Ontario Recycler Workshop

June 9, 2011

9:30 a.m. to ~4:00 p.m.

Ontario Recycler Workshop

Andy Campbell,
Director, CIF

Ontario Recycler Workshop

- Presented by: CIF & partners
  - Waste Diversion Ontario (WDO)
  - Association of Municipalities of Ontario (AMO)
  - City of Toronto
  - Stewardship Ontario (SO)

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Today's Audience

- Approximately 90 people in Barrie
- Expecting 40+ online
- Audience members include:
  - municipal councillors, recycling & waste staff & other staff members
  - stewards
  - industry association representatives
  - program representatives, consultants & other stakeholders

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Today's Program & Housekeeping

Full day session (to ~4:00 p.m.) with program & project updates

- For webcast viewers
  - ❶ sound slider
  - ❷ webcast technical assistance
  - ❸ "Ask a Question"
    - no response via console
    - check email
  - ❹ link to slides & resources

Today's Program: Snapshot…

- Program updates
- Break
- Larger Box Programs
- Multi-Res
- Lunch
- More Multi-Res
- Mid Range Transfer Projects
- Break
- Ontario Blue Box Training Update
- Simcoe County Mobile Education

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CIF Thanks Today's Speakers & Moderators

- Alfred Von Mirbach, REIC Perth
- Anne Boyd, City of London
- Dave Merriman, WDO
- David Pressey, County of Haldimand
- Eleanor McAteer, Toronto Tower Renewal
- Frank Velle, City of Sarnia
- Jerry Biersteker, Waterloo Region
- Marcel Cardinal, City of Timmins
- Michelle Shannon, City of St. Thomas
- Mike Birett, CIF
- Mike Mostow, City of Kenora
- Milena Avramovic, AMO
- Pam Antonio, County of Oxford
- Patricia Paz Soldan, Genivar
- Phil Jensen, Genivar
- Rick Denyes, Stewardship Ontario
- Sherri Tait, Niagara Region
- Sherry Arcaro, Stewardship Ontario
- Steven Jedinak, Durham Region
- Willma Bureau, Simcoe Region

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CIF Update

Andy Campbell, P.Eng.
Director, CIF

Fund Status

- 560 applications to date
  - 2011 REOI - 127 from 74 municipalities $13.7 million
- $28.5 million for 376 approved projects
- $21 million budget left for new projects
- CIF has over 100 projects under review
  - expecting $30 million in new project applications for balance of 2011

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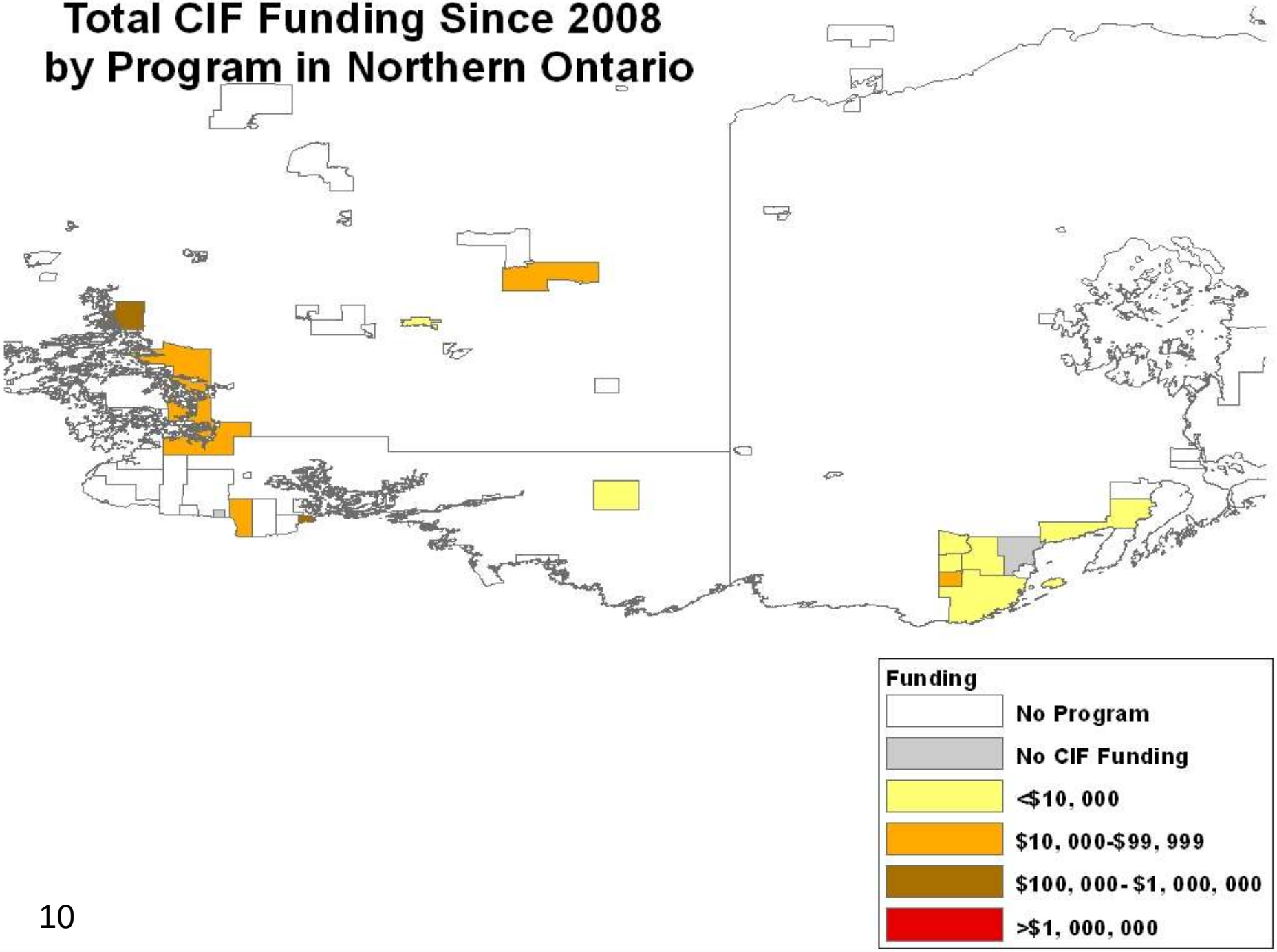
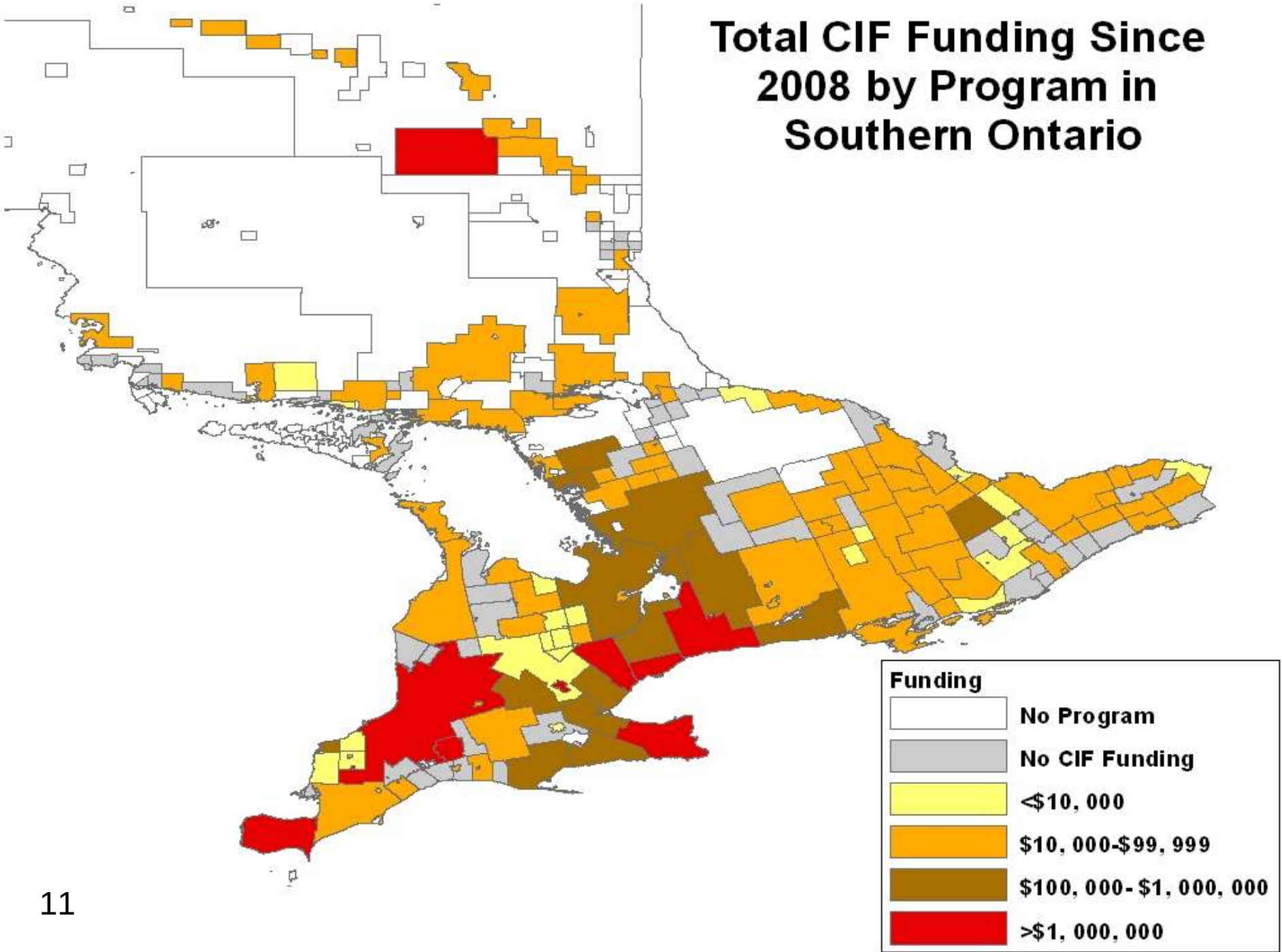
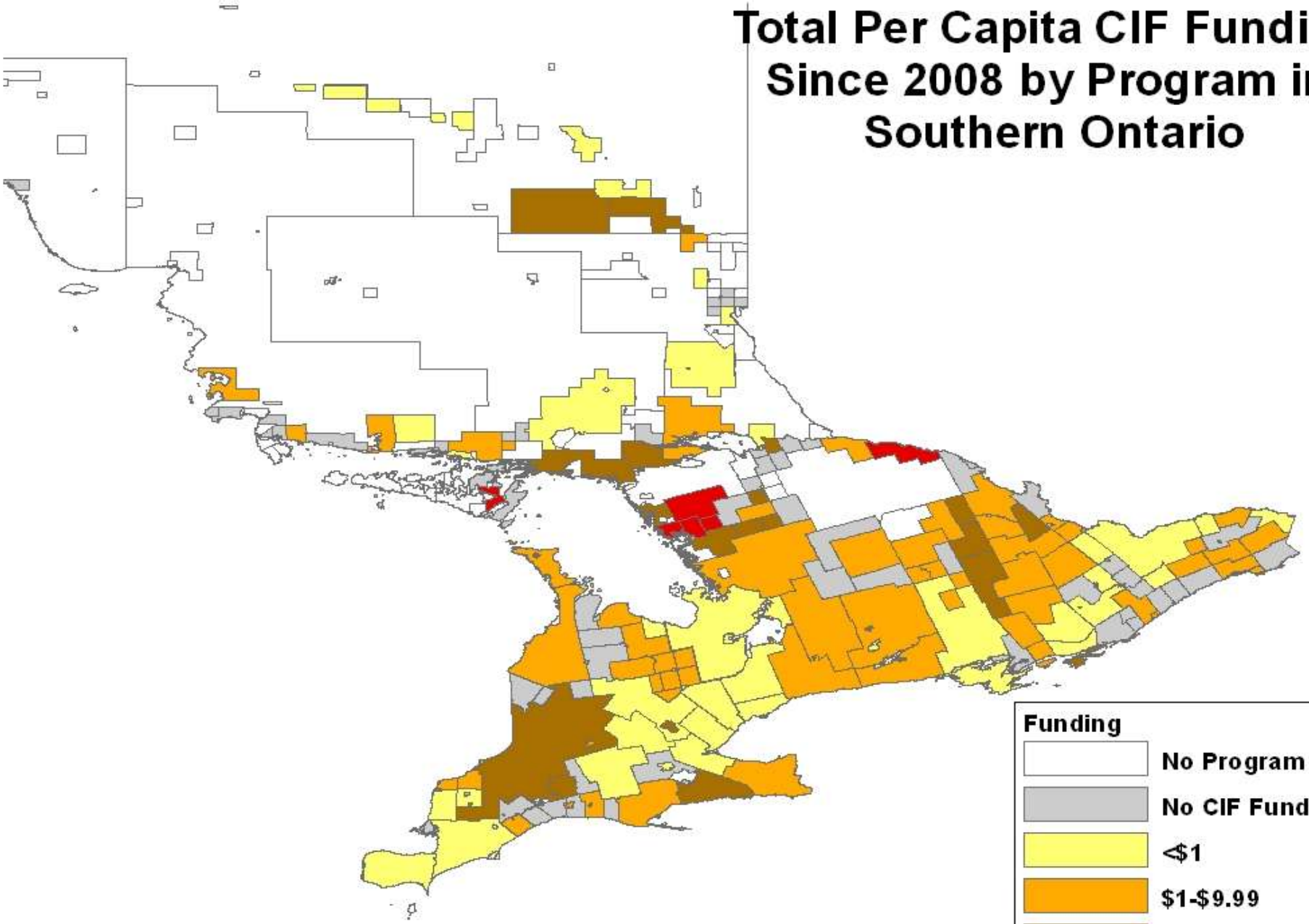
Total CIF Funding Since 2008 by Program in Northern Ontario



Total CIF Funding Since 2008 by Program in Southern Ontario



Total Per Capita CIF Funding Since 2008 by Program in Southern Ontario



Achievements

- Mixed plastics
  - new processing capacity
  - leveraged over $2 million in additional funds from Stewardship Ontario
  - NAPCOR work on PET thermoforms
- Regional infrastructure
  - London MRF
  - Timmins & Haldimand transfer stations

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Achievements (2)

- Innovative technology
  - Tri-split optical sorter in Bluewater's MRF
  - film grabber in Hamilton's MRF
  - depot compaction units in Strong, Muskoka, Peterborough, McKeller, Whitestone, McDougal & Carling
  - expanded polystyrene processing in Markham & Kawartha Lakes
- Over 100 municipal recycling strategies for compliance with WDO's best practices

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Achievements (3)

- Emerging technologies
  - testing hydrogen injection on recycling trucks in York Region & Waterloo Region
  - testing compressed natural gas collection truck in Toronto
  - working with two firms to process MRF residues into viable products
- Energy audits in 6 MRFs identified over $100,000 per year in savings

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Achievements (4)

- Co-operative tenders achieved lowest cost ever for 22 gallon boxes & 96 gallon carts
- Improved capacity & education material at over 370,000 multi-residential (MR) units
- Web tools for promotion & education material development, contract & RFP writing, P&E strategies
- CIF website, conferences, “Connections” e-news to share municipal successes

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2011 CIF Tender for Blue Boxes (BB)

- 22 gallon or larger boxes; 60% (min.) post consumer resin
- Tender closed April 28
- Awarded to ORBIS Canada / Norseman
  - $4.50 plus HST each including hot stamping
  - delivery extra; quoted for all regions in Ontario (ON)
  - any ON municipality can access the tender price
  - includes price adjustments for resin & fuel
  - contract for 12 months plus 2 six-month renewals
- CIF funding 50% if municipality adds more plastics

Moving Forward

- Lots of great municipal projects remaining
- MIPC will determine in June / July if new funding will be made available to the CIF for 2012 & 2013
  - talk to Milena Avramovic or your MIPC rep with any comments
- CIF Committee will have to determine how remaining funds will be allocated if MIPC provides different priorities &/or funding levels

CIF Staff

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Update from WDO

David Merriman
Interim Executive Director

Waste Diversion Ontario
Association of Municipalities of Ontario
Toronto

Overview

- WDO MRF Study
  - purpose
  - study approach & deliverables
  - key findings
- Update on 2010 Datacall Results
- Current WDO Initiatives
- For more information
  - davidmerriman@wdo.ca
  - www.wdo.ca

WDO Public Sector MRF Study

- Purpose: to provide WDO, municipal MRF owners, AMO & Stewardship Ontario with comprehensive independent information on capacity, capability, condition & expansion plans of the 25 Ontario (ON) public sector MRFs
- Study approach & deliverables
  - individual investigations of 25 facilities conducted June–Nov. 2010
  - preparation & population of a database to store & access the detail
  - individual assessment reports on each MRF provided to municipal MRF owners, AMO & Stewardship Ontario
  - overall high level Summary Report available on WDO web site

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WDO MRF Study–Key Findings (1)

- Most public sector MRF buildings & equipment in good shape
  - 96% of BB tonnage processed in facilities that have only minor defects or wear
- There is significant processing capacity available
  - collectively ON public sector MRFs operating at ~60% of maximum capacity
- Additional capacity generally available by extending hours of operation
- 21 of 25 MRFs studied have space available for expansion

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WDO MRF Study–Key Findings (2)

- Individual capacity constraints exist; esp. in GTA
- 48% of tonnage processed in single stream facilities & 38% in 2 stream facilities
- MRFs sited on integrated waste management sites process significantly more material than MRFs sited as stand alone facilities
- Degree of automation, economies of scale & resulting labour productivity varies dramatically
  - 40 to 2,260 tonnes processed annually per FTE
- Study provides sound technical base for any future rationalization of processing infrastructure

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Preliminary 2010 Datacall Results (unverified)

	2009	2010
Participating Programs	217	224
Total Gross Costs	$284.6M	Slightly Higher
Total Revenue	$60.8M	Significantly Higher
Total Marketed Tonnes	870,000	Marginally Higher

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Current WDO Initiatives (1)

- Governance Renewal
  - amending WDO/MOE Operating Agreement
    - clarification of WDO's role
    - moving to a skills based Board that is independent & avoids conflicts of interest between WDO directors & programs they oversee
  - use of advisory committees
- Oversight of IFOs
  - standardized timing & format for IFO/ISP reporting
  - undertaking independent performance audits

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Current WDO Initiatives (2)

- Addressing Consumer Related Issues
  - representing consumer perspective on WDO & IFO Boards & Committees
  - ensuring consumers have appropriate information on diversion programs
- Working with municipal & industry partners on developing Broad Public Education & Awareness Strategy
- Recruiting new Executive Director

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AMO & the Winding Road to 100% Blue Box EPR

Milena Avramovic, AMO

Association of Municipalities of Ontario

The Association of Municipalities of Ontario (AMO) is a non-profit organization representing almost all of Ontario's 445 municipal governments & provides a variety of services & products to members & non-members, including the development of policy positions & reports on issues of interest to municipalities.

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Blue Box Program Highlights

2010	• Early Indications show increased recovery and decreased net costs over 2009
2009	• Municipal programs recover 67% of BB material – Net Cost $224 million
2008	• Municipal Recycling exceeds 60% Recovery Goal • Creation of CIF to promote Best Practices & Innovation
2003	• 46% recovery of Blue Box Materials • *December:* Liberal Minister accepts Stewardship Ontario BBPP • *December:* 50% Producer Responsibility for BB Recovery Costs
2002 (June)	• Conservatives introduce WDA to protect and fund Blue Box Programs • Stewardship Ontario directed to prepare Blue Box Program Plan • WDO created to administer funds & monitor diversion

Blue Box EPR – Now

- 50% (...as high as 50%) Partial Producer Responsibility
  - producers responsible for a maximum of 50% of the total net costs incurred by municipalities as a result of BB programs
  - in 2004, the Minister revised the BBPP to require industry to only pay 50% of the best practice operational costs incurred by municipalities
  - steward obligation based on compromise between declared costs & “best practice” costs
  - funding distributed preferentially to program that demonstrate ‘Efficiency, Effectiveness’ & use of best practices

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Leveraging Partial EPR

- Municipalities use the ‘Steward Obligation’ to:
  - develop & fund Municipal Training in BB Best Practices
  - pay for the Continuous Improvement Fund
  - offset part of Municipal BB program expenses
    - not all municipalities are funded at the same rate
    - 30% based on your reported net costs
    - 45% based on efficiency & effectiveness
    - 25% based on utilization of best practices

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100% Extended Producer Responsibility (EPR)

- EPR means that producers of Printed Materials & Packaging are responsible for all aspects of product recovery & re-use or recycling
  - producers can function outside of jurisdictional limitations affecting municipalities
  - producers can modify products & packaging to become more easily recyclable
  - producers can benefit from reduced costs by developing efficient profitable supply chains for recovery & re-use of recycled materials

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100 % EPR Successes

- 100% EPR–Used Tires Program
  - September 2009 – collection, transportation & processing of on-road & off-road tires including passenger, truck & off-road tires
- 100% EPR–Waste Electrical & Electronic Equipment (WEEE)
  - April 1, 2009 – Phase 1 including computer equipment & televisions
  - April 1, 2010 – Phase 2 including cell phones, cameras & other household electronics

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EPR – Works in Progress

- 100% EPR−Municipal Hazardous or Special Waste (MHSW)
  - July 1, 2010 – all costs including collection through final diversion or disposal for Phase I & Phase 2 materials
  - program rollout coincided with unpopular HST
  - ECO FEES issue made program politically untenable
  - MOE stepped in & took temporary custody of program pending re-build
  - still awaiting re-built program a year later

LESSONS LEARNED

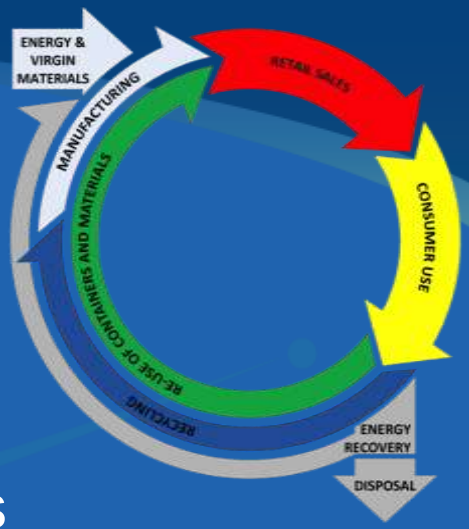
Make Sure Everyone's Ready before Launch

Get Buy-in through Pre-Consultation with Stakeholders

Waste to Worth - Outcome Based Approach

- Oct. 2009 – Minister published "*From Waste to Worth: The Role of Waste Diversion in the Green Economy*"
- Report suggested 'waste diversion framework' based on 4 outcomes:
  1. Increased waste diversion
     - more focus on "Reduce" & "Re-use" concepts
     - increased 'Recyclability' of packaging
  2. Sustainable product & packaging design
  3. Investment in green industry to develop re-use opportunities & recycled material supply chains
  4. Keep everyone in the game
- Opportunities for meaningful participation in waste diversion activities by all Ontarians

Supply Chain Concept



- Supply Chain" concept recognizes inherent value of recycled content increases
- EPR allows development of green industry at all stages in product life cycle
  - inherent value of recycled content increases with each step
    - collection represents a cost
    - processing generates a small profit from sale of raw recovered material
    - advanced processing product results in much larger profits
    - finished (re-manufactured) product re-sale produces a larger profit
  - sustainability over the full supply chain drives productivity

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Clear Underlying Value

- 95% household participation
- Unmatched convenience
- Unmatched breadth
- Economically & environmentally efficient

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Anticipated Impact of Full EPR

- Full EPR for containers & printed materials will not become reality until Waste Diversion Act changes tabled
- AMO anticipates changes will increase recycling of materials in residential & ICI sectors & increase stewards' planning, compliance & reporting obligations
- Full EPR will place accountability for waste diversion under control of producers responsible for making decisions about introduction of packaging & printed materials into the marketplace

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Mixed Plastics: From Blue Box to Blue Box

Sherry Arcaro & Rick Denyes
Stewardship Ontario

Ontario Mixed Plastics Recycling Initiatives

- EFS Plastics: 3-7 plastics recycling facility located in Elmira, ON
  - capable of processing 7000 TPY of mixed plastics from curbside with plans to expand to 14,000 TPY

- Entropex: 1-7 plastics recycling facility located in Sarnia, ON
  - capable of processing 15,000 TPY of mixed plastics from curbside with plans to expand to 30,000 TPY

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Ontario Mixed Plastics Recycling Initiatives – EFS Plastics

- Recycled pellets supplied to Gracious Living Corporation for production of 70% PCP content blue boxes & Canadian Tire Corporation's national branded Blue Planet household products
- Has ability to process film plastics
- Initiative supported by Stewardship Ontario & the Continuous Improvement Fund

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Ontario Mixed Plastics Recycling Initiatives - Entropes

- Recycled plastics being supplied into automotive, agricultural, household injection molding & industrial sheet products
- Initiative supported financially by Stewardship Ontario

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Canadian Grocers Thermoform Recycling Initiative (1)

- Part of larger initiative to convert to all recyclable packaging
- Started by individual companies now working cooperatively under Retail Council of Canada umbrella
- Loblaws, Sobeys, Walmart, Metro, Safeway

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Canadian Grocers Thermoform Recycling Initiative (2)

- Initial target of opportunity in-store thermoform packaging & private label
- To be followed by products packaged by brand owners
- PET selected as the resin of choice

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Canadian Grocers Thermoform Recycling Initiative (3)

- Understanding & addressing the obstacles to efficient PET thermoform recycling
  - critical mass
  - aggressive adhesives
  - fluorescence

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Canadian Grocers Thermoform Recycling Initiative (4)

- With critical mass being addressed through conversion to PET, recycling friendly adhesives & elimination of fluorescing material are next critical focus

- Grocers stimulated the development of ‘compatibility’ protocol by NAPCOR & APR to address & solve these issues with focus on making the stream compatible with PET bottles

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Canadian Grocers Thermoform Recycling Initiative (5)

- First registration period for adhesive/label testing ends July 15th with testing immediately thereafter
- Only products that pass will be posted on APR website & be used by grocers in the future
- Source of fluorescence identified & being dealt with
- www.plasticsrecycling.org/technical-resources/testing/pet-thermoform-test-for-adhesives-&-labels

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Multi-municipal P&E Pilot Project

- Four municipalities – one campaign >$150,000
- Focus on mixed plastics (predominantly PET)
- Brochures, direct mail, billboards, OMG bins, radio
- Baseline, pre & post waste composition studies, Pollara quantitative research study
- Launch 2nd week of July for 2-month period
- Creative & study results will be made available to all municipalities

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Contact Info:

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Dir. BB System Optimization - Stewardship Ontario
Phone: 416-725-3156
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Questions

"Ask a Question" at console bottom right

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Association of Municipalities of Ontario
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Refreshment Break

Waste Diversion Ontario

Association of Municipalities of Ontario

TORONTO

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Welcome Back

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Large Recycling Box

Jerry Biersteker
Region of Waterloo

Background

- Changes to composition of BB material stream
- Dense, heavy materials on decline
- Growth in plastics stream – light & bulky materials
- Need to improve capture of plastic packaging
- Increased capture of plastics = more space needed on the curb to accommodate materials
- Best practice highlighted that sufficient BB capacity needed to get/increase residential participation

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Today's Session

- CIF has promoted transition to larger containers at the curb
- Demonstrate practicality & need for larger container at curb
- Presentations from some success stories on implementation of larger sized curbside boxes

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Today's Speakers

- Michelle Shannon, City of St. Thomas
- Steve Jedinak, Durham Region
- Alfred Von Mirbach, REIC (Town of Perth)

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Recycling Program Renewal - Large Curbside Containers Project # 302

Michelle Shannon
City of St. Thomas

Project Highlights

- ***Project goal:***
  - reinvigorate BB program & increase capacity for future program changes
- ***Anticipated impacts:***
  - increase in tonnage & participation rate
- ***For more information:***
  - mshannon@city.st-thomas.on.ca
  - www.city.st-thomas.on.ca

Why this Project?

- A long standing two stream program, but no provision of second recycling box
- Contractor identified cross-contamination issue between the two streams
- Future intention to expand the list of acceptable items

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Project Description

- Distribution of a 22-gallon grey recycling box to every single family home
- Utilized the new box as a P&E tool as the roll out was paired with a route rationalization
- Correlated the drop off of the box with the collection days
- Boxes delivered at the end of 2010
- Prior to the drop off of the boxes, each household was mailed an information package

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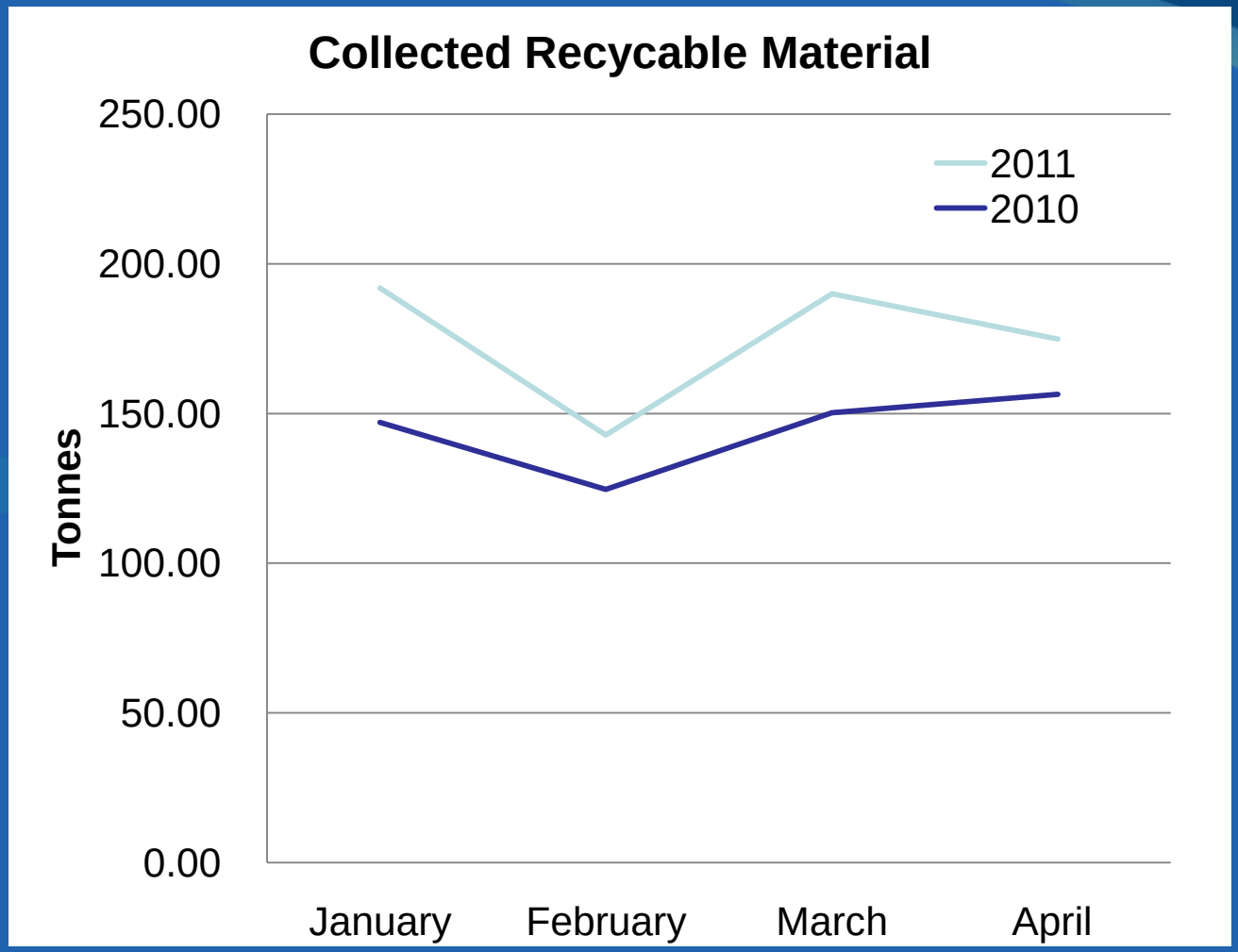
Progress to Date

- Feedback from residents well received
- Participation rate has increased
- Increase in collected tonnage
- Decrease in contamination rate at the MRF



Best Practice

- Initial results demonstrate need for additional capacity at curb
  - council commitment to provide additional boxes at cost to residents
- Largest increase (so far) in program recovery since before 2000
- Demonstrated good contract management techniques
  - co-operation with collection contractor

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Next Steps

- Continue monitoring impacts of the new system
  - additional data monitoring
- Make improvements in P&E efforts to build on success
- Report to CIF early in 2012

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Questions

- Address questions to:

Michelle Shannon
mshannon@city.st-thomas.on.ca
519.631.1680 x4258

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Durham Region Additional Complimentary Blue Box: Increasing Recycling Compliance & Capture Initiative CIF Project #189

Steven Jedinak
Durham Region

Project Highlights

- *Project goal:*
  To increase residential BB recycling rates & increase collection efficiency
- *Anticipated impacts:*
  Increase in program participation & capture of recyclable materials, decrease in non-compliant bin set outs & in commingled bins & contamination
- *For more information*:
  - steven.jedinak@durham.ca
  - www.durhamregionwaste.ca

Why this Project?

- In 2008, Durham Regional Council set a waste diversion goal of 70%
- Two stream BB program
  - provided one complimentary 14-gallon BB
  - purchase additional boxes
- Results 2009 set out survey
  - **1.5** was average number of boxes set out
  - 18% of set outs were using non-compliant boxes
- Best Practice – have sufficient capacity at the curb

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Project Details

- Provide each household 83 litre (22 gal) “Containers Only” BB
  - production contract: Orbis/Norseman @ $4.55 /box
  - delivery contract: Delta Global Logistics @ $1.23 / delivery
- Boxes hot stamped as “Containers Only”
- distribution Sept. 27 to Oct. 29, 2010
  - 183,174 households; >99% successful deliveries
- Included substantial P&E campaign

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Audit Component

- AET Consultants retained & performed participation & composition study for project
  - 1,000 households (10 neighbourhoods)
  - before, June 14-28
  - after, November 15-26, 2010
- Used sub sample of 100 random households for residual waste composition study
- Used another sub sample of 250 random households for container stream composition study

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Audit Results

Measured Item	Pre-rollout result	Post-rollout result	% Change
Avg. weight of containers stream per BB	1.76 kg	2.14 kg	+21.6%
Avg. density of containers material per household	27 kg/m^3	28 kg/m^3	+3.7%
Participation rate	77.3%	78.6%	+1.7%
Set out rate	93.2%	90.2%	-3.2%

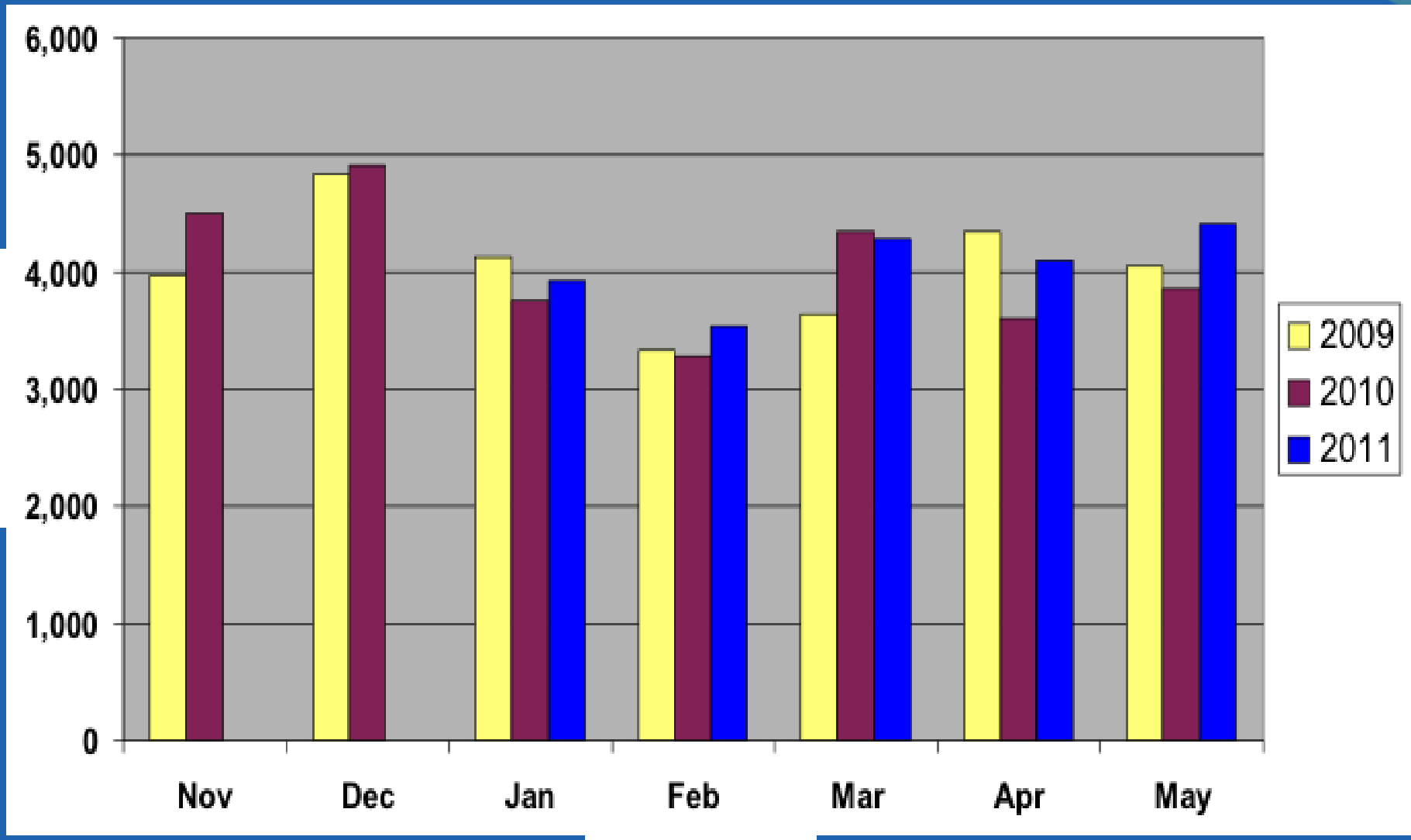
Audit Results (2)

Measured Item	Pre-rollout result	Post-rollout result	% Change
# of households with co-mingled recycling	152	105	-30.9%
# of non-compliant bins set out during study	308	146	-52.6%
% of recyclable material in garbage stream	7.2%	8.6%	+19.4%

Audit Results (3)

Measured Item	Pre-rollout result	Post-rollout result	% Change
% contamination in container recycling stream	9.14%	10.69%	+16.9%
%capacity of each bin/container set out for containers stream	65.5 Litres	75.8 Litres	+15.7%

Blue Box Tonnage Comparisons: 2009-2011



Promotion & Education

- Region developed extensive P&E campaign which included
  - advertisement in newspapers
  - movie theatre ads
  - television & radio ads
  - billboards
  - regional website & external web banner ads
  - Go Transit bus/train shelters ads
  - recycling collection vehicle decal wraps

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CONTAINERS ONLY

Please no papers

- ✓  Milk and juice cartons, drinking boxes
- ✓  Glass bottles and jars
- ✓  Plastic tubs and lids
- ✓  All plastic bottles with a twist-off top
- ✓  Metal food and beverage cans
- ✓  Empty aerosol and dry metal paint cans

Maximum box weight 20 kilograms (44 pounds).

Set out by 7 a.m. on your collection day.

Recycling

Two boxes for two reasons

Your containers box

- Plastic bottles, jugs and jars, up to 10 litres in size.
- Milk and juice cartons
- Metal food and beverage cans
- Plastic tubs and lids, up to two litres in size.
- Aerosol and paint cans
- Glass bottles and jars

Separate materials into two boxes...

please use your big Blue Box for containers only.

Your papers box

- Printed papers, magazines and soft cover books
- Boxboard
- Newspapers and flyers
- Cardboard
  Cut and bundle the same size as your blue box.

www.durhamregionwaste.ca | 1-800-667-5671

Project Challenges

- Production size made sourcing enough post consumer recycling resin an issue
  - resulted in 5 week production delay
- Residents using 83 litre (22 gal) box for fibre stream
  - resulted in some overweight & oversize issues
- Minor push back from collection contractors who now had to sort recyclables from new deeper boxes

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Conclusions & Next Steps

- Residents are recycling more
- Participation compliance has improved
- Continue ongoing promotion & education efforts
- Follow-up audit for a one year comparison/ measurement
- Investigating opportunity to utilize the additional capacity to expand Blue Box items to include mixed # 3-7 plastics

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Perth's YellowBox Program
CIF # 255

Alfred Von Mirbach
REIC Perth

Project Highlights

- Project goal:
  - make recycling more convenient
- Anticipated impacts:
  - increased capture rate
- For more information:
  - alfred@ecoperth.on.ca
  - 613 267 6463
  - www.perthcomposts.com

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Project Rationale

- All waste stream collection contracts came up for renewal as of June 1, 2010 – window for change
- Previous system had limited materials & weekly multi-curb sort
- Switching to single-compartment packers for each of four streams (garbage, organics, containers, fibres) seemed most efficient
- Provided an opportunity to add materials
- Existing single blue boxes were maxing out

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Project Description

- Town of Perth (pop. 6400)
- Switch from weekly multi-sort recycling to alternative week container & fibre recycling
- Add new materials (tubs, lids, polycoat, asceptic)
- Give residents a second larger box
- Promote a true integrated curbside waste program

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Project Roll-Out

- December 2009 – tender issued
- April 2010 – P&E developed
- Mid-May 2010 - boxes delivered with P&E
- June 1, 2010 – contract commenced
  - ordered 2,900 22-gallon YellowBox
  - supplier – Norseman/Orbis ($6.20/unit)
  - deliveries by Kendrew ($1.35 per unit)

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Why Yellow?

- Yellow is sunny, positive
- Yellow plus Blue = Green
- P&E
  - BlueBox, YellowBox, GreenBin – GOOD
  - black bag - BAD
- Same strong colour scheme carries through to public & special events bins
- Outweighs downside (cost, print run, lower recycled content, less resistance to UV)

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Results

- Average Monthly Container Stream Tonnage
  - pre-YellowBox – 6.5 tonnes
  - 2010 YellowBox – 13.0 tonnes
- Fibre tonnes increased by ~10%
- Set-Out Studies
  - 76% of hhlds. set out on any given week
  - average box was ¾ full
  - 14% of set outs put out more than one box

CIF
CONTINUOUS IMPROVEMENT FUND

Emerging Issue

- Container stream contamination
  - contractors find it cheaper to deal with contamination at MRF, not curb
  - residents assume if the driver accepts it, it is recyclable (regardless of what we tell them)
  - need to work with contractor to undo the damage

CIF
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Heritage PERTH

We Recycle. We Compost. We Care.

Perth's Curbside Diversion Program

The YellowBox is for Containers!

What goes in

- Glass bottles & jars (and lids)
- Metal cans (steel and aluminum)
- #1 and #2 small-mouth screw-top food & drink containers
- Aluminum trays & foil (clean)
- Empty metal paint cans (dry, lids removed)
- Gable end milk & juice cartons
- Juice and soup boxes (tetra-pak)
- #5 and #6 wide-mouth dairy containers

DON'T put in

- Film plastic (bags & cellophane)
- Polystyrene (Styrofoam trays & cups)
- Paper coffee cups
- Coffee and drink cups
- Clear or black plastic trays or boxes
- Plant pots and trays
- Containers that held hazardous products

The BlueBox is for Fibre!

What goes in

- Boxboard (cereal boxes, rolls from paper towels and toilet tissue, shoe boxes, tissue boxes)
- Soft and hard cover books
- Telephone books
- Corrugated cardboard (flattened/bundled/tied)
- Detergent boxes
- Egg cartons (paper)
- Kraft (brown) paper bags
- Magazines, catalogues, junk mail & office paper
- Newspapers and flyers (plastic bags removed)
- Pizza boxes (clean)

DON'T put in

- Soiled paper
- Pizza boxes with food residue
- Plastic egg cartons
- Reports with plastic spines
- Waxed cardboard

The GreenBin is for Kitchen Waste!

What goes in

Any type of food:

- Meat, bones, dairy
- Vegetables, sauces
- Breads, fruit, nuts
- Egg shells, etc.

Soiled paper products:

- Paper towels, tissues
- Soiled pizza boxes
- Coffee filters, tea bags

Kitty litter and pet waste

PLEASE, absolutely no plastics, even bio-degradable and compostable ones!

DON'T put in

- Plastic bags
- Any plastic or metal (twist-ties)
- Ashes
- Drinking cups
- Motor oil
- Brush & yard waste

Items should be clean, crushed and flattened for easy handling.

www.PerthComposts.com or 613-267-3311

Special Events Bins & Banners

Best Practice/CIF Impact

- Second larger box is a best practice
- Results are clear – tonnage of containers collected doubled
- The bigger the better
  - 22 gallon will be small if/when we add film, PS & Thermorform PET
- Any positive change is a chance to reinforce pride & participation in all aspects of your program

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Questions

"Ask a Question" at console bottom right

Waste Diversion Ontario
Association of Municipalities of Ontario
TORONTO

Spotlight on Multi-residential Recycling

Moderator
Anne Boyd
CIF – MR Project

MR Train the Trainer Update

Anne Boyd

NEW CIF project for Multi-residential (MR)

- CIF has developed many tools & provided funding to municipalities to grow the MR section
- New focus on the role of superintendents & property managers in ensuring success……

Recall 2007 KPMG BP report:

> *"Owners, property managers, & superintendents need to be fully trained with regards to the responsibilities & requirement of the recycling program"*

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Train-the-trainer workshops – June 8 & 22

- Project Purpose – two deliverables
  1. skills training for municipal staff: adult educators & facilitators
  2. workshop package: course curriculum & ‘how-to’ structure & deliver the super workshops
- Update
  - June 8 workshop – ‘sold out’
  - 25 municipal participants
  - next workshop in Durham – June 22

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For later discussion

- Think about your multi-res program – do you have indicators of measurable success?
- How would you rate (measure) the performance of your program – compared to ….year-over-year….other municipalities…..your curbside program?
- What have you heard (in today's session) that has been relevant to your program?

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In This Session (1)

- six presentations – five municipal + one CIF/ Consultant
- Similar (i.e. multi-res) yet different (focus, issues, tools)
- two before lunch, four after lunch

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CONTINUOUS IMPROVEMENT FUND

In this Session (2)

1. Pam Antonio	Oxford County	Rural Regional (1,100)
2. Frank Velle	City of Sarnia	Medium Urban (11,000)
LUNCH		
3. Sherri Tait	Niagara	Urban Regional (30,000)
4. Patricia Paz-Soldan	Genivar	
5. Eleanor McAteer	Toronto	Large Urban (500,000)
6. Alfred Von Mirbach	Perth	Small Urban (1,300)

Oxford County's Multi-Residential Recycling Program

Implementing Multi-Residential Best Practices Project #514.4

Pamela Antonio

Waste Management Coordinator

Oxford County

Oxford County
growing stronger...together

Project Highlights

- *Project goals:*
  - develop MR database; increase MR recycling container capacity; & develop & distribute MR P&E
- *Anticipated impacts:*
  - increase building participation; increase container capacity; increase amount of captured materials
- *More information*:
  - pantonio@oxfordcounty.ca
  - www.oxfordcounty.ca

Why this Project? (1)

- *Lack of focus:*
  - no P&E material
  - no data on performing or under-performing buildings
- *No database of buildings:*
  - no current contact information, number of units, bin capacity, site conditions, etc.

Why this Project? (2)

- Lack of baseline data
- Inconsistent service delivery
  - bi-weekly program but some buildings receiving weekly collection

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Project Description

- Building inventory
  - use of CIF MR Database (Project #236) & customization of database for Oxford County
- Distribution of containers
  - participation in CIF bulk purchase of 95-gallon totes
  - purchased small apartment size containers
- Development & distribution of P&E
  - participation in CIF P&E Project #166

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Project Implementation – Recipe for Success

- Access to industry experts
- Access to pre-developed data-bases & P&E
- Assess to inexpensive carts
- Having the right staff to implement the project
- Documentation
- Follow-up

CIF
CONTINUOUS IMPROVEMENT FUND

Project Outcomes (1)

- Total number of MR properties suitable for cart collection: 79
  - total unit count: 2104
  - required number of carts: 301
  - potential container capacity 108,000 litres

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Project Outcomes (2)

Current State of Affairs	August 2010	May 2011	% Change	Deficit
# of Participating Properties	42	63	34% ↑	16
# of Units	1440	1752	18% ↑	352
# of Carts in System	166	234	30% ↑	67
Container Capacity	60,000 litres	84,000 litres	29% ↑	24,000 litres
Capture Rate	73 kg/ unit/year	Audit in June 2011		

Lessons Learned

- Expect building owners/superintendants to be disinterested & resistant to program implementation
- Expect building audits & cart sales to go slowly at first
- Avoid implementation during winter months
- Expect embracement of program once owners/superintendents see how much support they are given & how easily the program runs
- Expect increased accuracy & material capture rates on collection day

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Next Steps

- Semi-annual monitoring & measurement
  - building audit to assess building performance & P&E material needs
  - semi-annual dedicated MR collection service to identify material tonnages
- Continue to bring in non-participating buildings
- Distribution of Superintendent MR Handbook
  - building superintendent & owner training
- Continued promotion of cart system & proper separation of materials
  - through education & awareness

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CONTINUOUS IMPROVEMENT FUND

Implementing MR Best Practice with Signage for Recycling Depots Project #125

Frank Velle
Solid Waste Supervisor
City of Sarnia, Public Works

Project Highlights

- *Project Goals:*
  - work together towards ON target 70% recycling rate
- *Anticipated Impacts:*
  - increase recycling & reduce waste management costs by encouraging community involvement with MR residents & superintendents
- *For more information:*
  - fvelle@sarnia.ca
  - www.sarnia.ca

Carmen Acton, 155 Front St.

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Project Description

- Increase number of carts
- Providing consistent, comprehensive signage through all MR buildings
- Offer simple educational material about recycling for Sarnia residents
- Add recycling information on the recycle carts

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Sarnia – Background Information

- 29,000 households (hhlds.)
  - 10,600 units in MR buildings
  - nearly 1/3 of all households
- two stream program; designated routes for MR
- Collection & processing by Emterra
  - MRF in London
- Recent BB initiatives include:
  - public space recycling
  - Waste Recycling Strategy
  - MR initiatives

This Project

- Serves need to increase diversion
- Why MR focus?
  - first opportunity to focus on MR in Sarnia since 1995
  - neglected area with room for improvement

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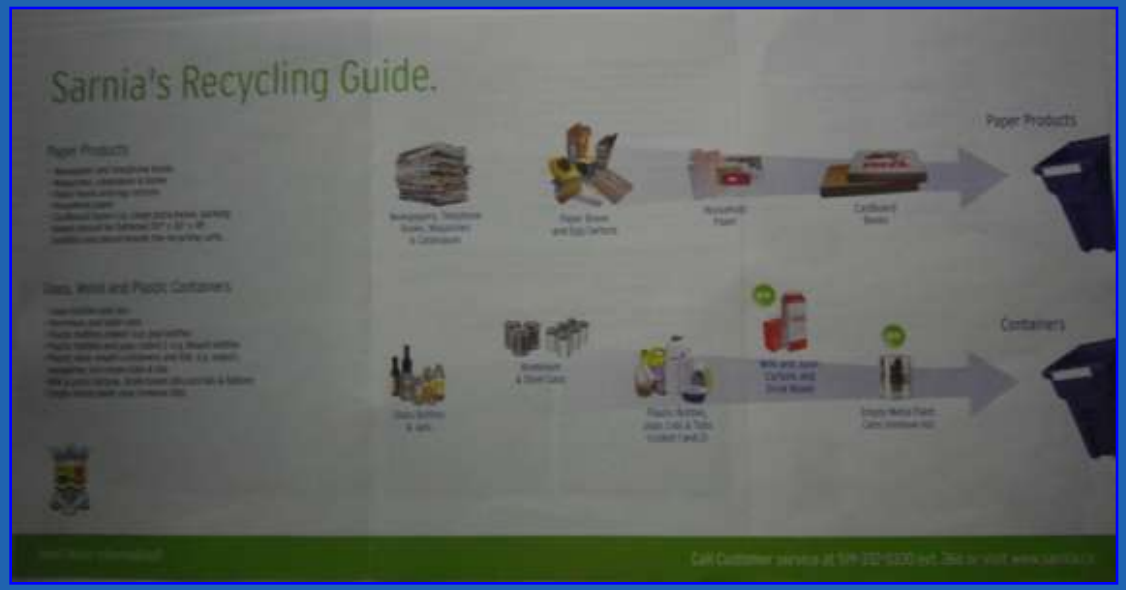
Progress to date

- 450 recycle carts distributed in Dec. 2010/Jan. 2011
- signs only placed in buildings with indoor carts due to winter weather
- hand delivered flyers to MR residents.

Individualized pamphlets for multi-family buildings



Progress to date

	Pre-Project	Current
Number of Buildings	140	160
Number of Carts	747	1197
Unit to Cart Ratio	11:01	7:01
Litres per Unit	33	51

Bottom Line: We have reached Best Practices Ratio of 50 litres per unit

Recyclable Material Collection from MR Buildings only: January to April	2010	2011
Totals	230 MT	257 MT
Difference		+27 tonnes

Bottom Line: 12% increase in 1st quarter recyclables over 2010

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Issues?

- Space in buildings limited for carts & signage
- Residents in MR buildings commented signs are too “wordy”
- Many senior citizens; need LARGER wording on signs
- Will need to change signs if council approves recycling changes (i.e. new grades of plastic)

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The Snow Factor…

- New carts buried by snowplow operators
- Large snow-piles blocked access to carts — city will enforce agreement that recycle carts cannot be blocked
- City was unable to install majority of signs because of the weather

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Is this Approach a Best Practice?

YES! – forged good relationships with building managers & superintendents; work better as a community

YES! – can assess growth, identify & fix problems because we have community support

YES! – building managers & superintendents more likely to work with city

Actual sign posted in MR building

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Next Steps:

- Soon we will be accepting more plastics in our updated recycling program (#s 3-7).
- Working towards a multi-municipality contract to reduce waste collection costs in a broader area
- More promotion through the use of summer students
- More direct contact with residents on recycling in residential & MR buildings.

We will report our results to the CIF in 2011

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Questions

"Ask a Question" at console bottom right

Waste Diversion Ontario
Association of Municipalities of Ontario
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Morning Summary

Andy Campbell, CIF

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Enjoy Your Lunch

CONTINUOUS IMPROVEMENT FUND

ORW Resumes Soon…

Waste Diversion Ontario

Association of Municipalities of Ontario

TORONTO

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Welcome Back!

Waste Diversion Ontario

Association of Municipalities of Ontario

TORONTO

Afternoon Program

- More great multi-residential projects
  - Niagara, Toronto, Perth, Genivar/CIF
- Mid-range transfer stations
  - Dryden/Kenora, Timmins, Haldimand
- Break ≈ 3 pm
- Need to Know
  - Ontario Blue Box Training Update
  - Simcoe County Mobile Education Unit
- ORW ends ≈ 3:30 pm

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CONTINUOUS IMPROVEMENT FUND

More MR Projects

Anne Boyd,
City of London & CIF

In this session (continued)

1. Pam Antonio ✔	Oxford County	Rural Regional (1,100)
2. Frank Velle ✔	City of Sarnia	Medium Urban (11,000)
LUNCH		
3. Sherri Tait	Niagara	Urban Regional (30,000)
4. Patricia Paz Soldan	Genivar	
5. Eleanor McAteer	Toronto	Large Urban (500,000)
6. Alfred Von Mirbach	Perth	Small Urban (1,300)

Niagara Region Multi-Residential Recycling Program Implementation

Project # CIF 212

Sherri Tait

Niagara Region

Project Highlights

- *Project goal:*
  - implementation of region-wide, multi-residential recycling to buildings with 7+ units
- *Anticipated impacts:*
  - expansion of Niagara's recycling services, which will increase the residential diversion rate
- *More information*:
  - sherri.tait@niagararegion.ca
  - www.niagararegion.ca

Why this Project?

- Standardize MR recycling program across the region
- Increase the collection & processing of recyclable materials
- Maximize program participation & minimize contamination rates
- Provide program support, monitoring, assessment & feedback

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Project Description

- Phase 1 – Program Planning
  - site visits & follow up telephone calls/letters for development of multi-residential database
  - used data to assess potential for collection service standardization across the region
- Phase 2 – Program Implementation
  - amendments to policy dealing with collection on private property & by-law
  - site visits to plan service, obtain baseline data - based on best practices
  - communication strategy development
  - roll out of program: provision of necessary infrastructure i.e., appropriate cart-to-unit ration, in-unit bags, etc.
  - program monitoring

Anticipated Results

- Increase in recyclable material tonnages
  - separately weigh recyclable material from multi-residential buildings on a semi-annual basis
- Improved performance at buildings with existing services in place
  - swapped out reusable Blue Carts (being used for paper) for Grey Carts
  - provided free in-unit bags & promotional material to all tenants
  - provided carts at a subsidized price (50% of cost)

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CONTINUOUS IMPROVEMENT FUND

Phase 1 Results (2008/2009)

- Preliminary Site Visits

Service	Percentage of Properties
Curbside Blue/Grey Boxes	14%
Base Level (weekly alternating stream cart collection)	5%
Enhanced (weekly both streams)	18%
Municipal Service	17%
Private	15-18%
No Recycling	29%-32%

- Council approved staff recommendation to implement region-wide MR recycling program

Phase 2 Results

- Pre-Implementation Site Visit Rating Summary

Barrier	Rating		
	1	2	3
Signage/Labels	80%	18%	2%
Stream Mixing/ Contamination	28%	63-64%	8-9%
Overflowing Carts	16%	55%	29%
Loose Material	19%	52%	29%

- Majority of buildings required more carts
- Over 100 property owners/supers/managers attended open house in Dec. 2010
- Note: 1 = Bad, needs attention, 3 Excellent

Phase 2 Results: Implementation to Date

Service Type	Buildings	%	Units	%
Region (Totes)	400	67%	16,212	70%
Region (Boxes)	41	7%	440	2%
Private	47	8%	4,083	18%
Region (planned)	90	15%	2,151	1%
Unknown	18	3%	289	1%
Total	596	100%	23,175	100%

- 21 Open Houses (approx. 540 tenants attended) & 26 additional Open Houses requested
- 23 un-staffed lobby displays (3 day displays)
- ~56% of properties that currently have recycling have ordered at least the minimum recommended amount of carts

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Communication/Outreach Activities

- In addition to CIF Project 166 material:

Over the cart posters

Cart Labels

In-Unit Bags

Roll up Banner

Poster Boards

Challenges/Solutions

- Could not confirm services to ~40 properties
  - approached tenants, went on curbside collection day, sent reminder letters to owners to contact us
- Smaller properties don't have superintendent to take carts to curb (if on-site collection unavailable)
  - option to use blue/grey boxes or work with property to set up recycling station set back from curb
- Buildings don't believe they need recommended amount of carts
  - letters to financially motivate cart orders, site visits
- OCC from move outs would not fit in carts
  - worked with contractor to occasionally allow bundled OCC

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Next Steps

- Complete roll out
- Site visits to monitor progress – target previous poor performers & those that did not order recommended number of carts
- Communication back to tenants & supers, etc. re: performance/site visit observations
- User survey – considering via direct mail & web
- Communication material available for other municipalities to use
- Final report outlining results

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CONTINUOUS IMPROVEMENT FUND

Best Practices & Site Plan Requirements

Multi-Residential Recycling

CIF Project #219

Patricia Paz-Soldan, P. Eng
Building Sciences
GENIVAR

Project Highlights

- *Project Goal:*
  - review current design requirements in order to improve recycling performance
  - present “Best Practice” guides for Storage & Collection of recyclables
- *Project focus:*
  - new buildings, some measures could be implemented in existing buildings
  - Study is Part 1 of 3; Part 2 – Leed Certification, Part 3 – OBC proposed changes
- *For more information:*
  - Patricia.paz.soldan@genivar.com;
  - www.genivar.com

CIF CONTINUOUS IMPROVEMENT FUND

Scope of Work

- Despite MOE regulations MR buildings still have low capture rates
- Reviewed current design requirements of several municipalities
  - e.g., Toronto, Vaughan, Peel, Hamilton, Durham
- Reviewed & analyzed recycling facilities in 23 existing buildings across GTA
  - relatively new buildings; five with LEED designation
- Apply findings of the Mayor's Tower Renewal project on waste reduction

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Noted Obstacles that reduce recycling

- Buildings lack proper space for recycling on every floor
- Space in the centralized recycling room is insufficient
- Majority of buildings reviewed (61%) use a tri-sorter, 24% use a single chute
- Tri-Sorters - safety, mechanical & contamination problems, e.g., recycling disposed as garbage
- Building staff not fully engaged

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CONTINUOUS IMPROVEMENT FUND

Best Practices

- Mandatory site plan approval
  - site plan & traffic flow plan
  - schematic of garbage, recycling & chute intake rooms
  - plan of loading facilities
  - number of bins/carts for all waste streams
  - compactor specifications & safety features

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Best Practices: Recycling Room Requirements

- Area
  - carts= 4 to 24 sq m – 40 to 100 units
  - front-end bins = 10 to 40 sq m – 40 to 300 units
- Carts recommended for buildings < 100 units
  - number of carts too large
  - less efficient
- Double doors – movement of bins
- Recycling room should be used for recycling other items, e.g., clothing, ewaste, bulbs, etc.
- Odor control &/or air conditioning

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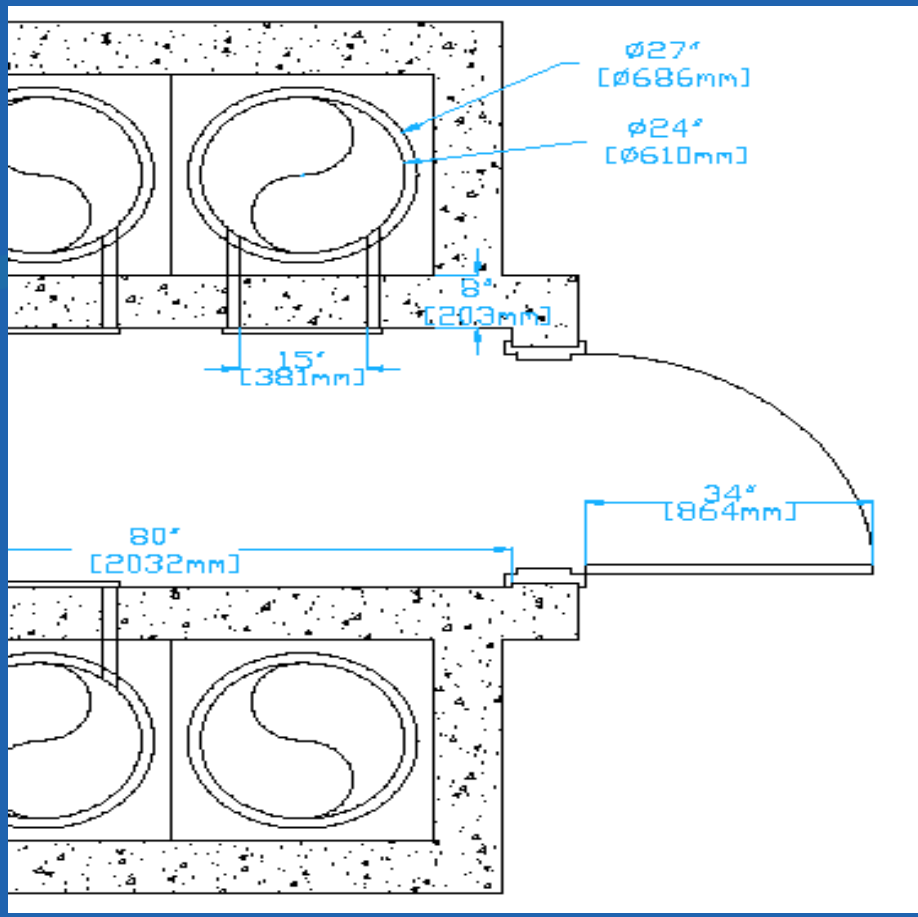
Best Practices:
Internal Collection Systems (1)

- Option 1 – Triple or Higher Chute Systems
  - stream sorted
  - better diversion
  - equally convenient
  - separate green, recycle & garbage chutes
- Best for single & dual streams



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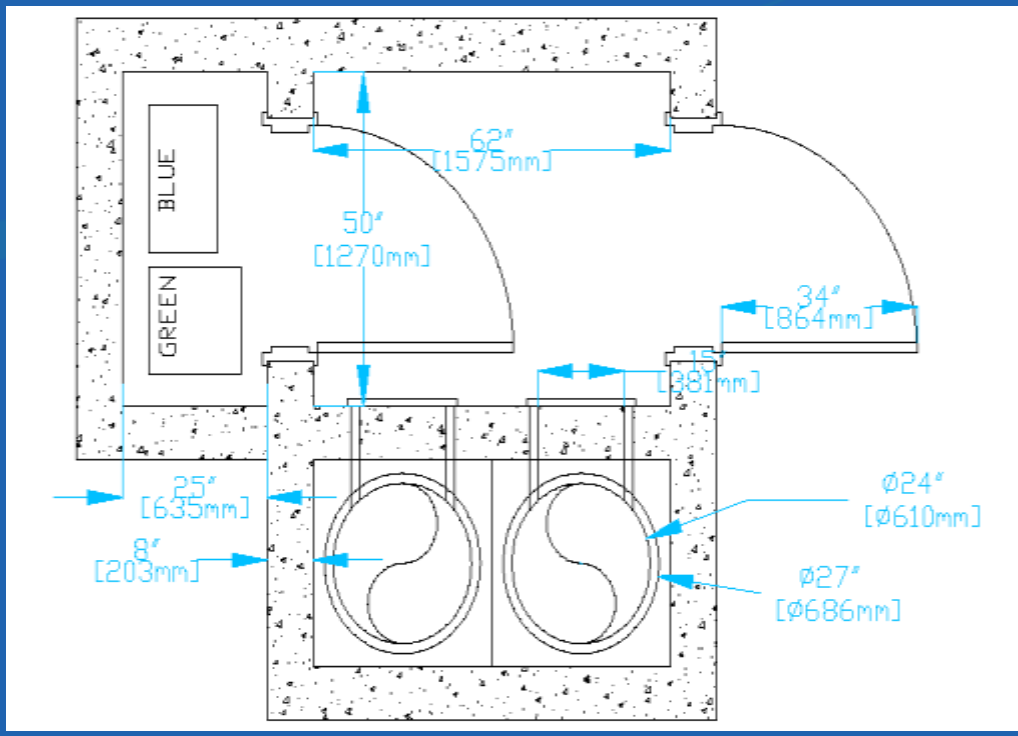
Best Practices: Internal Collection Systems (2)

- Option 2 – Dual Chute Systems
  - separate chute for garbage & recycling
  - better diversion
  - equally convenient
  - best for single stream
  - carts for specialty items, e.g., glass
  - *Floor-to-floor storage*



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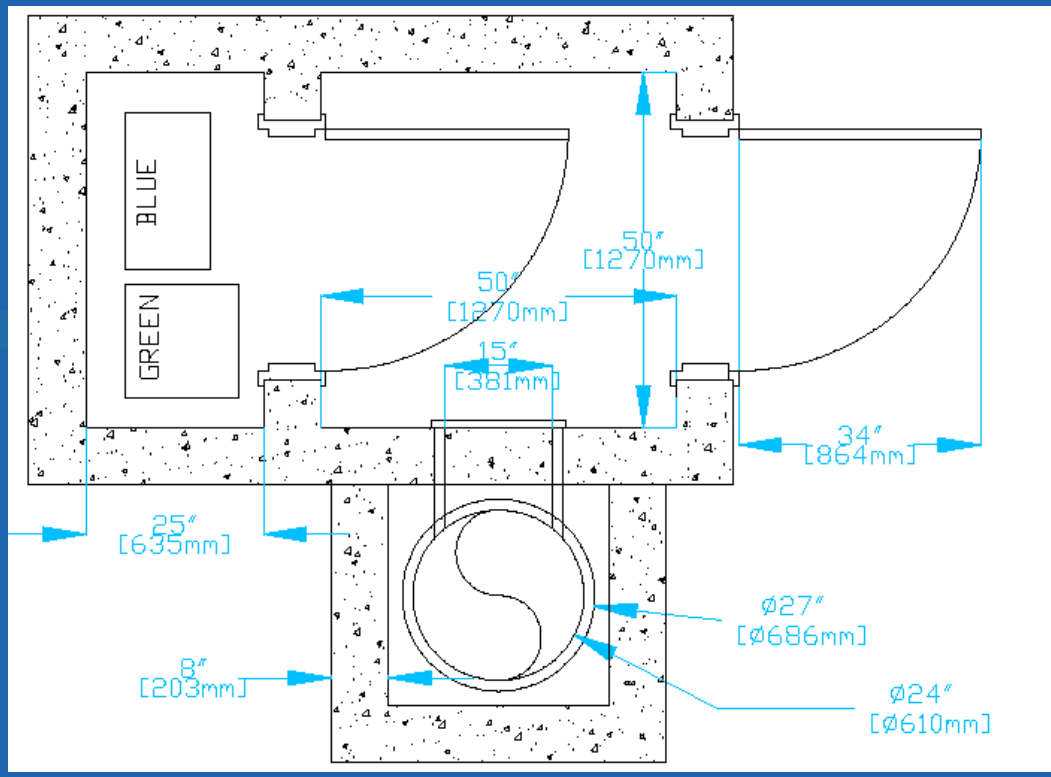
Best Practices:
Internal Collection Systems (3)

- Option 3 & 4 – Single Chute Systems
  - equally convenient
  - less contamination
  - chute for garbage
  - carts for recycling
  - *Floor-to-floor storage*



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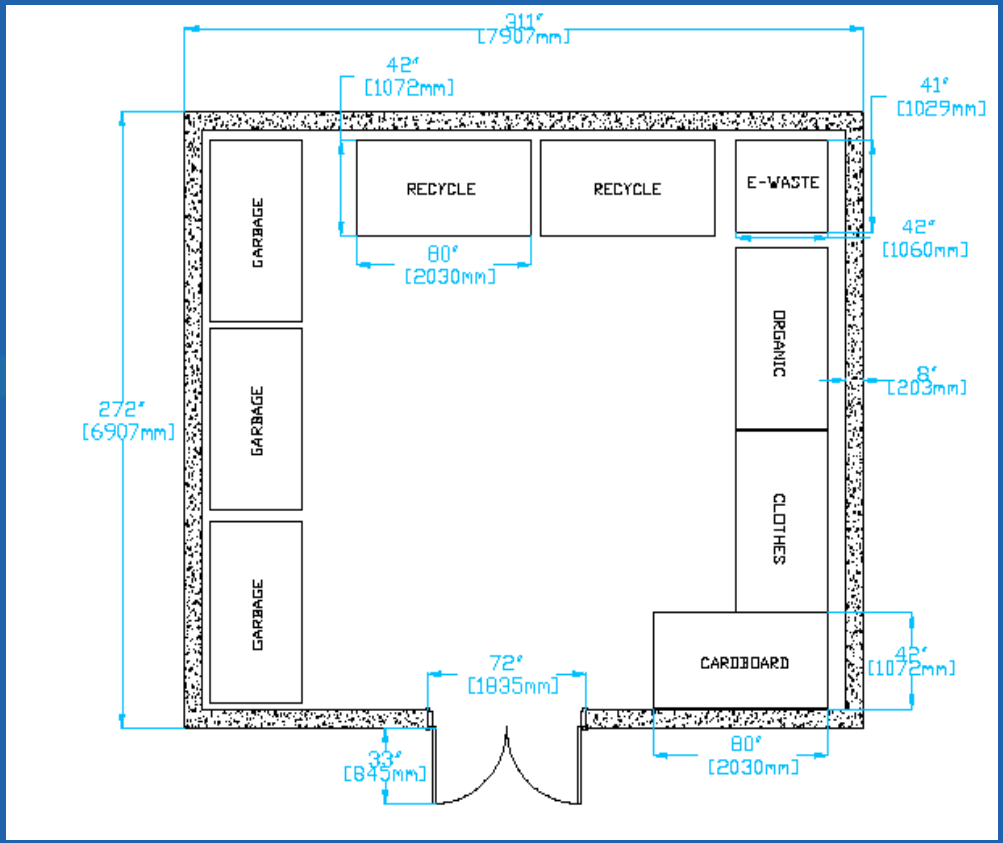
CONTINUOUS IMPROVEMENT FUND

Best Practices
Internal Collection Systems (4)

- Option 5 – No Chute Systems
  - equally convenient
  - combined garbage & recycling
  - centralized area
  - could be adopted to existing buildings
  - no mechanical equipment



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Best Practices Conclusion

- Options can be adapted to suit program parameters
- Options can be adapted to size of buildings
- Separate chutes appear to mitigate existing problems & increase efficiency
- Floor to floor requires a separate fire-rated assembly

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Tower Renewal - Recycling Is A Key Component Of Apartment Performance Part A: CIF 178

Eleanor McAteer
Toronto Tower Renewal

Project Highlights

- *Project goal:*
  - find out how to boost apartment diversion from present (15%) to meet Toronto's 70% overall waste diversion target
- *Anticipated impacts:*
  - determine costs & benefits from intervention strategies
  - develop implementation options to maximize waste diversion in apartments
- *For more information:*
  - Eleanor McAteer, emcatee@toronto.ca
  - www. toronto.ca/tower_renewal

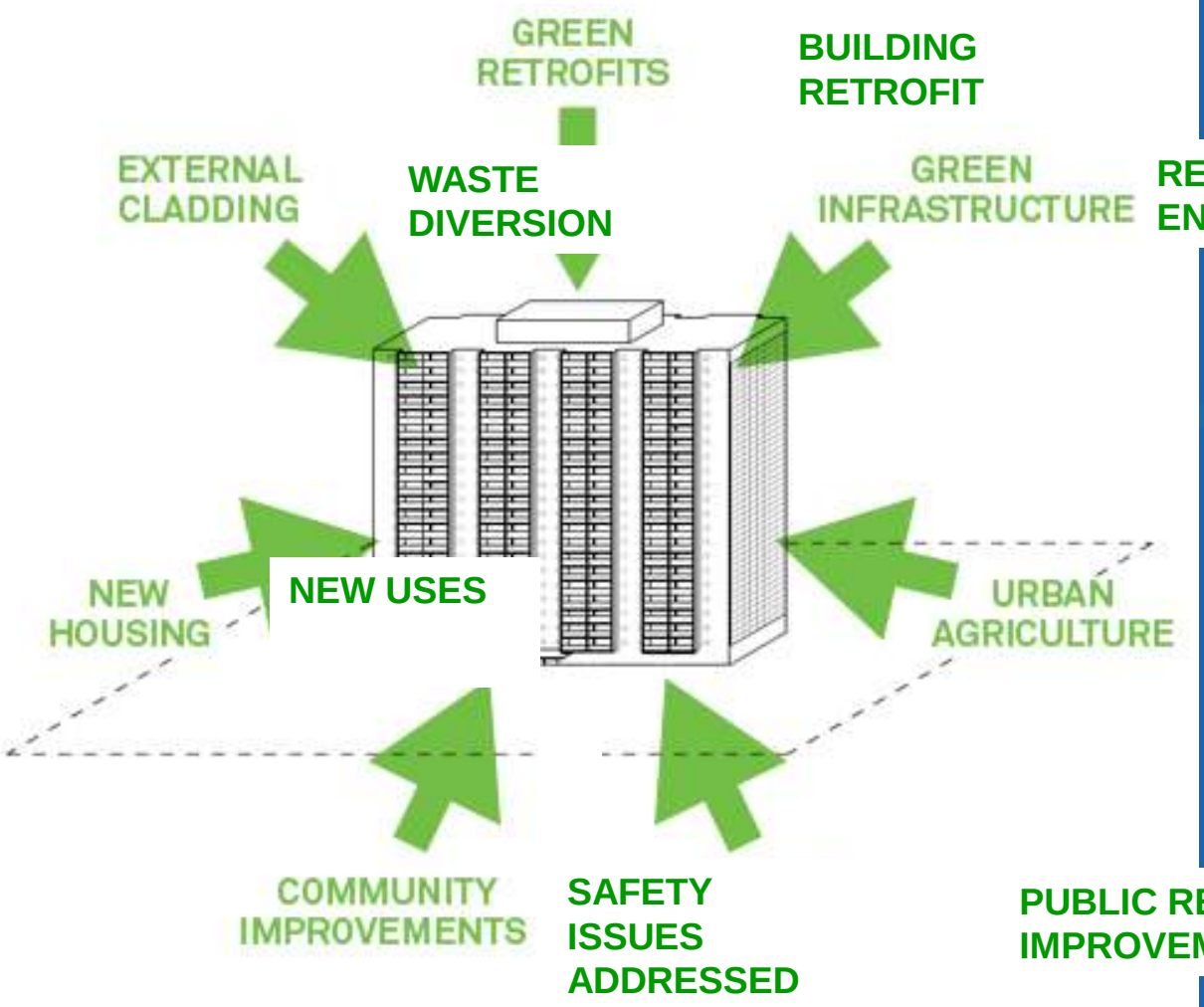
CIF CONTINUOUS IMPROVEMENT FUND

Apartments Lag in Recycling Participation

- City of Toronto has 5,000+ MR dwellings
  - 1000+ large concrete-frame towers
  - 50% of Toronto's population live in MR buildings
- CIF study examined 11 apartment buildings
- Opportunity to examine methods of varying intensity & investment to determine diversion impacts
- Outcome: recommended best practices to improve diversion programs in MR dwellings city-wide

CIF
CONTINUOUS IMPROVEMENT FUND


TORONTO


GREEN RETROFITS
BUILDING RETROFIT
EXTERNAL CLADDING
WASTE DIVERSION
GREEN INFRASTRUCTURE
RESIDENT ENGAGEMENT
NEW HOUSING
NEW USES
URBAN AGRICULTURE
COMMUNITY USE SPACE
COMMUNITY IMPROVEMENTS
SAFETY ISSUES ADDRESSED
PUBLIC REALM IMPROVEMENTS

TORONTO

Study buildings

- 11 apartment buildings in four areas of the city had almost 3,000 suites
  - population 10,000+
- four buildings privately owned; seven owned by Toronto Community housing

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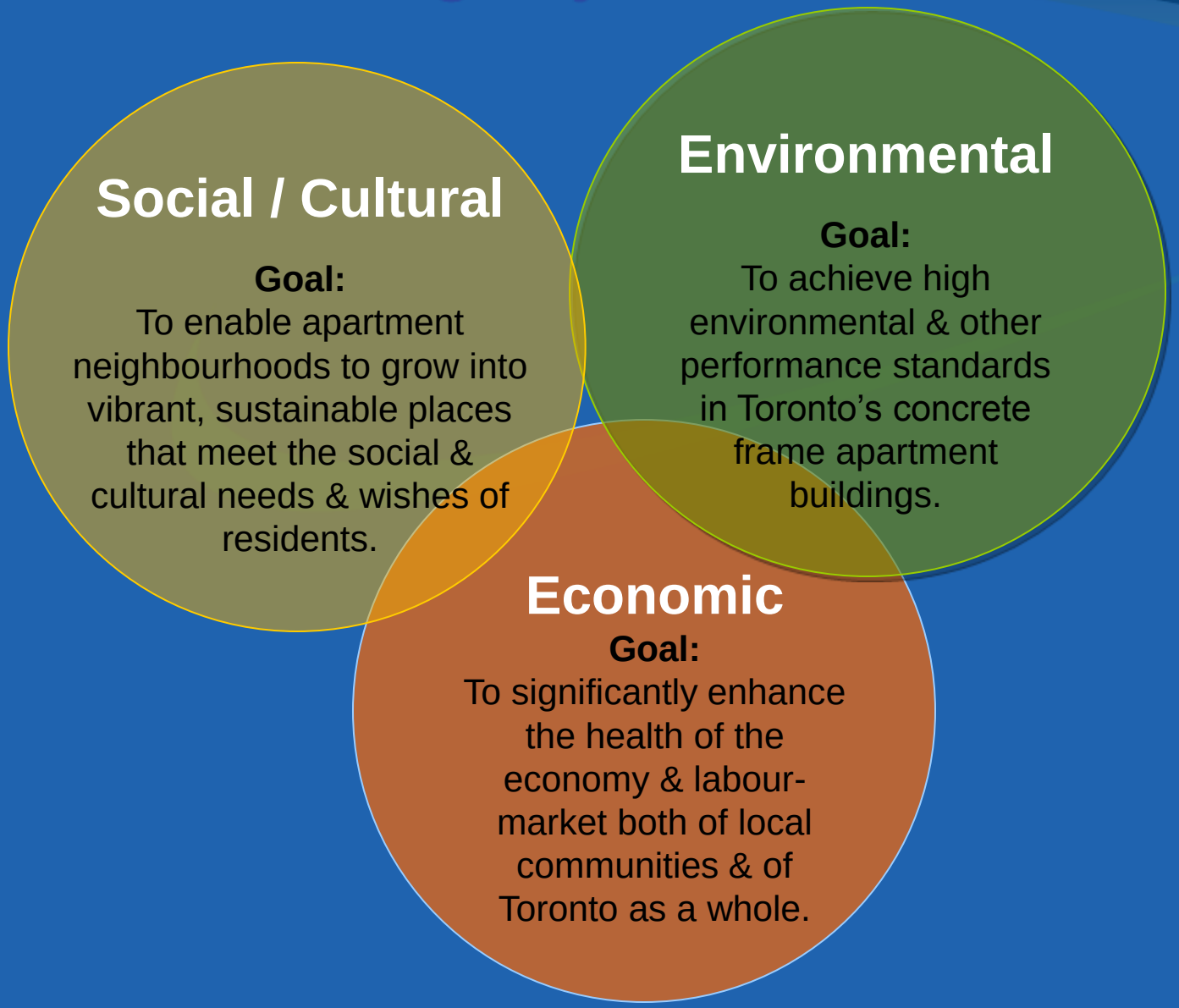
Study Process

- RFP to hire consultant with scope for each pilot building
  - determine current waste stream attributes
  - detailed feasibility analysis of waste diversion options
  - assess how buildings' current waste production & handling characteristics compares to general class of apartments built in 1960s &1970s
  - identify potential funding/incentive opportunities & required bylaw amendments, policy changes, etc. to implement recommended site actions
  - provide case study examples showing application of recommended opportunities & measures
  - evaluate feasible approaches for each site

CIF
CONTINUOUS IMPROVEMENT FUND

Three Interlocking Objectives



Study Findings

- ~5 buildings achieving less than 5% recycling rate
  - superintendents & property management who felt overwhelmed & burdened with their responsibilities
  - challenged in responding to tenant & building needs
  - recycling program not a factor in priorities' viewed as burden
- 4 buildings hovering around city average (15%) & 2 buildings far exceeding average recycling rate
  - enthusiastic & supportive building management & superintendents
  - understood need to continually communicate recycling program & demonstrate commitment

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Study Recommendations

- Assessed 32 potential approaches
- Tenant survey of actions most likely to get good outcome:
  - placing bins inside building (added convenience)
    - 86% strongly or somewhat agreed
  - providing information about impact on their building (e.g. $ cost for garbage, $ savings from recycling, % diversion)
    - 88% strongly or somewhat agreed
  - providing collection of recyclables on every floor
    - 80% strongly or somewhat agreed

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Study Approaches Evaluated for Each Site

Table 6.1: The "Short List" of Potential Approaches

Operational Adjustments	10	Contract Clauses
	11	Temporary Chute Closure
	12	Permanent Chute Closure
	13	Door-To-Door
	14	Floor-To-Floor
	15	Designated Chute Times
	16	Recycling Bags In Chutes
Financial Tools And Incentives	18	Tenant Incentives (Prizes, Draws)
	21	Building and Community Rewards
	23	Staff Incentives / Superintendent Rewards and Recognition
Compliance Approaches	24	Punitive Fines
	25	Enforcement / Violation Letters
	26	Security Cameras
Outreach	27	Third Party Community Groups
	28	The Ambassador Program
	29	Events
	30	Pledges

city-dev.toronto.ca/city_manager/pdf/tr_waste_diversion.pdf

Findings if Applied City-Wide

- Diversion rates for scenarios evaluated range from 30% – 47%
- Toronto Tower Renewal pilot buildings could divert additional ~350 – 700 tonnes/year (est.)
- Extrapolating diversion rates to all of Toronto's 1,000 (est.) MR buildings in Tower Renewal Profile
  - could divert additional ~30,000 – 60,000 tonnes/year

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Perth's Multi-Res Program
CIF # 301

Alfred Von Mirbach
REIC Perth

Project Highlights

- Project goal:
  - engage larger apartments in recycling
- Anticipated impacts:
  - increased capture rate
- More information:
  - alfred@ecoperth.on.ca
  - 613 267 6463
  - www.perthcomposts.com

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Project Description (1)

- Inventory existing services & site conditions
- Offer 360 litre Yellow Carts & Blue Carts at cost (CIF subsidized) to all apartments
- Offer cart labels & signage (free)
- Offer two free in-unit reusable bags per unit (one Yellow Bag & one Blue Bag)
- Provide each unit with an apartment-specific InfoCard

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Project Description (2)

- Approached 22 buildings (ones with central waste collection) - a total of 500 units
- 70 Yellow Carts & 30 Blue Carts ($59/cart)
- 1,000 in-unit bags ($1.85/bag)

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Results

- 13 of 22 buildings are now on stream
- 8 buildings took carts (26 blue, 25 yellow)
- 8 buildings took in-unit bags (244 total)

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Issues

- Very time-consuming
- Absentee landlords
- Surprised at Yellow/Blue cart ratio
- Surprised at low bag take up
- Very hard/expensive to get small runs of bags & yellow carts

- Will require on-going work:
  - quantify diversion
  - get more buildings on board
  - see if participating buildings need more carts

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Samples

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Best Practice/CIF Impact

- Large apartments have now been offered convenient & cost-effective ways to recycle
- Half of the targeted units are now on board
- Will need to work with remaining units (management &/or residents) to get them on board

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Questions

"Ask a Question" at console bottom right

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Mid Size Transfer of Recycling

Steve Whitter, City of Toronto

Overview

- Best Practices – MRFs more efficient at larger sizes
  - >40,000 TPY
- Small & mid-size programs do not generate the tonnage of BB material to have own MRF
- Transportation of BB material is the issue for most programs
- Consolidation & compaction are keys to transport efficiency

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Today's Session

- Examines the CIF's investments in mid-sized transfer infrastructure
- Project related goals include:
  - improving program efficiency
  - investment in municipal infrastructure
  - demonstrating flexibility for programs & promoting multi-municipal cooperation
  - providing operational experience/information of a specific system

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Today's Speakers

- David Pressey, Haldimand County
- Marcel Cardinal, City of Timmins
- Mike Mostow, City of Kenora

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CONTINUOUS IMPROVEMENT FUND

CRTS – Operational Update

CIF Project #241

David Pressey
Haldimand County

Project Highlights

- *Project goal:*
  - reduce long term operating costs
- *Anticipated impacts:*
  - simplify residential set-out practices, increased tonnes collected, & reduced processing & collections costs
- *More information*:
  - dpressey@haldimandcounty.on.ca
  - www.haldimandcounty.on.ca

CIF CONTINUOUS IMPROVEMENT FUND

Needs Assessment

- Why this project?
  - Haldimand-Norfolk jointly owned MRF
  - CIF Project #103 – MRF Study
  - move to a 2 stream collection system

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Project Description

- Transtor transfer system
  - 2 − 53yd Transtors (fibres/ containers) with 3 53’ compaction trailers
  - located at the CWMF
  - operated by curb-side drivers
  - haul to Niagara MRF for processing/marketing
- MRF optimization study, looming EPR, larger MRFs within our viable market area – economy of scale

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Construction

- At landfill−Greenfield site−flat
- Needed site work to accommodate grade
- Construction July–September 2010
- Costs
  - site work: $840,000
  - equipment: $860,000
  - total capitol: $1,700,000
- Commissioned October 2010

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Operational Issues

- Operations Q1
  - wind blown litter
  - miscellaneous mechanical issues with trailers
  - rams jamming–design flaw on top of the ram
  - unable to maximize tonnages on transfer trailers
- Operations Q2
  - wet/frozen loads in curbside trucks
  - BB materials behind the ram – reprogramming
  - scheduled hauling of transfer trailers

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Impacts/Anticipated Results

- Impacts
  - collection contract – net ZERO
  - transfer operation & processing – net POSITIVE
  - tonnes collected – net POSITIVE
- Anticipated Results
  - reduction in curbside collection costs
  - reduction in transfer operation costs

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Results

- System operating well so far; need some improvements:
  - collection contractor operating system– not recommended
  - operations are evolving process
  - learning curve – getting & maintaining weights in trailers
  - trailer haulage is a key
- Transferring BB materials at roughly same cost as operating old MRF – with reduced capital output
- Flexible BB material handling

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Best Practice/Continuous Improvement Impact

• Streamlining curbside set out procedures	**YES**
• Development of transfer station to replace MRF	**YES**
• System operation with curbside collections drivers	**NO**
• Joining forces with Niagara to process BB materials	**YES**

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Next steps

- Project results to be accounted for within the final report due to the CIF early 2012
- Determine actual cost & effectiveness of transferring via Transtors System compared to the proposed impact

THANK YOU

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The City of Timmins Waste Management System
CIF Applications #162 & #173

Marcel Cardinal, City of Timmins

Project Highlights

- *Project goal:*
  - provide the most efficient collection, transfer & disposal system for our municipality
- *Anticipated impacts:*
  - increase BB material recovery, cost effective transportation for processing & provide regional alternative for other programs
- *For more information*:
  - marcel.cardinal@timmins.ca
  - www.timmins.ca

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Why this Project?

- Current recycling contract expiring – August 2011
  - current price low = big price increase in new contract
  - little control on processing materials & lack of processing facilities in local area
  - no competition between contractors for collection of material
- Opportunity to move recycling collection in house
  - aging waste collection fleet that needed replacement
  - staff issues – move to automated collection

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Project Description

- Waste System Evaluation (CIF 129)
  - evaluation of options, report provided by AECOM
- Transfer of Recyclables (CIF 163)
  - construction of a transfer facility
  - Transtor system to haul single stream to a designated recycling facility
- Automated Recycling Collection (CIF 172)
  - automated collection system – municipal collection
  - increase recycling capture – expand acceptable materials

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What this means

- Control of system = control of costs
- cost savings through cost avoidance from contractor pricing
- Know where recycling is being processed & able to expand program
- Additional tonnage to the BB – estimate 10%
- Expansion of the program - include multi-residential, compatible with new system
- Timmins can act as regional transfer hub

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Progress to Date

- Progress to date//results/findings
  - Transfer Facility completed in December 2010
  - began transferring materials to Sudbury January 2011
    - learning curve - operation of system
    - current contractor using facility
  - haulage contract needs to go through Council
  - processing options being investigated
  - planning the implementation of automated collection in July

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Results/Findings

- Transfer Facility
  - capital cost $1 million
    - 2 Transtors - $203,720
    - 2 Trailers - $317,672
    - remaining site work

    $431,156

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Results/Findings 2

- Haulage
  - issues with trailer weights – average 17T in one 15T in other
  - lower weights = increased cost – rate to Sudbury = $900 load
- Processing
  - limited processing options – locations
    - Sudbury – no negotiation, high price
    - Rouyn-Noranda (QC) – composition of materials

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Next Steps

- Transfer Operations
  - iron out the bugs with trailers
  - need more time to get proper data baseline & better numbers
- Processing
  - finalize processing location & develop agreement

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Next Step

- Automated Collection
  - implement in July – big change
- Reporting
  - report on transfer facility – end of 2011
  - collection – end of 2012

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Co-op Haulage Kenora, Dryden Recycle Haulage CIF # 288

Mike Mostow

Fleet/Solid Waste Supervisor

City of Kenora

Project Highlights

- *Reduce Recycle Haulage Cost for Kenora & Dryden*
- *Development of efficient co-operative recycling transportation system*
- *mmostow@kenora.ca*
- www.kenora.ca

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Why This Project?

- Transportation & handling of recyclables expensive
  - Reduce haulage cost = lower program costs
- Dependence on contractors major issue
  - Lack of competition & responsiveness
- Distance to markets
  - Kenora To market 250 kms
  - Dryden to market 400 kms

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Project Outline

- Co-operative haulage of recyclables – Kenora & Dryden
  - Compaction trailer for Kenora – rebuild transfer
  - Upgrade Dryden's trailer to 53 foot
  - New Tractor to move both trailers – Kenora own/operate
  - Develop route schedules
  - Council approved agreements, both Cities
- Began haulage in November 2010, new trailer in Dryden February 2011

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Impacts of New System

- Reduced transportation costs
  - Dryden's cost per load reduced by $380.00
  - Kenora’s cost per load reduced by $220.00
- Increased payload on new trailers
- Onsite loading cost reduced (CIF 187)
  - Kenora’s loading cost reduced by $120.00 per load
  - Kenora’s capture rate increased

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Progress Report

- Improved load tonnages
  - paper loads same (load restrictions) 20 tonnes
  - OCC up 1 tonne per load on average to 12.5 tonnes
  - co mingle up 2.5 tonnes per load on average to 14.5 tonnes
- The system is working but we can foresee operational problems
  - pin to pin times need improvements
  - maximize Truck & Trailer weight distribution
  - operations of the compaction trailer

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Best Practice in Action

- Best practice/continuous improvement impacts
  - reduce Kenora & Dryden recycle program costs
  - multi- municipal cooperation – working with other communities in area
  - improved marketing tonnages for future contract procurement with processors
  - opens the door to actively campaigning for better recycle efforts from the community

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Next Steps

- Continue system improvements
  - working with trailer supplier
  - more data collection
- Expand services to surrounding towns
  - potential additional equipment for improved operations & optimization
  - build a “regional system”
- Co-operative approach to contract procurement with processors
- Final report to CIF by end of the year

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Regional Setting

Tractor & Trailer

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Dryden Trailer

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Questions

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Welcome Back

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Today's Final Session

Mike Birett, CIF

Ontario Blue Box Recyclers Training – Program Update

E&E Fund PN 341

Phil Jensen, Manager Waste Diversion & Planning

In a Nutshell

- The Ontario BB Recyclers Training Program
  - approved by MIPC in 2008, $1.75M budget for development & delivery
  - developed in 2008 & 2009
  - pilot deliveries in 2009 & 2010
  - content teams & faculty consist of municipal professionals
  - curriculum by Stantec Learning Solutions, Ottawa (Hogan/MWA developed Contract Management)
  - delivery coordinated by MWA
  - GENIVAR assists with project management

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Origins

- E&E Fund #226, Blue Box Program Enhancement & Best Practices Assessment Project, 2007
  - Training of Key Program Staff in Core Competencies
    - cites benefits, concludes that there was no coordinated recycling management training in Ontario
- E&E Fund PN 311
  - confirmed lack of dedicated BB courses & a need for such training
  - outlined an implementation strategy

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Current Status as WDO BP

- Now recognized in WDO Datacall through the Best Practice questions, which require
  - recycling-specific, 4 days or more, individually or collectively
  - training received from an industry association, post-secondary educational institution or recognized body which offers a certificate of completion or certification
  - primarily dedicated to BB recycling
    - minimum 50% by content &/or time

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Course Components

- Fundamental Principles in Recycling Planning
  - online component, 3 hours, “common baseline”
  - 4 day classroom session, planning, markets, collection, processing, P&E, policies & monitoring
  - 2 hour exam
- 4 “Specialized” courses
  - data management, contract management, P&E, & markets & marketing
    - online or pre-reading component
    - 2 day classroom
    - 8 hour assignment

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Results to Date - Course Delivery

- Fundamental Principles delivered 7 times
  - 157 trained
  - June delivery almost sold out, will bring attendance to within 93% of target (200 in 3 years)
- Specialized delivered 7 times
  - FP is the prerequisite (waived for pilots)
  - 99 trained
  - will reach 140 target if 4 fall offerings attract 10 each
- 97 municipalities trained
  - 70% of programs targeted, currently at 45%

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Continuous Improvement – Interim Progress Report

- September 2010, GENIVAR
  - program review, including student survey (62/100) & instructor interviews
  - program adjustments identified (exam review, assignment consistency, instructor training, participant feedback, operational adjustments)
- "I would recommend this course to others"
  - agree or strongly agree: 75 to 95%
- "The course met my expectations"
  - agree or strongly agree: 81 to 100%

4 day "Fundamentals" course exceeded 90% in both cases

Training & Continuous Improvement – Updated Needs Study

- February 2011, GENIVAR & Alex Hogan
  - e-survey (open) & stakeholder interviews
  - findings:
    - support strong, municipal & non-municipal
    - main barriers are time & cost
  - Recommendations
    - attraction: incorporate into a broader certification program, promote professional development aspect
    - access: continue holding throughout the province, adapt to an on-line format
    - expand the audience, add subject matter

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Training & Continuous Improvement – Future Delivery

- RFP for Training Delivery 2012 through 2014
- Issued in February 2011, closed mid April
- RFP principles:
  1. Municipal audience to have ready access but expand to include non-municipal audiences
  2. Delivery on a self-sustaining basis
  3. Integrate into a certification program
  4. Performance measures & training targets
- 2 Proposals received & evaluated
- Report to MIPC in late June

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Next Steps

- Next sessions
  - Fundamental Principles
    - June 20 through 24, Toronto
  - Specialized
    - Fall 2011
- Contact Carrie Nash (MWA) carrie@municipalwaste.ca

- RFP for Training Delivery 2012 through 2014
  - pending MIPC decision negotiations for an agreement could take place over summer

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Learning & Living Green: Teaching Our Children; Investing In Our Future

Learning & Living Green Program & the Mobile Education Unit
CIF Projects # 276 & 277

Willma Bureau
County of Simcoe

Project Highlights

- *Project goal:* increase residential waste diversion recyclables recovery rates with
  - school collection program consistent with residential curbside programs
  - outreach using unique P&E tool
- Anticipated impacts:
  - increased awareness of acceptable materials
  - increased participation/capture rates
  - reduced residuals; lower operating costs & increased cost-effectiveness
- More information:
  - willma.bureau@simcoe.ca/ www.simcoe.ca

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Why these Projects?

- Children play a significant role in influencing adults with respect to environmental initiatives
- The cornerstone of effective education is experiential learning
- Learning & Living Green (L&LG) ensures consistency between schools & residential program

Learning & Living Green

Project Description

- Key features
  - Living & Learning Green is a partnership with local school boards
  - County provides collection of recyclable & organic materials at more than 100 schools
  - mobile education unit (MEU) is a 30’ trailer featuring various interactive activity stations

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What We Did to Complete the Projects

- Obtained budget approval & funding
- Developed partnership agreements with local school boards including requirement for school curriculum
- Sourced vendors
- Provided various specifically targeted P&E including brochures, posters, & personal outreach
- Developed concepts, provided content & creative input for MEU

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Anticipated Results

- Increase waste diversion in schools leading to improvements in residential sector
- Estimated increase of residential BB tonnages of ~2% or 500 tonnes annually
- Decreased residuals
- Overall net operating cost decrease of ~$2.20/tonne

Results to Date/Findings (1)

- 350+ tonnes of recyclables collected from schools
  - 91% increase over the same period last year
- Survey results indicate that:
  - 60% of children assist parents with recyclables sorting
  - 83.5% of children have a better understanding of what's acceptable since program inception
  - 72% of children say they will recycle more at home due to the program

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Results to Date/Findings (2)

- School audit results show
  - 89% recycling capture rate
  - 2.5% contamination rate
- Since programs were launched -- 4,000+ faculty, staff & students have received outreach
  - school presentations
  - MEU visits

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What We Have Learned (1)

- L&LG operates smoothly with communication between boards, schools, & the County
- Importance of extensive outreach to faculty & custodial staff prior to program launch
- Illegal dumping into recycling bins an issue at program commencement

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What We Have Learned (2)

- MEU: difficult to manage whole schools effectively
  - targeting grades 3 – 5 students keeps the messaging fresh
- MEU is extremely popular, activities appeal to people of all ages

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Best Practice/Continuous Improvement Impact

- BB Program Enhancement & Best Practices Assessment: :
  - "one of the factors of an effective P&E program which positively affects program performance is one that is collaboration with schools, civic organizations & youth groups. "
  - "campaigns that include a program for ongoing & sustained contact with target audiences generally have greater impact than a one time blitz. Year round exposure is the target."
- L&LG & MEU represent continuous improvement by providing a multi-pronged & cost effective approach to recycling education.

Next Steps

- Children will influence recycling habits of their parents as result of L&LG & memorable MEU experience
- Ongoing monitoring & measuring including:
  - school waste audits
  - tonnage analysis
  - take home audit activities
  - MEU visitor counts & feedback forms
  - assessment of outreach efforts

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MEU Specs

- 30 ft. insulated gooseneck trailer
- Towed by a 1 ton bio-diesel fuelled truck
- Remote start gasoline generator plus electrical land line
- Activity stations:
  1. Green Grocery–teaches benefits of 3Rs at point of purchase
  2. The Smart Home–reinforces waste diversion in all areas of home
  3. Lifecycle Lane – discusses benefits of waste diversion
  4. The Waste Plant – teaches proper sorting to increase capture rates & decrease contamination

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Questions

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How Can CIF Assist You?

How Can We Help Your Municipality?

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www.wdo.ca/cif

Ontario Recycler Workshop

Thank you!