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CONTINUOUS IMPROVEMENT FUND

Welcome to the Ontario Recycler Workshop Spring, 2009

John Giles, City of Kingston

Waste Diversion Ontario | AMO | TORONTO | Stewardship Ontario

Firsts from the "Limestone City"

2

- 1st Parliament of the Province of Canada in 1841
- 1st Prime Minister in 1867—Sir John A. Macdonald
- 1st municipality requiring LEED certification for all new municipal construction & retrofit projects
- 1st municipality to ratify sustainable procurement principles to evaluate purchases: "Kingston Protocol"
- 1st of 1000 Islands at start of St. Lawrence River
- 1st for sailing: freshwater sailing capital of the world
- 1st for diving: among best freshwater wreck diving

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City Hall from Confederation Basin

3

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Start of the 1000 Islands

4

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Racing at Collins Bay

5

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Home to many famous people

6

- John Gerretsen (Minister of the Environment)
- Peter Milliken (Speaker of the House)
- Ken Linseman (Flyers, Oilers, Bruins)
- Doug Gilmour (Blues, Flames, Leafs, Devils…)
- Kirk Muller (Devils, Canadians, Islanders, Leafs…)
- Don Cherry (all you kids out there know "Grapes")
- Simon Whitfield (Gold in 2000 Olympic triathlon)
- Bryan Adams
- Tragically Hip

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New Years Eve in Springer Market Square

7

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Many Outstanding Institutions & Sites

8

- 7 federal correctional facilities
- Queens University (founded 1841)
- Royal Military College (founded 1876)
- St. Lawrence College (founded 1969)
- Canadian Forces Base Kingston
- Fort Henry (UNESCO World Heritage site)
- Rideau Canal (UNESCO World Heritage site)
- Wolfe Island wind project—86 turbines generating up to 200 MW of renewable energy for 75,000 homes

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Fort Henry Guard

9

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Welcome to Today's Participants

10

- 80 people in room (expected)
- ~70 people registered for webcast
- In the audience:
  - recyclers & other municipal staff
  - Councilors
  - industry stewards
  - consultants
  - other BB program stakeholders

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Special thanks!

11

- Thank you to:
  - Paul Wash, PhotoSave Digital Imaging, for free use of his copywrited pictures
  - Norterra Organics for compost facility tour
  - ORW speakers
  - all participants—in-house & onscreen

Enjoy the rest of your day!

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Ontario Recycler Workshop

Andy Campbell
CIF

Waste Diversion Ontario | AMO | TORONTO | Stewardship Ontario

Welcome

13

- 8th Ontario Recycler Workshop (ORW)
- Presented by CIF & partners
  - Waste Diversion Ontario (WDO)
  - Stewardship Ontario
  - Association of Municipalities of Ontario (AMO)
  - City of Toronto
- Focus on recycling enhancements
  - results of CIF & E&E Fund & special projects
  - special session featuring stewards & activities that affect Ontario (ON) MRFs

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Today's Program & Housekeeping

14

- Full day session (to ~3pm)
  - program & project updates
  - special segment—continuing & emerging issues
- For webcast audience
  - we move slides
  - question "chat box"
  - sound slider
  - enlarge slide
- Slides & webcast archive available after ORW

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Morning Sessions

15

- Session 1: Program Updates:
  - CIF update
  - Stewardship Ontario news
  - E&E Fund update
- Session 2: Making multi-residential recycling work
- Morning break
- Session 3: Developing regional capacity for recycling
- Break for lunch
  - live demo of interactive P&E website

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Afternoon Sessions

16

- Session 4: Ontario recycling training program update
- Session 5: Northern Ontario projects
- Afternoon break
- Session 6: Continuing & emerging issues
- Wrap up

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Thank You to All ORW Contributors!

17

- Marcel Cardinal, City of Timmins
- Lyle Clarke, Stewardship Ontario
- Rick Clow, Quinte Waste Solutions
- Vivian DeGiovanni, Municipal Waste Association
- Glenda Gies, WDO
- John Giles, City of Kingston
- Catherine Habermebl, Niagara Region
- Steve Irwin, Township of Terrace Bay
- Phil Jensen, Stewardship Ontario
- Laurie Lashbrook, Lashbrook Marketing & PR
- Eleanor McAteer, City of Toronto
- Charlie Mignault, Norterra Organics
- John Rhodes, City of Toronto
- Christian Shelepuk, Wal-Mart
- Steven Sikra, P&G
- John Smith, Trow Consulting
- Jay Stanford, City of London
- Francis Veilleux, Bluewater Recycling Association
- Cameron Wright, EWSWA
- CIF staff Anne Boyd, Mike Birett & Clayton Sampson

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Continuous Improvement Fund Update

Andy Campbell
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Waste Diversion Ontario · AMO · TORONTO · Stewardship Ontario

Fund Summary

19

- CIF fully operating for 13 months
- Successfully allocated all first year funding
- 51 approved projects
- $12.9M funding approved
- 20 projects ($ 4.4M) currently under review
- Over 100,000 tpy new capacity at MRFs
- 17 geographic optimization projects

$14M still available for 2009

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Recent Project Approvals

20

Municipality	Project	Results	Approved Funding
York Region	MRF upgrade	Added 35,000 tpy Avoided 24 sorters	$1 million
London	Regional MRF capacity	Added 35,000 tpy Over $20/t savings	$4.3 million
Bluewater Recycling Association	New MRF equipment	Added 20,000 tpy 10% savings	$2 million
Niagara Region	MRF upgrade	Added 19,000 tpy fibre Reduced out throws by 3% $400k /yr savings	$1.17 million
Bruce County	Eddy current	$52k /yr savings	$49,550
Quinte	Multi-res containers	Added 51 kg/unit/yr $11k /yr savings	$61,700
Timmins	Bbox transfer station	$220k /yr savings	$436,000

New Opportunities for Material Processing

21

- WDO owns 35,000 tonnes per year of capacity in London for other municipalities to use (2011)
  - separate fiber and container lines
- 20,000 tonnes per year capacity for single stream material in Bluewater's facility (2010)
  - some capacity available on first shift & full second shift available

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CIF's Continuous Improvement

22

- CIF needs to meet its stakeholders' requirements
- Undertaking a customer satisfaction survey
- Require input into the development of the 2010 priorities
- Improve program awareness & potential funding opportunities

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2009 CIF Priority Budget

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Priority Area	Allocation of Budget
Increase capture of existing materials	12%
Increase capture of new packaging types	18%
Geographic optimization / rationalization	42%
Technology improvements	21%
Other	7%

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CIF Approach

24

- Increase effectiveness & efficiency
- Increase diversion
- Transferability to other municipalities
- Handle a changing mix of materials
- Define best practices (BP)
- Present a good financial business case
- Implement program change, not just study change
- Assist municipalities to implement BP

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Project Application Evaluation

25

- Weighted evaluation scorecard (see CIF website)
  - 6 main criteria matching fund priority areas
  - 23 criteria overall
- Payback less than 8 years required
- Funding above minimum based on total score
- Revised application on website (coming soon)

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Potential Projects

26

- Collection best practices
  - streams, vehicle type, containers
- Establishment and enforcement of policies
- Measurable objectives for P&E
- Integrated waste management plans
- Standardized performance measurement system
- Joint municipal projects
- Co-operative marketing
- CIF will work with municipalities to fund & construct BB transfer stations
- Multi-residential

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CONTINUOUS IMPROVEMENT FUND

Contact

Andy Campbell
Mike Birett
Clayton Sampson
Anne Boyd

www.wdo.ca/cif

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The Future of Blue Box

Lyle Clarke
Stewardship Ontario

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E&E Fund Highlights

Phil Jensen
Stewardship Ontario

What I will Cover

30

- E&E Fund activity review
- Status of E&E Fund projects
- The future
  - CIF in full swing
  - E&E Fund project evaluation

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E&E Fund Commitments by Priority Area

31

Priority Area	Number of Projects	Project Value	% of Total Value
MRF Rationalization	16	$5,476,961	27.1%
Cost Containment	14	$3,484,066	17.3%
Benchmarking & Waste Audits	13	$2,491,198	12.3%
Multi-Residential Recycling	9	$2,191,056	10.9%
Communication & Education	11	$5,412,185	26.8%
Innovative Financing & Compliance	7	$264,992	1.3%
Other Projects	5	$856,094	4.2%
Total	75	$20,176,552	100.0%

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E&E Fund Spending by Geographic Area

32

Geographic Area	% of Total Funding	% of Hhlds Served	% BB tonnes Marketed
GTA	31.7%	41.9%	45.1%
Southwestern	13.2%	52.0%	50.6%
Eastern	8.9%		
North	4.5%	6.1%	4.3%
Province-wide	41.6%		
Total	100%	100%	100%

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Status of Projects

33

- 4 years, ~20M allocation approved
- 75 projects in total
  - completed projects: 59
  - projects in progress: 16
    - expect completion by end of 2009: 13
    - completion beyond 2010: 3
- As projects completed, fund reconciled
  - unspent funds will be transferred to CIF
  - MIPC approved transfer of $649,959 in April

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To be Completed…

34

- Optical sorting technology (OST) projects
  - testing & monitoring over 4 seasons
- Recycling training strategy implementation
- Multi-family (MF), Toronto
- Infrastructure & capital projects
  - MRF upgrades (York, Kingston, Northumberland)
  - depot collection (Peterborough County)
- Support projects (Municipal Coordinator)

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Project Reporting

35

- Recently completed
  - Essex-Windsor multifamily database (PN 278)
  - Discussion Papers & Implementation Manual on Sustainable Financing Systems (PN 160)
  - London Multi-Family Pilots (PN 197)
  - Toronto Recycling Container Capacity Pilot (PN 60)
- About to be released
  - QWS Clear Bag pilot (PN 312)
  - Peel Multi-Family On-Board Weigh Scale Pilot (PN 123)
  - Woodstock Transfer Station (PN 247)

www.stewardshipontario.ca/bluebox/eefund

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Communicating E&E Fund Results

36

- Project evaluation in progress
- Based on project-by-project evaluation process & agreed metrics
  - cost/tonne reduction; tonnage increases; payback period; return on investment; other results
  - what worked/didn't & why; identify strongest elements for future work
  - determine how to maximize/build on E&E Fund investment
- Continue to report at future ORWs

Results to be posted

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Questions?

CONTINUOUS IMPROVEMENT FUND

Making Multi-residential Recycling Work

Anne Boyd
CIF (seconded from City of London)

Multi-residential Recycling: Quantifying the Challenge

- Multi-residential (MR) housing: 25-30% of provincial total
  - 1.2M households (hh)
- Currently achieves ½ capture of single-family hh
- Potential tonnes at 60% ≈100,000 te

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CIF 113—MR Coordinator (1)

- Up to 2 year project, 2009-10
- Administrative & technical support to municipalities
- Translate findings & recommendations from completed studies into program implementation
- Assist municipalities with accessing CI Funds for MR projects & identify areas for CIF directed projects to benefit all

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CIF 113—MR Coordinator (2)

- Focus Areas:
  - assist smaller municipalities
  - better 'metrics'
  - P&E
  - 3Rs Regs Compliance
  - bulk purchasing
  - increase capacity
  - model language for lease agreements to building design for diversion

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Continuous Improvement in MR Recycling E&E Fund, CIF Projects & other Initiatives (1)

1. Compliance—Reg 103/94
   - MRWG–MOE Information Sharing Protocol to target non-participants
   - EWSWA (156)
2. Database Development—Get to know your MR
   - EWSWA (278 & 156*)
   - London (197)
   - MRWG & AMRC (18)
   - Peterborough (124)
3. Benchmarking Performance—How are we doing?
   - MRWG & AMRC (201 & 301)
   - Peel (123)
   - Peterborough (124)
   - London (197)
   - EWSWA (278 & 156)
   - Toronto (32)

**** Green text denotes CIF projects***

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Continuous Improvement in MR Recycling E&E Fund, CIF Projects & other Initiatives (2)

4. Convenience—competing with garbage
   - 'as convenience' clause in several programs including Toronto, Peel, York
5. Guidelines for new buildings—designing for diversion
   - under development in several programs
   - building guidelines (by-laws) for waste management systems
6. 'Adequate capacity' —overflowing bins?
   - London (187) – Waste Audit Analysis (301)
   - Quinte (149) – Elliot Lake (241)
   - MOE target for 'adequate capacity'
   - Toronto 'adequate capacity' by-law
   - Others setting minimum standards

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Continuous Improvement in MR Recycling E&E Fund, CIF Projects & Other Initiatives (3)

7. Financial incentives—pay-per-bin
   - Several programs are driving diversion with fee-based incentives
   - Toronto volume-based fees (32)
   - Peel's weight-based (123)
   - Others include Ottawa, Orillia
8. Communication & outreach
   - Extensive focus group work (199)
   - Toronto 3Rs Ambassador Project (32)
   - Markham (186)
   - CIF Co-operative P&E (166)
   - Toronto Tower Renewal
9. 'Education, training' & support for Municipal Staff
   - Multi-res Working Group
   - AMRC Admin support (215)
   - CIF—MR Coordinator (113)

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In This Session

- Cameron Wright, Essex Windsor Solid Waste Authority
  - Increasing Recycling Compliance through Outreach & P&E (CIF #156)
- Eleanor McAteer, City of Toronto
  - Mayor's Tower Renewal
- Laurie Lashbrook, Lashbrook Marketing & PR
  - Multi-municipal Promotion & Education Project (CIF #166)
- Rick Clow, Quinte Waste Solutions
  - MR Recycling: A Work in Progress, Quinte Collection Upgrades (CIF #149)

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CONTINUOUS IMPROVEMENT FUND

Increasing Multi-Residential Recycling Compliance Through Outreach & P&E

CIF Project # 156

Cameron Wright

Essex-Windsor Solid Waste Authority

Project Highlights

- *Project goal:*
  - increase number of buildings that participate in the program
  - increase amount of recyclables recovered from MR sector
- *Anticipated impacts:*
  - increase building compliance rate by recruiting 65%-85% of buildings that are not recycling.
  - attract additional 50-100 tonnes (t) of materials through site visits, promotion & education & in-unit containers.
  - completely populate MR database to enable further analysis of information
- *For more information:*
  - cwright@ewswa.org
  - www.ewswa.org

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Project Description

- Comprehensive database will allow us to better monitor buildings in the long term
- In-unit containers & promotion & education (P&E) to entice non-participating buildings to recycle
  - for how long is questionable.
  - P&E developed under co-operative project (CIF 166)
  - depends on development of comprehensive, long-term P&E program
- Key is having a summer student(s) that will not take "no" for an answer.
- "Cold calling," site visits, visual recycling audits.

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Project Challenges

49

- Finding building contacts
- Completing the questionnaires
- Breaking chain of non-co-operation
- Providing information and opportunity prior to passing on to MOE
- City of Windsor strike may jeopardize summer completion

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Project Impacts

50

- Some increase in revenue from sale of new tonnes
  - Anticipate in the range of 200 – 700 tonnes
  - at $100 per tonne = $20,000 - $70,000 revenue
- Flat contract cost (8 years) no increases
- Marginal tonnage increase
- Other unknown impacts

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Anticipated Outcomes

51

- "Horse Before Cart" get a good data set
- Last change for many non-participants concrete repercussions
- Hope "hands-on" approach bolsters participation beyond objectives
- Hope complete data set holds many surprises

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Is This a Best Practice?

52

- Too early to tell—should provide good information on whether wide distribution of in-unit containers should be BP
- Should comprehensive MR database be a part of BP?
- Do incentives & P&E drive recovery or are they over-shadowed by other factors
  - such as limited building capacity?

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Next Steps

53

- Still populating database
- Site visits & visual waste audits
- P&E: in-unit container distribution
- Compile a list of non-cooperators for MOE
- Revised projection date to 2010 due to strike

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Mayor's Tower Renewal

Eleanor McAteer
City of Toronto

Waste Diversion Ontario · AMO · TORONTO · Stewardship Ontario

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Mayor's Tower Renewal

Mayor's Tower Renewal is a program to drive broad environmental, social, economic, and cultural change by improving Toronto's concrete apartment towers and the neighbourhoods that surround them.

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TRANSITCITY

25 in 5: Network for Poverty Reduction
www.25in5.ca

Live green Toronto

Clean City Beautiful City

Change is in the Air

safecitysafer

Agenda for Prosperity

TARGET 70

Toronto Bike Plan

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57

Cutting emissions from City operations by 30 percent from 1990 levels by:
- Powering Toronto City Hall with renewable energy
- Switching to biodiesel, hybrid electric and natural gas-powered buses, cars and trucks
- Upgrading over 500 city facilities to be energy efficient
- Converting 2,000 traffic signals to LEDs

Live Green Toronto
Investing $20 million to green Toronto's homes and businesses with innovative projects like shared geo-thermal systems and green roofs

Largest public transit expansion in North America
Transit City plan will add 120 km of modern light rail public transit

Deep Lake Cooling
Cold lake water cuts downtown office tower energy use by 90 percent

Toronto Green Standard
Our made-in-Toronto approach to Designing environmentally friendly buildings

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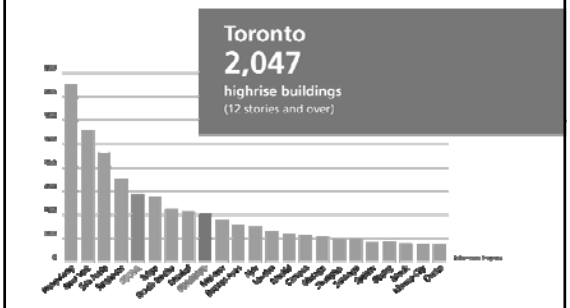

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Mayor's Tower Renewal

Towers Across Toronto

CIF

60

Mayor's Tower Renewal

- Ultimately Mayor's Tower Renewal provides us with the opportunity to drive change by achieving the combined and integrated results of:
- combating climate change, while stimulating local economic development;
- applying new and innovative green technologies and, very importantly,
- renewing, revitalizing, creating beautiful vibrant neighbourhoods across our city.

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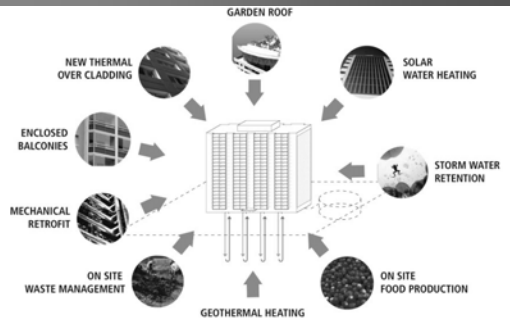

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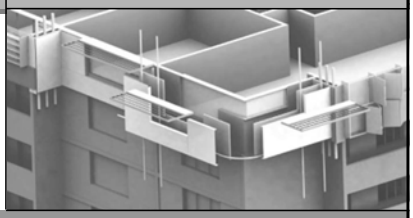

Structural retrofit can provide opportunities for multiple system upgrades

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64

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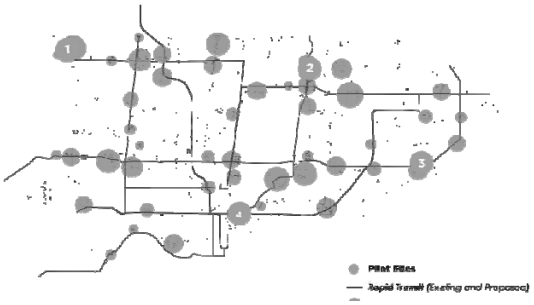

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Mayor's Tower Renewal

www.towerrenewal.ca

Eleanor McAteer, Project Director for Tower Renewal, emcatee@toronto.ca

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CONTINUOUS IMPROVEMENT FUND

Multi-residential Recycling

Laurie Lashbrook
Lashbrook Marketing & Public Relations

Project Highlights

- *Project goal:*
  - create high quality, customizable communication pieces for use by numerous municipalities to promote multi-residential (MR) recycling
- *Anticipated impacts:*
  - provide tools to launch/boost MR programs
  - empower municipal staff to create materials at their desk with DIY, on-demand approach
  - cost effective, professional, consistent materials
- *For more information:*
  - laurie@lashbrook.ca
  - www.lashbrook.ca

Lashbrook MARKETING & PUBLIC RELATIONS

CIF

Key issue/problem

- Municipalities unable to put adequate resources toward multi-residential recycling
- Managing information from 18 municipalities (18 logos & guidelines)
- Diverse recycling programs (1 to 5 streams, variety of containers & what can be recycled)
- Complicated message (awareness to action)
- Diverse target audiences
- Lack of information for superintendents & residents

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Project Description

- Development of promotion & education materials
- Customization available for each municipality
- E-marketing shop
  - web-based solution
  - login to access templates
  - key elements are 'locked down'
  - photos from library or desktop
  - municipal logos

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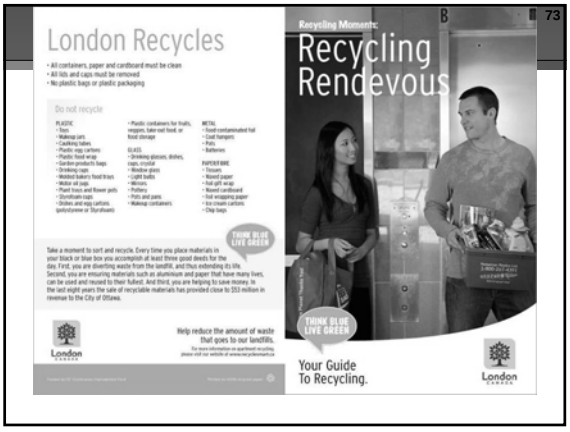
Costs

- 18 Municipalities at the table:
  - Ottawa
  - Durham
  - Waterloo
  - Niagara Region
  - London
  - Essex-Windsor
  - Kingston
  - Oxford County
  - Sarnia
  - Peterborough
  - Barrie
  - Brantford
  - Quinte
  - St. Thomas
  - Stratford
  - York Region Municipalities
- Represents 430,000 MR households @ $0.16/hhld/year
- Project Budget = $115,000–first 15 municipalities & up to $150,000 for additional programs
- Includes all design work–municipalities cover production (print) costs

CIF


73
London Recycles
• All containers, paper and cardboard must be clean
• All lids and caps must be removed
• No plastic bags or plastic packaging
Do not recycle
PLASTIC
• Toys
• Makeup jars
• Caulking tubes
• Plastic egg cartons
• Plastic food wrap
• Garden products bags
• Drinking cups
• Molded bakery food trays
• Motor oil jugs
• Plant trays and flower pots
• Styrofoam cups
• Dishes and egg cartons (polystyrene or Styrofoam)
• Plastic containers for fruits, veggies, take-out food, or food storage
GLASS
• Drinking glasses, dishes, cups, crystal
• Window glass
• Light bulbs
• Mirrors
• Pottery
• Pots and pans
• Makeup containers
METAL
• Food-contaminated foil
• Coat hangers
• Pots
• Batteries
PAPER FIBRE
• Tissues
• Waxed paper
• Foil gift wrap
• Waxed cardboard
• Foil wrapping paper
• Ice cream cartons
• Chip bags
THINK BLUE LIVE GREEN
Take a moment to sort and recycle. Every time you place materials in your black or blue box you accomplish at least three good deeds for the day. First, you are diverting waste from the landfill, and thus extending its life. Second, you are ensuring materials such as aluminum and paper that have many lives, can be used and reused to their fullest. And third, you are helping to save money. In the last eight years the sale of recyclable materials has provided close to $53 million in revenue to the City of Ottawa.
London
Help reduce the amount of waste that goes to our landfills.
Recycling Moments:
Recycling Rendevous
THINK BLUE LIVE GREEN
Your Guide To Recycling.
London


74
Ottawa Recycles
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• Waxed cardboard
• Foil wrapping paper
• Ice cream cartons
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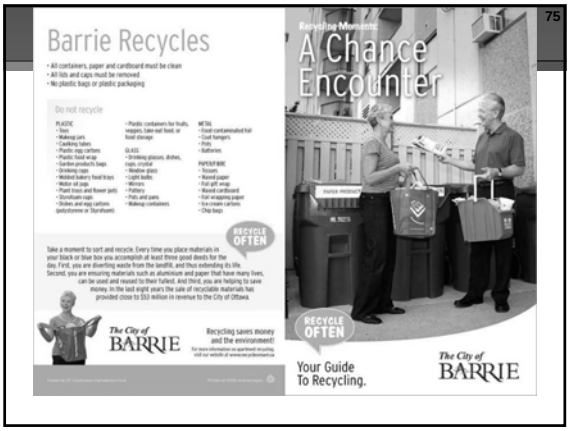
RECYCLE MORE
Take a moment to sort and recycle. Every time you place materials in your black or blue box you accomplish at least three good deeds for the day. First, you are diverting waste from the landfill, and thus extending its life. Second, you are ensuring materials such as aluminum and paper that have many lives, can be used and reused to their fullest. And third, you are helping to save money. In the last eight years the sale of recyclable materials has provided close to $53 million in revenue to the City of Ottawa.
Ottawa
Help reduce the amount of waste that goes to our landfills.
Recycling Moments:
A Family Affair
RECYCLE MORE
Your Guide To Recycling.
Ottawa


75
Barrie Recycles
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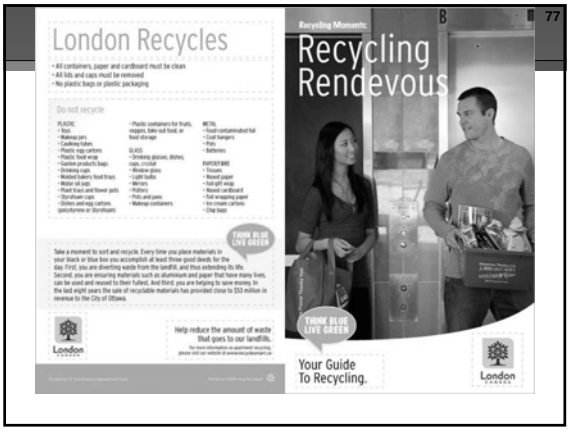
RECYCLE OFTEN
Take a moment to sort and recycle. Every time you place materials in your black or blue box you accomplish at least three good deeds for the day. First, you are diverting waste from the landfill, and thus extending its life. Second, you are ensuring materials such as aluminum and paper that have many lives, can be used and reused to their fullest. And third, you are helping to save money. In the last eight years the sale of recyclable materials has provided close to $53 million in revenue to the City of Ottawa.
The City of BARRIE
Recycling saves money and the environment!
Recycling Moments:
A Chance Encounter
RECYCLE OFTEN
Your Guide To Recycling.
The City of BARRIE


76
Recycling Guide.
Take a moment to sort and recycle. Here's what goes where.
Paper Products
Containers
Paper/Cardboard
• Newspaper and flyers
• Magazines and catalogues
• Telephone books
• Cereal and cracker boxes (liners removed)
• Shoe and laundry detergent boxes
• Fine paper such as writing paper, computer paper, paper pads, advertising mail
• Hard and soft cover books
• Paper egg cartons, toilet paper and paper towel rolls
• Paper gift wrap, greeting cards
• Clean paper shopping bags or paper packaging
• Pizza boxes (no pizza please!)
Containers
Glass bottles and jars for food and drink
• Metal cans
• Soft drink cans
• Aluminum containers (pie plates, roasting pans, etc.)
• Empty, clean paint cans
• Jar lids
• Plastic bottles, jars and jugs
• Tubs, tub lids (yogurt, sour cream, margarine containers, etc.)
• Milk, juice cartons
• Drink boxes
• Cardboard cans (Pringles, frozen juice, etc.)
Ottawa
Need More Information?


77
London Recycles
• All containers, paper and cardboard must be clean
• All lids and caps must be removed
• No plastic bags or plastic packaging
Do not recycle
PLASTIC
• Toys
• Makeup jars
• Caulking tubes
• Plastic egg cartons
• Plastic food wrap
• Garden products bags
• Drinking cups
• Molded bakery food trays
• Motor oil jugs
• Plant trays and flower pots
• Styrofoam cups
• Dishes and egg cartons (polystyrene or Styrofoam)
• Plastic containers for fruits, veggies, take-out food, or food storage
GLASS
• Drinking glasses, dishes, cups, crystal
• Window glass
• Light bulbs
• Mirrors
• Pottery
• Pots and pans
• Makeup containers
METAL
• Food-contaminated foil
• Coat hangers
• Pots
• Batteries
PAPER FIBRE
• Tissues
• Waxed paper
• Foil gift wrap
• Waxed cardboard
• Foil wrapping paper
• Ice cream cartons
• Chip bags
THINK BLUE LIVE GREEN
Take a moment to sort and recycle. Every time you place materials in your black or blue box you accomplish at least three good deeds for the day. First, you are diverting waste from the landfill, and thus extending its life. Second, you are ensuring materials such as aluminum and paper that have many lives, can be used and reused to their fullest. And third, you are helping to save money. In the last eight years the sale of recyclable materials has provided close to $53 million in revenue to the City of Ottawa.
London
Help reduce the amount of waste that goes to our landfills.
Recycling Moments:
Recycling Rendevous
THINK BLUE LIVE GREEN
Your Guide To Recycling.
London


78
RECYCLING MOMENTS:
the Rendezvous
RECYCLE SMART
Ottawa

CONTINUOUS IMPROVEMENT FUND

Multi-residential Recycling:
A Work in Progress
Quinte Collection Upgrades

Rick Clow, General Manager,
Quinte Waste Solutions

Project Highlights

- *Project goal:*
  - build & place up to 100 bins designed to receive OCC & glass bottles & jars
  - replace old, low to the ground, deteriorating metal bins prone to contamination & accidents
  - assist with sorting/collection in more ergonomic fashion
- *Anticipated impacts:*
  - increase capture via placement in new locations
- *For more information:*
  - rick@quinterecycling.org
  - www.quinterecycling.org

CIF

Background

- Quinte's BB program limited by size of MRF
  - glass (sorted to clear & coloured) kept separate in collection trucks
- MR is 10% of total hhlds in an urban-rural service area, multi-res units primarily use 360 litre (L) carts – can be collected by any curb side truck
- New bins keep glass containers in BB but safely located
- Provide more capacity for OCC & 'forces' flattening via an access slot

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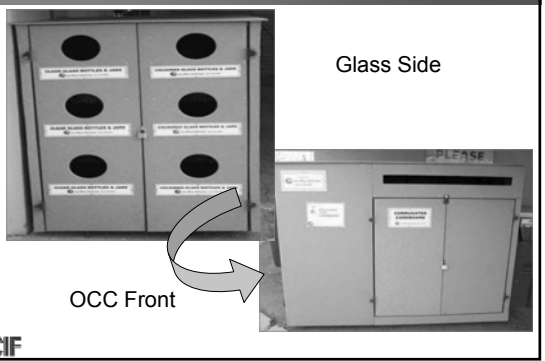
Old Bin

CIF

New Bin—Prototype



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New Bin—Prototype Being Unloaded

CIF

Advantages

- Final design to overcome problems experienced by prototype:
  - angled roof, raised box to avoid snow issues
  - locked & recycled plastic sheeting to avoid rusting & vandalism
  - robust construction for longer life
- Enables residents to bring material out anytime
- Frees up cart space
- Provides extra capacity reducing tendency to put overflow on ground, into carts, or garbage

CIF

Advantages

- Can be built without the “glass” compartment
- Option for a dedicated OCC collection truck
- Could be used in other locations: IC&I, Depots, Campgrounds, etc.
- Will be rolled-out with PR to encourage use & additional MR diversion
- Appearance aids placement
- QWS will monitor

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Anticipated Impacts: Costs & Tonnes

- Project budget = $135,000
  - CIF approved 46% funding
- 2007 MR capture rate—63%, Curbside = 83%
- Estimated new tonnes
  - at 83% capture rate ≈ 250 tonnes (35kg/unit)
  - increased collection & processing costs (contracted)
  - increase revenue & grant dollars
  - keeps material out of landfill

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CONTINUOUS IMPROVEMENT FUND

Questions

Please use “Question/Answer” box on your screen

CONTINUOUS IMPROVEMENT FUND

Break

CONTINUOUS IMPROVEMENT FUND

Welcome Back

CONTINUOUS IMPROVEMENT FUND

Developing Regional Recycling Capacity

Michael J. Birett
CIF

Developing Regional Processing Capacity

- Anticipating the processing needs of Ontario's blue box program is a difficult challenge
- Issues include:
  - forecasting capacity requirements
  - implications of a new BBPP
  - changing waste stream
  - economic conditions
    - supply & demand
    - energy costs

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In this session

- Today's session highlights infrastructure related projects funded by CIF
- Goals of these projects include:
  - development of new processing capacity
  - increasing system flexibility and efficiency
  - identification of better practises

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Other Projects

- CIF Projects
  - Ontario MRFs Rationalization Study (#126)
  - Decision Tree Tool for Recycling Transfer Stations (#148)
- E&E Fund Projects
  - Renfrew County MRF Feasibility Study (#122)
  - Feasibility Study for GTA Centralized Plastics Recovery Facility (#168)
  - Peterborough MRF Optimization & Regionalization Study (#198)
  - London Regional MRF (#232, #265)
  - Woodstock Transfer Station (#247)

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Today's Speakers

- Francis Veilleux
  - President, Bluewater Recycling Association
  - Single stream Collection in Bluewater
- Jay Stanford
  - Director, Env. Programs & Solid Waste, City of London
  - Building Sustainable Processing Capacity
- Catherine Habermebl
  - Associate Director, Collection & Diversion Operations, Regional Municipality of Niagara
  - Positioning Niagara's MRF for the Future
- John Rhodes
  - Manager, City of Kingston
  - Kingston's MRF Rebuild

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CONTINUOUS IMPROVEMENT FUND

Automated Program in Southwestern Ontario

Francis Veilleux
Bluewater Recycling Association

Project Highlights

97

- *Project goal:*
  - to Improve the systems, technology, & methodology used in the recycling program
- *Anticipated impacts:*
  - reduced cost
  - increased recovery
  - increased workplace safety
- *For more information:*
  - info@bra.org
  - www.bra.org

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Project Description

98

- Automated Collection Program
  - 95 Gallon Wheelie Bin Standard
  - 90% of Households
  - over the next 5 years
- State of the Art Single Stream MRF
  - multiple pass plastic optical separation
  - fibre QC optical separation
  - glass clean-up/recovery system

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Key Issue/Problem

99

- Overflowing boxes create litter issues
- Lack of capacity to increase further recovery
- Poor ergonomics leading to injuries
- Subject to extreme weather conditions
- Scavenging is easy and costly

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Impacts

100

- Increased efficiency
  - lower cost through faster collection
- Increased effectiveness
  - increased tonnage through increased capacity
- Other
  - reduced litter
  - virtual workplace injury elimination
  - reduced employee turnover

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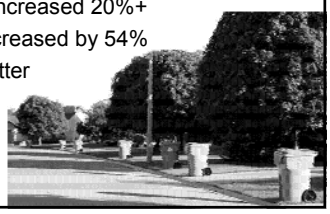
Preliminary Results

101

- Town of St. Marys
  - Started October 2008
  - Reduced Collection Frequency to Biweekly
  - Upgraded from One Sided to Two Sided Collection
- Material Recovery Increased 20%+
- Collection Time Decreased by 54%
- Significantly Less Litter
- No Scavenging
- No Injury



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Best Practice Impact

102

- Not a Defined Best Practice but…
  It is Continuous Improvement
- Taking Waste Diversion Program into 21st Century

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Next Steps

- MRF Upgrade Q4 2009
- Increase Processing Scope in 2010
- Collection Expansion Spring 2010-2014

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CONTINUOUS IMPROVEMENT FUND

London's New MRF: Building Sustainable Processing Capacity

Jay Stanford
City of London

Projects Highlights

- Project goal:
  - establish a Regional MRF for Southwestern Ontario
- Anticipated impacts:
  - lower system costs & increase recyclables captured
- For more information:
  - jstanfor@london.ca
  - www.london.ca

London CANADA

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Recap—Why Regional

- CIF project investment
  - $3.5M for regional MRF
  - $890,000 for future design
- Expected system savings $$ (approximately $1,000,000 annually)
- More efficient collection systems
- More materials collected
- Opportunity to standardize programs
- Opportunity to share resources & responsibilities (partnerships)

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Costs

- Operating Cost—Regional
  - $75 - $85 per tonne = 28,000 tonnes/yr
  - $50 - $60 per tonne = 40,000 tonnes/yr
  - $45 - $55 per tonne = 75,000 tonnes/yr
- Capital Cost—Regional
  - $18,000,000 = 40,000 tonnes/yr
  - $23,000,000 = 75,000 tonnes/yr
- Savings confirmed

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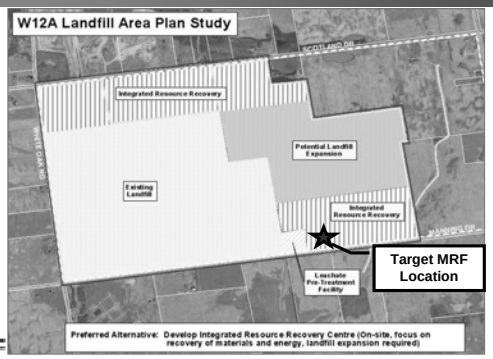
PROPOSED LOCATION



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Proposed Facility

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Designing for Future

- Can add recyclable materials
- Convert to a single stream MRF
- Increase capacity to 100,000 tonnes/yr
- Ship newspaper loose or baled
- Colour sort PET & HDPE plastics
- Add 2nd optical sorter

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Regional Arrangements

- 35,000 tonnes/yr available
- Municipalities pay per tonne fee & keep revenue (less marketing costs)
- Fee=contractor's operating cost plus administration
- Municipalities can expect "cheque" in normal markets
- Open early 2011

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Summary of Process

- Background Research
  - Stewardship Ontario E&E Fund Regional MRF Study
  - "internal" analysis & business case
  - E&E Fund *Recyclers' Knowledge Network* MRF (single vs 2-stream) "debate"
- Request for Qualifications
  - 6 companies respond, 5 qualified
- Request for Proposals
  - E&E Fund Peer Review
  - 3 companies respond

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CONTINUOUS IMPROVEMENT FUND

Optical Sorting System

CIF Project #161

Fibre Line Quality Improvements

CIF Project #140 / 142

Catherine Habermebl
Niagara Region

Project Highlights

- Project Goal:
  - *improve capture rates, reduce operating costs & improve quality of outgoing materials*
- Anticipated impacts:
  - *higher revenues, increased throughput capacity*
- For more information:
  - *catherine.habermebl@niagararegion.ca*
  - *www.niagararegion.ca*

Niagara Region

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Why Optical Sorting Equipment?

115

- Shift 2000 tonnes of low grade mixed plastic into higher valued categories
- Materials consisted of
  - 40% single serve PET, 25% other smaller plastics such as PP, LDPE, HDPE & rigid PS
  - remaining 35% is fibre, film & small pieces of waste
- Marketing materials at current cost of $25 per tonne or $32,500 annually
- Currently–5 sorters picking PET

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Optical Sorting System—Project Description

116

- Installation of:
  - vacuum hoods on pre-sort
  - glass breaker system & new vertical shaft perforating
  - innovative in-line mesh conveyor system for removal of loose film & fibre after pre-sort
  - dual eject optical sorting system
- Remove PET on first valve block
- Shuttle conveyor to optically remove polycoat & aseptic containers & aluminum on second valve block
- Mixed plastics or tubs & lids etc flow through
- sorted materials pass through quality control
  - go to silos using reversible conveyors

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Optical Sorting System —Anticipated Potential Efficiencies/Effectiveness

117

- Projected recovery of PET: 800 tonnes/year at higher value
- Projected recovery of mixed plastic: 500 tonnes/year
- Total annual revenue gain of approx. $237,500
- Annual labour savings of approximately $120,000
- Estimated Cost of $2M—received $595,855 in CIF
- Estimated payback period of 5.3 years for project &1.6 years on funding

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Fibre Line Improvements—Current Situation

118

- OCC/OBB travel over OCC separator from pre-sort
- ONP travel under to post sort
- Average outthrows–8.75% (low 4% and high 14%)
- ONP is shipped loose

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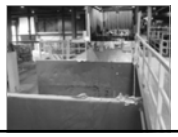
Fibre Line Improvements-Project Description

119

- Installation of additional steel discs
- 4 new sorting stations & under each sorting station a shuttle conveyor to transfer ONP to long transfer conveyor
- Clean positively sorted ONP conveyed to existing ONP area
- Unders from OCC separator receive further processing to remove any remaining smaller OCC/OBB pieces
- Installation of dedicated baler for fibre and 4 live bottom conveyors under existing post-sort ONP line



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Fibre Line Improvements —Anticipated Potential Efficiencies/Effectiveness

120

- Better quality of newsprint = higher premium from paper mills (no downgrades)
- Increase net gain of $330,000 annually
- Improved throughput of 15%
- Target is 5% or less of outthrows
- Reduce loader time – savings of $87,000 annually
- Reduce baling overtime
- Estimated payback on project of 3.1 years & 1.3 years on funding
- Changes will ensure long-term marketability of ONP

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Best Practices

121

- Allow for greater processing capacity to process third party material
- May provide options for other 2-stream recycling facilities in ON to maximize their potential recovery using OCC separation technology
- Long term labour costs
- ONP quality to meet mill specifications

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122

CONTINUOUS IMPROVEMENT FUND

MRF Expansion & Equipment Upgrades

E&E Fund Project #211

John Rhodes
City of Kingston

Project Highlights

123

- *Project goal:*
  - to increase MRF tipping floor, bunker capacity, baler efficiency & bale storage
- *Anticipated impacts:*
  - better positioned to offer processing regionally, reduce unit costs, reduce litter, improve revenues, defer need for new MRF construction
- *For ore information*:
  - jrhodes@cityofkingston.ca
  - www.cityofkingston.ca

CIF

Project Description

124

- Expand tipping floor (3000 ft²) & bale storage (3750 ft²)
  - 28% footprint increase: 23,725 ft² to 30,475 ft²
- Increase baler efficiency
  - emphasize increased speed more than density
- Installed perforators for #1 & #2 plastics & sweep arms & doors to spread material through full height of bunker
  - #1 PET, tubs & lids & aluminum bunkers
- E&E Fund: 5% of building & 50% of equipment

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Key Issues

125

- Space: less than 1 day capacity for down time on tipping floor; materials often dumped outside MRF
  - outside storage of #1 & OCC bales; steel & film in rented trailers
- Bottle-neck: 14 year old baler: expensive to maintain & lacking speed
- Pressurized bales
  - lack of perforators & light bales limiting revenue (did not reach minimum truck load)
- Cones in bunkers with lots of wasted space
- Limited ability to offer "regional" service

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Impacts

126

- Additional processing capacity to accommodate
  - Kingston & Loyalist growth (original service area from 1989)
  - South Frontenac Township (since September 2006)
  - potentially other adjacent municipalities
- Reduced unit costs for Kingston, Loyalist & South Frontenac
  - fixed costs spread across greater tonnage
- Capacity to handle downtime (e.g. baler installation) & market slowdowns (storage)
- Contractor activities more efficient; expect lower pricing in next contract
- Further "regionalization" possible

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Results

- Electrical upgrade required for baler was unexpected
- Litter problem eliminated
- Recommend to others?
  - if more capacity needed to service community &/or expand service area this is an economical option
- Innovation:
  - bunker sweep arms enable fuller use of existing bunker capacity by up to 50%

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Best Practice / Continuous Improvement

- Enables option for “regionalization” of recyclables processing where situation & political will allows
- Areas of improvement include:
  - faster & more efficient processing
  - better litter control
  - better product quality
  - extended MRF life expectancy by maximizing capacities of tipping floor, bunker, baler & storage
  - lower unit costs
  - wider service area

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Next Steps

- Finish off the 2 remaining bunker sweep arms & associated funding with Stewardship Ontario
- Mary Little, 2CG contracted by Stewardship Ontario to report on this project
  - final report near completion; will be posted on Stewardship Ontario E&E Fund approved projects web page
- Or … to view results, visit Kingston MRF
  - tours can be arranged.

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CONTINUOUS IMPROVEMENT FUND

Questions?

CONTINUOUS IMPROVEMENT FUND

Morning Wrap-Up

CONTINUOUS IMPROVEMENT FUND

Enjoy Your Lunch

CONTINUOUS IMPROVEMENT FUND

Welcome Back

Coming Up

- Training Project Review
- Northern Issues
- Continuing & Emerging Issues

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CONTINUOUS IMPROVEMENT FUND

Project Update for 3 Year Ontario Blue Box Recycler Training Program

E&E Project #341

Vivian De Giovanni
Municipal Waste Association

Project Summary

- *Project goal:*
  - 3 year program
    - fundamental training: 200 existing municipal staff trained including 50 new entrants into the field
    - specialized training: 140 individuals
- *For more information:*
  - vivian@municipalwaste.ca
  - www.municipalwaste.ca

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Program Origins

- BB Program Enhancement & Best Practices Assessment Project (2007)—KPMG (E&E Fund 226)
  - identified staff training as a best practice (BP)
- 3 Year Blue Box Recycler Training Strategy & Implementation Plan (2007) "needs study" (E&E Fund 311)
  - confirmed interest (survey, targeted interviews) in municipal BB-specific training

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Project Outline

- Implement 3-year, $1.75M strategy
- Develop & deliver training with 2 elements
  - fundamental training to cover broad range of competencies at high level
  - specialized training in P&E, markets & marketing, contract management & data management
- Aided by steering group & subject team

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Project Team

139

- Steering group:
  - 16 volunteer representatives
    - community colleges, Royal Roads University
    - adult training & continuing education experts with public & private sector backgrounds
    - key recycling organizations
- Subject matter team
  - 11 volunteer municipal & technical subject matter experts (SMEs)
- Training Coordinator: Municipal Waste Association
- Curriculum Developer: Stantec (Formerly Jacques Whitford)

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Project Deliverables & Update

140

- In-class fundamental course piloted at Centennial College in May, 2009
- 22 municipal staff took part in 4-day session
- 5 municipal SMEs helped in delivery

- Student survey: overall course rating of 4.5/5
- Comments/input used to refine on-line & classroom material, delivery, & exam

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Deliverables—Specialized Training

141

- Award for development of specialized courses to Stantec based on competitive bid
- Specialized courses to be developed concurrently
- Tentative delivery based on fall 2009 completion of curricula

Course	Tentative Dates
Contract Management (MWA pilot)	Fall 2009
Promotion & Education	Winter 2009/10
Markets & Marketing	Spring 2010
Data Management	Summer 2010

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Best Practices

142

- Ensure this best practice is delivered to high standards & incorporates input from steering & content development teams
- The training supports transfer of BP knowledge

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Next Steps

143

- Collaboration continuing with steering & content groups to develop specialized training
- Municipal expertise used in training very well received by pilot student group
  - team is actively seeking involvement from municipal staff to participate as trainers

Find out more about becoming a trainer
Contact: Vivian De Giovanni, MWA
vivian@municipalwaste.ca

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CONTINUOUS IMPROVEMENT FUND

Northern Ontario Projects

Clayton Sampson
CIF Project Manager

Waste Diversion Ontario | AMO | TORONTO | Stewardship Ontario

Implementing Best Practices

145

- Northern Ontario has ¼ of ON BB programs.
- Many opportunities to assist with program improvements & implement/demonstrate best practices
- Projects have acted on:
  - program planning & development
  - municipal cooperation
  - operations optimization
  - promotion & education (P&E)

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In this Session

146

- Overview of 3 current projects in different areas of the north
  - Thunder Bay Area municipalities cooperative planning
  - Lake Superior North Shore communities recycling program development
  - City of Timmins program evaluation

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Other Northern Projects

147

- Town of Dryden (E&E Fund Project #12)
  - transfer station development
    - reduced transportation costs for recyclable processing
- Township of Black River-Matheson (CIF Project #100)
  - increasing recycling program & enhancing P&E
    - preliminary results 20%+ increase in capture
- Town of Fort Frances (CIF Project #110)
  - evaluate Transfer Station operation
    - identified opportunities for operation efficiencies

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Today's Speakers

148

- Sean Irwin—Special Projects Co-ordinator, Township of Terrace Bay
  Co-operative Municipal Program Development at North Shore of Lake Superior
- Marcel Cardinal—Waste Management Supervisor, City of Timmins
  Collection & Transferring of Recycling
- John Smith—Project Manager,Trow Consulting
  Thunder Bay Area Cooperative Municipal Recycling Planning

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149

CONTINUOUS IMPROVEMENT FUND

Co-operative Municipal Program Development at North Shore of Lake Superior CIF Project # 136

Aguasabon Falls in Terrace Bay

Sean Irwin,
Township of Terrace Bay

Ice Climbing in Nipigon

Waste Diversion Ontario | AMO Association of Municipalities of Ontario | TORONTO | Stewardship Ontario

Project Highlights

150

- *Goal:*
  - to develop a robust and effective regional recycling program for communities of Terrace Bay, Marathon, Schreiber, Nipigon & Red Rock
- *Action:*
  - undertake a regional evaluation to examine alternatives & formulate an action plan
- *For more information:*
  - s.irwin@terracebay.ca
  - www.terracebay.ca

Caribou at Terrace Bay's Slate Islands

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Key Issue/Problem

151

- Key Issue—how to overcome distance to market
- Reason for Partnership—cost sharing & efficiency
- Evaluation being conducted by Robins Environmental
- Compiling data and stakeholder feedback
- Developed & delivered survey for stakeholders
- Delivered a recycling survey in Terrace Bay to compile sample feedback on setup

Snowshoeing in Marathon

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Project Description

152

- Catchment population of approximately 10,000 residents & 350 businesses
- Major obstacle—isolation from market & metro
- Only one community with a current household recycling program, other interested
- Extreme municipal budget pressures due to forestry crisis
- CIF offers assistance to research alternatives & ways to save money

Map of top of Superior Region spanning 300 km

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Results/Findings

153

- Next step is to develop alternatives & to present them to the communities
- Communities will have to determine which program is most appropriate to their needs & budget

Red Rock Marina & Landscape

- Hopefully, in 2010 a program for each community will be implemented that will allow for cost savings
  - especially on transportation costs!

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Example

154

- Terrace Bay operates a landfill with Schreiber
- Life expectancy 30 years, 3 CofA's for solid non-hazardous, scrap metal & sludge dewatering
- Residents/businesses have no bag limits or user fees (town collection built into taxes—$118/hhld)
- No other diversion programs, no weigh scales

Terrace Bay Landfill

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Alternatives

155

- 1 Municipality takes on all collection services?
- Municipalities share collection resources? 1 vehicle
- Private business takes on collection services?
- Alternating collection—garbage 1 week then recycling the next so little increase in collection
- Alter collection based on season—less in winter
- Adjust by-laws & limits or user pay systems
- Depots at landfills—1st step?
- Education & awareness needs are key

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Next Steps

156

- Decide on best alternative from evaluation study for implementation across communities.
- Use the evaluation as the basis for the development of an Integrated Waste Diversion plan to take advantage of other provincial programs like MSHW and E-Waste
- Make the programs cost neutral – bag tags/limits
- Build up from start - continuous improvement

Terrace Bay Surfing

Terrace Bay Kayaking

Schreiber Beach

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CONTINUOUS IMPROVEMENT FUND

Collection & Transferring of Recycling

CIF Project # 129

Marcel Cardinal
City of Timmins

Project Highlights

- Project goal:
  - examine options to operate BB program for City of Timmins
- Anticipated impacts:
  - achieve cost efficiencies for program operations
  - increase amount of BB materials to market
  - increase waste diversion rates
  - increase the level of service to residents
- For more information:
  - marcel.cardinal@timmins.ca
  - www.timmins.ca

Project Description

- Evaluation study examined changes to the existing collection, transfer & processing of waste & BB materials for the City of Timmins
- Recommendation system to include:
  - collection of material will be achieved using split body automated collection vehicles
  - transferring BB materials through Transtor unit & shipping to Regional MRF via compacting trailers
- City wanted to consider best available technology to undertake waste collection & processing

Key Problems

- Manual collection issues related to worker injuries (existing equipment)
- Educational process in certain areas of City will need to be addressed (logistics for collection)
- Operate under reduced costs and increasing our BB materials & services (50%)
- Ensuring increased residential services for our BB materials under harsh weather conditions

Impacts

- Upon roll out of proposed new program, City will see immediate cost savings of $13/tonne for collection, transfer & disposal of waste & recyclables
- Increase materials in BB (expansion to all BB materials)
- Decrease transportation costs to MRF through compacting trailers

Results/Findings

- Education & public awareness will be critical (blue box theory)
- Reduction of waste/recycling vehicles on road
- Minimize operational cost & increase BB materials & service
- In house service to multi-residential units & increase BB education

Best Practice

163

- After detailed evaluations of both in house vs. contracted service this technology & process was determined to be best available practice

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Continuous Improvement

164

- Project allows municipality the benefit of controlling the BB program in Northern Ontario & provides greater flexibility
  - lack of competition between contractors = high cost
- Will enable other programs to utilize transfer facility
- Project eliminates exorbitant costs to municipality by mitigating the effects of monopoly

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Next Steps

165

- Submitted application for development of transfer facility – approved for $436,000
- 2nd application to CIF for assistance with recommended collection program implementation has been submitted
- Anticipate that new system will be in operation by early 2011
- Report findings & evaluate efficiencies of the project
- Minimize operating costs & establish additional "best practices"

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CONTINUOUS IMPROVEMENT FUND

Thunder Bay Area Cooperative Municipal Recycling Planning

CIF Project #103

John Smith
Trow Associates

Project Highlights

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- *Project goal:*
  - develop a cooperative municipal Plan for the future management of the municipalities' recyclable material
- *Anticipated impacts:*
  - *increased public support; overcome barriers to participation; and reduce cost*
- *For more information*:
  - john.smith@trow.com
  - www.trow.com

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Project Description

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- CIF supported project to develop a cooperative recycling plan – up to $40,000
- Municipalities of Conmee, Gillies, Neebing, O'Connor, Oliver Paipoonge & Shuniah
- Plan identifies a number initiatives to meet the objective:
  - communication & public engagement strategy (incl. barrier research)
  - standardize service level/haulage contract
  - enhance recycling depots
- Staff involvement:
  - key municipal representative from each municipality
  - consultant experienced in facilitation/WM planning processes

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Key Issues

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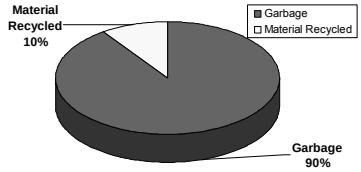
- Limited feasible markets for recyclable material
- Lack of collector/processing capability
- Recycling programs in need of help
- Low rate of material recovered & recycled



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Impacts

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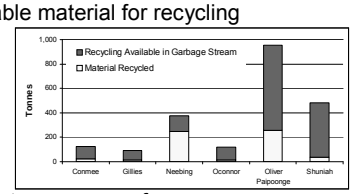
- Available material for recycling



- Current program performance
  - varies across municipal group
  - average capture 43.67 Kg/household
  - average $293.37/tonne or $15.44/household

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Anticipated Result

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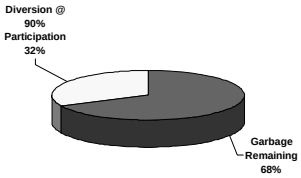
- Improved capture rate of blue box & other materials
- Increased participation from residents
- Anticipated result of implementation of the Plan's initiatives



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Best Practice/Continuous Improvement

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- Waste recycling planning
- Communication strategy
- Collaborative approach
  - standardized service level
  - communication material
  - haulage/processing contract

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Next Steps

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- Deliver final plan to municipalities – June 09
- Implementation of proposed recommendations
  - Develop co-operative communications strategy – Summer 09
  - Recycling depot enhancement – Fall 09
    - New signage
    - Additional depots
    - Co-op on collection and processing contract
- Evaluate the effectiveness of the changes – Spring 2010

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CONTINUOUS IMPROVEMENT FUND

Questions

Waste Diversion Ontario | AMO | TORONTO | Stewardship Ontario

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CONTINUOUS IMPROVEMENT FUND

Break!

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CONTINUOUS IMPROVEMENT FUND

Welcome Back

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CONTINUOUS IMPROVEMENT FUND

Continuing & Emerging Issues

Andy Campbell
CIF

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Continuing & Emerging Issues

- Developing “effective & efficient” programs requires a clear understanding of the ever changing landscape in which we operate
  - consumer behaviour & economics drive change in waste stream
  - what are implications of “design for the environment”, Blue Box Program Plan & Extended Producer Responsibility
  - packaging is undergoing dramatic change
- Understanding changes & their impact needs to be priority for program operators & CIF

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In this session

- This afternoon’s session will explore:
  - The Walmart Scorecard & packaging implications
  - Procter & Gamble’s perspective on future packaging designs
  - Impact on municipal MRF operations
  - WDO program update

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Today’s Speakers

- Speaker Name
  - Christian Shelepuk, Walmart
    - Scorecard Approach
  - Steve Sikra, Procter & Gamble
    - Evolving Packaging
  - Mike Birett, CIF
    - Plastic Market Development & Its Implications
  - Glenda Gies, WDO
    - Waste Diversion Ontario News

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Walmart
Save money. Live better.

Thursday, June 11, 2009

Walmart Canada Sustainable Packaging Initiatives

Saving people money so they can live better

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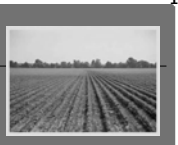

To be supplied 100% by renewable energy

To create zero waste

To sell products that sustain our resources & environment

Sustainability

Walmart
Save money. Live better.

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Sustainability – 5 Year Plan

Energy	→	New stores 30% Existing stores 20% Supply chain 15%
Waste	→	Diversion 80%
Green Products	→	Canada's largest seller
Packaging	→	Reduction 5%

Walmart
Save money. Live better.

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To create zero waste

Sustainability

Saving people money so they can live better

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Diverted from Landfill

- Last year the Wal-Mart Canada diverted about 100,000 metric tonnes of material from landfill. Once the data has been finalized we should divert an amazing 25% increase over last year, approximately 125,000 metric tonnes.
- That includes cardboard, plastics, metals, wood, paper, organic oil, meat rendering, beverage containers, misc. organics, oxidizers, paint, aerosols, tires, motor oil, auto-filters, batteries, polystyrene, organics, and various photo elements such as disposable cameras, and silver

Saving people money so they can live better

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To sell products that sustain our resources & environment

Sustainability

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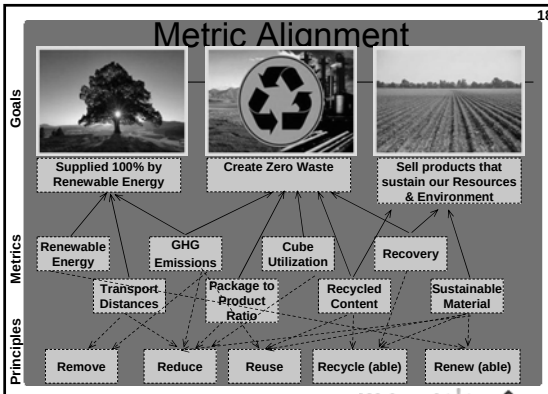
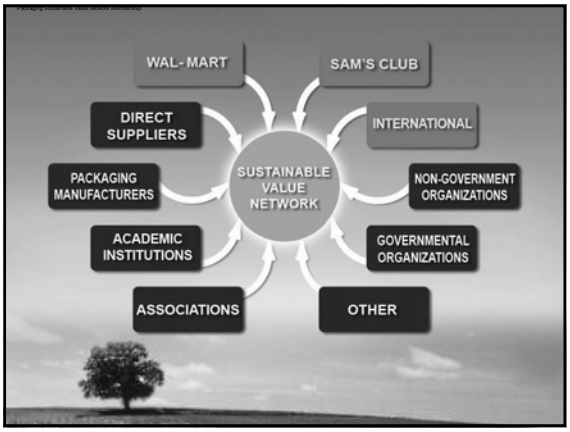
Save money. Live better.

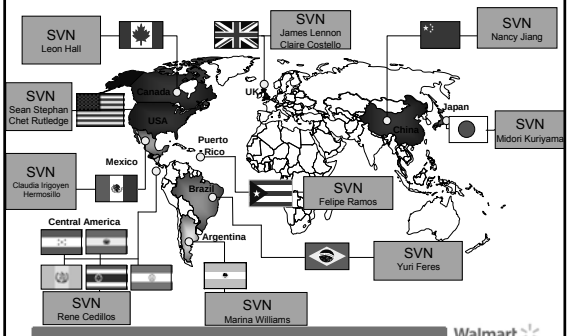
International Sustainable Packaging Scorecard

Metric Alignment

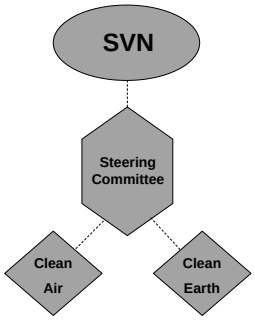




Global Wal-Mart Packaging SVN Managers



SVN Subcommittees Structure



- Discussion based group will directly input into and steer the expansion in scope and remit of the Wal-Mart Packaging Scorecard
- Directive based group will advise the SVN of pertinent findings from key stakeholders and the two subcommittees.
- Sub-divided groups of interested industry and NGO participants delving directly into the Scorecard metrics and all emerging relevant innovations.

Clean Earth Subcommittee
Open to all SVN Members

- **Objective:**
  - To advise the Steering committee of Metric changes needed to make the Scorecard Canadian Specific with a focus on Recycling and Material Values.
- Short Term Goal
  - Review and find consensus on the values for the Recovery Metric.
- Mid Term Goals
  - Discuss the Sustainable Material and Recycled Content Metrics
- Long Term Goals
  - Ongoing updates and discussion on material recycling and end use innovations

Meetings to be held June 16th and July 8th 2009
1PM-4PM at the Walmart Home Office
Please complete the invite template and send to susan.wilhelm@wal-mart.com no later than June 8th

Metrics Subcommittees Breakdown

- **Clean Air**
  - Greenhouse Gas Emissions
    - 15% of total score
  - Renewable Energy to Power Each Facility
    - 5% of total score
  - Average Distance to Transport Material
    - 10% of total score
  - Innovation Different from Energy Standard (Extra Credit)
    - 5% of total score
- **Clean Earth**
  - Sustainable Material
    - 15% of total score
  - Recycled Content
    - 10% of total score
  - Recovery
    - 10% of total score
  - Innovation Different from Energy Standard (Extra Credit)
    - 5% of total score
- Removed as discussion areas
  - Package to Product Ratio
    - 15% of total score
  - Cube Utilization
    - 15% of total score

Walmart Canada SVN Subcommittee Meeting

Meetings to be held June 16th and July 8th 2009
1PM-4PM at the Walmart Home Office

- The following slide details the goals of Clean Earth and the first meeting will focus on the *short term goal*.
- This group is encouraged to attend.
- ***Please request an invite from susan.wilhelm@wal-mart.com no later than June 12th***

Recovery Metric Alignment – 10% Weighting

- Recovered material quality per CMUM

$$\frac{\left(\sum_{i=0}^{np-1}(wt[i])(crr[i])\right)+\left(\sum_{i=0}^{nt-1}\left(\frac{twt[i]}{(ns[i])(pcu[i])}\right)(tcr[i])\right)}{\#CMUM}$$

- Re-characterize recovery ratings: best material ="1"; worst= "5"

Source: **Wal-Mart Scorecard Recovery Value based on data provided in: *Municipal Solid Waste In the United States, 2005 Facts and Figures*[1], and predicted compostability** *http://www.epa.gov/garbage/msw99.htm*
Report: Increase in the use of recovered material.
Statistics of material usage from each rating.

The Calculations | Materials Selected | Material Suppliers

The formula that was used to calculate the Recovery is illustrated below. Note that all the data sources are documented below the formula and variables.

$$\frac{\left(\sum_{i=0}^{np-1}(wt[i])(crr[i])\right)+\left(\sum_{i=0}^{nt-1}\left(\frac{twt[i]}{(ns[i])\ (pcu[i])}\right)(tcr[i])\right)}{nu}$$

Variable	Variable Definition
np	total number of selling unit materials
nt	total number of transport materials
wt[i]	selling unit weight of material i
twt[i]	transport weights of material i
ns[i]	transport items shipped of material i
pcu[i]	transport number of uses before discarded of material i
crr	selling unit walmart recycle rate of material i
tcr	transportation walmart recycle rate of material i
nu	Consumer Meaningful Unit of Measure (CMUM)

New "bucket' system

The Recovery Values are determined by sorting the data for each material into one of six categories, and assigning values of 0 through 5, as follows:

- US Recycling Rate = **0%**, Recovery Value = **5** the material will most likely be landfilled.
- The material is **compostable**, Recovery Value = **4.5** this low Recovery Value acknowledges need for growth in the composting infrastructure.
- US Recycling Rate **> 0% to 10%,** Recovery Value = **4** low recovery rate
- US Recycling Rate **11% to 25%,** Recovery Value = **3** moderate recovery rate
- US Recycling Rate **26% to 50%**, Recovery Value = **2** moderate recovery rate
- US Recycling Rate > **50%,** Recovery Value = **1** high recovery rate

Recovery Values – Phase 1 Materials

Material	Recovery Rate	Recovery Value
HDPE	11	3
LDPE	6	4
LLDPE	6	4
PET	25	3
PP	1	4
PS	0	5
PVC	0	5
Corrugated	71.5	1
SBS Board	12	3
SUS Board	12	3
Recycled Folding Boxboard	12	3
Molded Pulp: Paper	compostable	4.5
Freesheet	38.5	2
Aluminum	36	2
Steel	63	2
Glass	25	2

Recycled Content Metric Alignment – 10% Weighting

- lbs of non-recycled materials per CMUM

$$\frac{\left(\sum_{i=0}^{np-1}(wt[i])(1-ppd[i])\right)+\left(\sum_{i=0}^{ut-1}\left(\frac{twt[i]}{(rsf[i])(pcu[i])}\right)(1-ptd[i])\right)}{\#CMUM}$$

- Re-characterize non-recycled % = (1 – Recycled %)

Source: Recon data from Trade Association Sources – August 2006
Report: Increase in the use of recycled content.

Stephen Sikra
The Procter & Gamble Company
Global Package Development Leader

Procter & Gamble

Founded in Ohio (USA) in 1837

Over $84 billion in sales in 07/08

300 brands in over 160 countries

#1 or #2 in 80% of our categories

Billion-Dollar Brands

23 Billion Dollar Brands

Global Beauty & Grooming

Global Household Care

Global Health & Well-Being

$500 Million to $1 Billion

…and counting!

Strong Sustainability Heritage

- Pioneered environmental reporting (1970's)
- Promoted ***HDPE recycling*** with Liquid Tide and Downy (late 1980s)
- Environmental Quality Policy; EQ Reporting (1992)
- Supplier Sustainability Guidelines and Compliance
- One of the first companies to form a "corporate sustainability department" and publish a sustainability report (1999)
- Introduced global corporate cause – *Live, Learn and Thrive*™ (2005)
- Strict Principles and Policies for Environmental Claims on brands

P&G Global Sustainability

Live, Learn and Thrive

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History of Sustainable Innovation

Products

- Tide with Bleach – Non-chlorine bleach alternative
- Pampers – 40% reduced weight (1987-current)
- Pantene – Two-in-One shampoo/conditioner
- Ariel Cool Clean/Tide Cold Water – $63/year consumer energy savings; 8% of US Kyoto protocol target if all consumers washed in cold water

Packaging

- Recycled Fiber – 65% of fiber use
- Recycled Plastic (NA) – ***23% of plastic bottle use***

Raw Materials

- Elemental chlorine free pulp – Eliminated persistent chlorinated sources from pulpmaking
- Nitromusk replacement – Eliminated use of persistent/toxic materials

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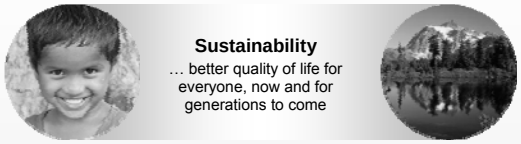
P&G Defines Sustainability Broadly…



Sustainability
… better quality of life for everyone, now and for generations to come

Social Responsibility

Environmental Responsibility

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2012 Goals

Products

$50 billion in sales

Operations

10% reduction in:
- Energy consumption
- Carbon Dioxide emissions
- Solid waste
- Water consumption

Total reductions over the decade of at least 40%

Social Responsibility

Live, Learn and Thrive: 250MM Children

Children's Safe Drinking Water program: 2 billion liters

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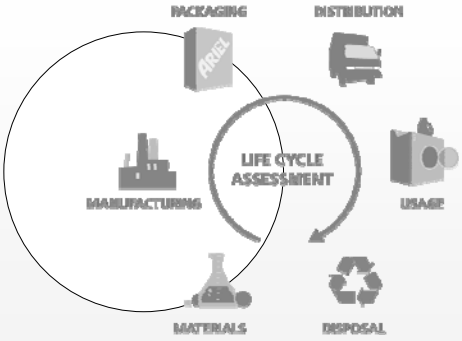
Innovation: Scientific Discipline



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Innovation: Laundry Compaction

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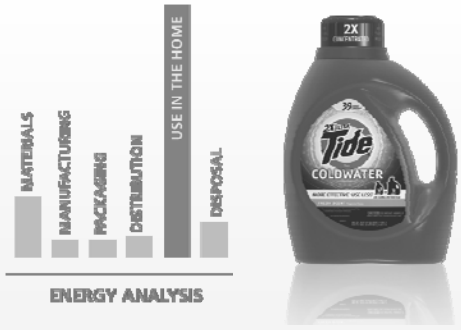
Innovation: Laundry Compaction



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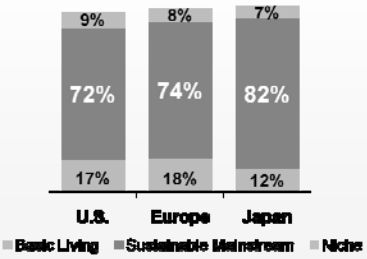
Sustainable Mainstream Consumer



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Environmental Sustainability

- Meaningful innovation
- Performance
- Value
- Confidence

Leadership Commitment

"We are committed to helping solve the world's sustainability challenges. We do this through product innovations, improving the environmental profile of our operations and through our contributions to help children live, learn and thrive."

"Companies like P&G can be a force for good in the world. This is a responsibility and an opportunity that we embrace."

A.G. Lafley
Chairman of the Board
and Chief Executive Officer

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Going Forward

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Top 10 Packaging Needs

Winning in Store – "First Moment of Truth"

1. New Decoration Technologies
2. Late Stage Package Differentiation
3. Bags: Stand Up and Stop the Flop
4. Liquid Sizing Flexibility

Winning at Home – "Second Moment of Truth"

5. Packages/Devices that Aid Compliance
6. Bottle/Cap Design that makes Off-Torque 'Easy'

Sustainability

7. Materials with Reduced Life Cycle Impacts
8. Low Cost Pumps and Foamers

Other

9. Winning with the Next Billion consumers
10. Cost and Speed to Market

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Package Sustainability Innovation

Domain	Reduce	Replace	Re-Use	Recycle
Why?	Lower Cost Reduced Load	Reduce Oil Dependence	Lower Cost Supply Chain & Retailer Engagement	Reduced Load Infrastructure Development
Examples	Light Weight Elimination Compaction	Bio-Derived Materials	End-to-End Recovery Refills	Increased Rate New Material

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Market Examples

Vicks Throat Drops – The Innovations

ISBM PP Jar
- *High Transparency*
- *Higher Moisture Barrier*
- *20% Lightweighted*

Optimized Cap
- *Improved Seal Integrity*
- *30% Lightweighted*

Time to Market
- *10 Months from Concept*

Vicks PP throat drop jars are the largest & lightest clear polypropylene jars with an injection molded neck to be commercially manufactured to date
Dr. S. Agarwal (Board of directors SPE)

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Market Examples

Home Care

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Market Examples

Beauty Care

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Market Examples

Ariel Bleach & Laundry Additive – The Innovation

ISBM PET DOSER
- *Transparency*
- *¼ Turn Opening & Seal*

ISBM PP BOTTLE
- *Transparency & Soft Touch*
- *Permeability for Bleach*
- *15% Lightweight*
- *5X Higher Conversion*

Bottle & Grip Design
- *Easy-to-hold Grip*
- *2L Handling Requirement*

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Brand Owner Needs

•Expansion of the recycling infrastructure to account for materials beyond 1 & 2 bottles

•A future which fosters innovation must include a recycling infrastructure beyond PET and HDPE

•We will continue to use PET and HDPE but have a need for expanded use of 3-6 materials and beyond

•A methodology for understanding industry needs (what must be true to expand beyond 1s & 2s?)

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The Rigids Working Group

In summary:

• Many in the industry desire to see plastic recycling expanded beyond HDPE and PET

• The APR Rigids Group is answering the call

• We believe the benefits include:
  -Establishing new revenue streams
  -Enhancing existing revenue streams
  -Improving the quality of existing streams
  -Proactively setting the future of plastics recycling
  -Improving our environment

It will be hard work, roll up your sleeves!

Join us: sikra.sw@pg.com

salexander@cmrgroup4.com

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Sustainability = Good Business

Sustainability
… better quality of life for everyone, now and for generations to come

Social Responsibility

Environmental Responsibility

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CONTINUOUS IMPROVEMENT FUND

Plastics Market Development & MRF Implications

Mike Birett
CIF

225

Project Highlights

- *Project goal:*
  - understand anticipate changes to plastics waste stream
  - facilitate sustainable market development in cooperation with municipalities & Stewardship Ontario
- *Anticipated impacts:*
  - improve ability of municipal infrastructure to respond to change
  - sufficient sustainable market capacity to meet future needs
- *For more information*:
  - mbirett@wdo.ca
  - www.wdo.ca

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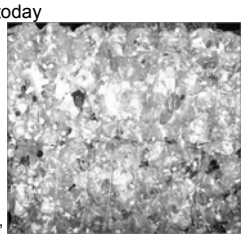
Background

- >250,000 MT of residential plastic packaging generated annually
- Approx. 50,000 MT/yr collected today
- Key drivers for design change:
  - product differentiation, production economics, consumer behaviour & public perception
- Manifestation of these drivers takes many forms:
  - light-weighting packaging, multi-laminants, biodegradables, single serve containers



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MRF Impacts

- Impacts are obvious, but not always
  - lightweighting affects hauling costs, processing volumes, burden depth, pick rates & ultimately costs
  - multi-laminants & biodegradables impact recyclability, bale purity & revenue
  - compositional changes affecting metrics & market sustainability
- CIF exploring 3-pronged strategy
  - market development
  - engagement on design
  - MRF technology upgrades

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Market Development

- Steward's responsibility
- CIF interests:
  - ensuring municipal infrastructure needs are considered
  - Sustainable & viable markets
- Current work includes:
  - partnering with Stewardship Ontario to develop domestic 3-7 plastics markets through joint RFP
  - possible partnership with NAPCOR & others on market development for thermoform plastics
  - resin-blending knowledge development
  - exploration of overseas markets

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MRF Technology Upgrades

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- Market development has impacts
- CIF interested in understanding:
  - what are anticipated changes
  - are solution(s) labour, technical, or logistics-oriented
  - is solution commercially available
- Current work includes:
  - funding of innovative MRF & collection equipment
  - processing options analysis

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Engaging on DfE

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- Sustainable markets require dialogue on design
- CIF interested in fostering communications between brand owners, suppliers, & MRF operators
- Current work:
  - identify packaging market intelligence
  - consider council or open forum
    - identify problem materials & designs
    - improve alignment with compounders & others
    - priority for CIF?
      - feedback required

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Conclusions

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- Market development will be ongoing requirement
- Short & long term goals required
- Developing infrastructure strategy a priority over next 6 months
- Constructive dialogue with all parties critical
- Require active municipal feedback & involvement

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CONTINUOUS IMPROVEMENT FUND

Waste Diversion Ontario News

Glenda Gies, Executive Director
Waste Diversion Ontario

Presentation Outline

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- Blue Box Program Plan (BBPP)
  - Report on Review Consultation & Recommendations
- Municipal Hazardous or Special Waste (MHSW)
  - Municipal MHSW Report Late Submission Policy
  - timelines—Consolidated Program Plan
- Waste Electrical & Electronic Equipment (WEEE)
  - timelines—Revised (Phase 1 and 2) Program Plan
- Used Tires
  - program commencement
  - information for collection agents
- New staff & new offices

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Blue Box Program Plan Review

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- *Report on Consultation to Support BBPP Review*
  - summarizes consultation
    - public opinion survey executive summary
    - summary of stakeholder meetings &
    - written submissions
- *Blue Box Program Plan Review Report & Recommendations*
  - summarizes consultation issues
  - includes 20 recommendations & other comments
- Both submitted to Minister mid-April
- Available via WDO website

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Municipal MHSW Reports

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- Under 103 municipal Shared Responsibility Agreements, municipalities report
  - quantities, post collection costs & value added services
  - via online quarterly MHSW Report (Q3 & Q4 2008, Q1 2009)
- Many municipal reports outstanding
  - resulted in conditional 2008 audit for Stewardship Ontario as auditor was unable to assess obligation to municipalities
  - preventing Stewardship Ontario from reporting to WDO on program performance
- WDO approved late submission policy
  - Comes into effect on July 1 for Q3 2009 report

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MHSW Report Late Submission Policy

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- Municipalities shall file Reports & submit invoices to Stewardship Ontario as early as feasible at end of quarter but not later than 6 weeks (42 calendar days) following last day of quarter
  - for quarter ending on December 31, municipalities to submit by January 31 if possible (due to annual audit)
- Municipalities with no reimbursable activity in quarter
  - file nil report within same deadline
- If unable to submit by deadline due to extenuating circumstances
  - request for extension by email PRIOR TO DEADLINE
    - operations@stewardshipontario.ca
  - extensions considered on case by case basis

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MHSW Report Late Submission Policy

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- Late submission penalties
  - all MHSW Reports submitted within five (5) business days following original or extended deadline will be assessed
    - 10% penalty on cost reimbursement amount for that quarter
  - any MHSW Reports submitted after this five (5) day period following original or extended deadline will be assessed
    - 25% penalty on cost reimbursement amount for that quarter

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Consolidated MHSW Program Plan Timelines (1)

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- Draft Preliminary Program Plan
  - due to WDO on June 12
  - will be posted upon receipt
  - comments can be submitted to WDO until noon on June 23
  - will be considered by WDO board at June 24 meeting
  - direction from WDO board to Stewardship Ontario on any program deficiencies

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Consolidated MHSW Program Plan Timelines (2)

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- Draft Final Program Plan
  - due to WDO on July 10
  - will be posted upon receipt
  - comments can be submitted to WDO until noon on July 21
  - will be considered by WDO Board at July 22 meeting
  - WDO Board can
    - reject program plan as non-compliant
    - approve subject to any additional revisions & submit to Minister by July 31

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Revised (Phase 1 and 2) WEEE Program Plan Timelines

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- Draft Preliminary Program Plan
  - considered by WDO Board at May 27 meeting
  - WDO Board provided direction to Ontario Electronic Stewardship regarding revisions required
- Draft Final Program Plan
  - due to WDO on June 12
  - will be posted upon receipt
  - comments can be submitted to WDO until noon on June 23
  - will be considered by WDO Board at June 24 meeting
  - WDO Board can
    - reject program plan as non-compliant
    - approve subject to any additional revisions & submit to Minister by July 10

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Used Tires Program Plan

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- Will commence on September 1, 2009
- 'Collectors' receive tires from consumers
  - tire dealers, automotive recyclers, municipalities
  - encouraged to register with Ontario Tire Stewardship (OTS) as Collectors
  - online registration available mid-June via OTS website
- For registered Collectors, OTS will
  - pay Collection Allowance
    - $0.88 per passenger/light truck tire
    - $3.05 per medium truck tire
    - off-the-road tires (e.g. agricultural tires)
      - if <= 10 kg - $0.88; if > 10 kg - $3.05
  - arrange for no charge pick up of program tires

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Used Tires Program Plan

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- Program will clean up tire stockpiles
  - within 3 years
- MOE estimates 2.5 to 2.8 million tires
  - in legal & illegal stockpiles
- OTS/MOE working to priorize sites
  - OTS will issue RFP
  - possibility of some site clean-up late fall 2009
  - more sites in spring 2010

CIF

New Staff & New Offices

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- 2 new staff arriving mid-July
  - David Merriman
    - Director of Waste Diversion Programs
  - Chris Van Rossem
    - Policy Analyst
- To accommodate more staff, office will be relocating in mid-July to
  - 4711 Yonge Street, Suite 1102
  - east side of Yonge between 401 & Sheppard Avenue
  - underground access to Sheppard subway
  - same phone & fax numbers & same email addresses

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Questions

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Event Wrap-up

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Thank you!

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