags of garbage containing large amounts of recyclable/compostable material will not be collected
- Up to four small shopping bags are permitted biweekly for privacy items
- Garbage in clear bags can be placed in a garbage can



TIP:

Use less bags,
empty your
household waste
baskets directly
into your clear
garbage bag!

For more information,
visit www.markham.ca

Education

How do I set out my garbage in a Clear Bag for Collection?

Clear Bags
Required April 30

- ✓ Clear bags for garbage cost the same as dark bags
- ✓ Clear bags can be used for excess organics
- ✓ Clear bags can line your green bin



No bag limits for clear bags containing non recyclable/non compostable garbage. Clear bags can also be placed into a garbage can.



No more than 4 small shopping bags of non recyclable/non compostable garbage may be placed out per collection within your clear bag.



No more than 4 small shopping bags of non recyclable/non compostable garbage may be placed directly into a garbage can.

Clear bags and your privacy

Tear or shred personal papers and put in weekly green bin

Diapers and feminine hygiene products
accepted in weekly green bin

Use small bags (shopping) within your clear bag
(up to 4 per collection)

Place your clear bag in a garbage can