

Niagara Region  
Blue Box  
Recycling Plan  
2011 - 2015

# NIAGARA REGION BLUE BOX RECYCLING PLAN 2011-2015

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# NIAGARA REGION BLUE BOX RECYCLING PLAN 2011-2015

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*This project has been delivered with the assistance of Waste Diversion Ontario's Continuous Improvement Fund, a fund financed by Ontario municipalities and stewards of Blue Box waste in Ontario. Notwithstanding this support, the views expressed are the views of the Niagara Region, and Waste Diversion Ontario and Stewardship Ontario accept no responsibility for these views.*

## **OVERVIEW**

The 2011-2015 Blue Box Recycling Plan generally addresses all components of Niagara's residential recycling program from collection and processing to policy development and education. The provision of Regional Blue Box collection service to the low density residential sector is mandatory under Ontario Regulation 101/94.

The key driver for the development of the Plan is to fulfill best practice requirements related to the annual Waste Diversion Ontario (WDO) datacall submission, which is used to calculate Niagara's residential Blue Box Program funding allocation. In the datacall, Niagara must demonstrate that the Blue Box Program is efficient and cost-effective based on various program metrics. WDO funding is based on annual Blue Box Program net operating and capital costs, in addition to implementation of best practices and program performance.

The 2011-2015 Blue Box Recycling Plan is comprised of six key sections:

- Program goals and objectives;
- Stakeholder consultation;
- Best practices or continuous improvement changes which were identified in the Recycling Program Enhancement & Best Practices Assessment Project Report and have been implemented or are being further assessed;
- Performance targets and a monitoring plan;
- Promotion and education plan; and
- Continuous improvement program.

### **1.0 Blue Box Program Goals and Objectives**

The Blue Box Program specific goals, which align with Council's current objective of 65% diversion from disposal by 2012, are to increase the diversion of residential Blue/Grey Box materials from disposal and extend the life of existing landfills.

Key program objectives include:

- Optimizing collection and processing in order to improve Niagara's performance factor (ratio of the program's net cost per tonne and its recycling rate) relative to other municipalities, which increases the program funding amount;
- Identifying and implementing improvements to the Blue Box Program;
- Continuous improvement including monitoring and reporting of Blue Box diversion successes against recycling targets;
- Facilitating the achievement of the various Blue Box Program performance measurement targets;
- Increasing program participation and recovery of Blue Box materials, while lowering residue rates; and
- Increasing level of customer (Regional service user) satisfaction.

## **2.0 Stakeholder Consultation**

In 2007 to 2011, extensive public consultation was undertaken to obtain input on the Region's waste diversion rate, various service level options and specifically the Blue Box Program. The results from the public consultation were used as a basis for developing recommendations on service changes for the new collection contract which began on February 28, 2011, and to develop components of the Blue Box Recycling Plan for 2011-2015.

### **2.1 Level of Service Focus Groups**

Focus groups were carried out in April 2008 by OEB Enterprise to obtain input on the proposed service changes and behaviour change incentives i.e. every other week waste collection service and one garbage container limit. The five focus groups, with a total of 43 participants, had representation from all twelve area municipalities and from a range of demographics with an urban/rural mix. The key results related to this Blue Box Recycling Plan include the following:

- Strong support for the waste diversion target of 65% by 2012. Most felt it was not aggressive enough and could be either higher or achieved faster; and
- Strong view that weekly two stream Blue/Grey Box (container/fibre) collection should be provided.

Participants were also asked what types of communication activities would increase the participation of residents in our waste management programs. The results are reflected in the Social Marketing and Education Plan in Section 5 of this report.

## **2.2 Level of Service Public Open House and Telephone Survey**

The results of the public open houses (82 respondents) and telephone survey (800 respondents) which were completed by UEM Inc. and Informa respectively in 2008 for the proposed level of service changes were generally consistent. The key outcomes related to this Blue Box Recycling Plan are as follows:

- Very strong public support for the 65% waste diversion goal (94% to 97% level of support), but as noted in the Informa telephone survey: "Yet recyclers were reluctant to endorse measures that will drive diversion if it means some kinds of changes. Every other week garbage collection was viewed as a reduction in service rather than one of the keys to achieving 65% reduction";
- Strong public support for the continued expansion of a range of waste diversion services (82% - 92% support) and specifically 66% to 70% supported collection of both Blue & Grey Recycling Box material on a weekly basis;
- Strong public support for increased education for diversion programs (89%-92%);
- Medium to low support for various garbage collection changes (as the behavior change incentive to maximize diversion) with greater support for continued weekly garbage collection with one container limit (53% to 58%), followed closely by implementing a clear bag pilot.

## **2.3 Waste Management Advisory Committee (WMAC)**

Waste Management Advisory Committee (WMAC) is an advisory committee of Niagara Regional Council. The mandate of WMAC is to provide advice and recommendations that will facilitate the implementation of new programs, initiatives and implementation of the Region's long-term waste management system. WMAC is comprised of members of the community at large and a representative from the Ontario Federation of Agriculture.

On an on-going basis, WMAC provides input on potential Blue Box Program enhancements, planned changes and various promotion and education campaigns.

WMAC formulated a Consensus Position Paper on the Waste Management Level of Service in Niagara in 2007, which has been the foundation for their feedback on diversion programs between 2008 and 2011:

'WMAC recognizes and supports the Niagara Region residential diversion goal of 65 per cent from disposal.

The basis of consensus is the following:

The Region should achieve its diversion targets by:

1. Expanding the organics collection Region-wide and relaunching the program.
2. Providing weekly service for all recyclables and organics collection.

3. Establishing permanent facilities for reuse centres, and Household Hazardous Waste depots.
4. Providing incentives to improve participation in diversion through waste collection every other week with a two container limit.
5. Increasing public education/awareness and improving outreach as well as enforcement activities (i.e. for bans on the collection and disposal of recyclable and organic materials).

WMAC believes the foregoing consensus position should be included in the future Regional waste management strategy to reach and exceed the 65 per cent diversion goal.'

## **2.4 Recycling and Waste Telephone Surveys - Benchmark 2010 and Post Campaign 2011 Surveys**

A benchmark telephone survey was conducted by Oraclepoll Research Limited in November 2010 before any collection contract service changes occurred and a second corresponding survey was completed in September 2011 after the service changes and associated promotion and education campaign were complete. The November 2010 survey consisted of a sample of 400 households and the September survey consisted of 507 households.

Key observations from the September survey are included below with reference to any changes in responses compared to the November 2010 survey. This excerpt is from the 2011 Recycling & Waste Collection Service Level Changes, Post-Campaign Survey – October 2011, Oraclepoll Research Limited and the Pier 8 Group:

- 98% of Niagara residents believe recycling is important to Niagara's environmental future, an increase from 91% in the post-campaign survey;
- Four out of five Niagara residents believe recycling and garbage disposal is easy in Niagara - no change between surveys;
- Survey respondents cited two things that motivate them to participate in recycling:
  - (1) Decreasing the amount of garbage going to the landfill (92% say it is important); and
  - (2) Helping the environment for future generations (94% say it is important). The former is partly a pragmatic concern, but there are altruistic overtones – viz., it is wasteful to dump in the landfill items that can be recycled. The second motivator is primarily altruistic (but pragmatic in the long-run) and reflects the widening reach and acceptance of “green ideas and sustainable values.” It is critically important to use the right motivators when marketing recycling services. Recycling is a simple activity where we can all participate to make our community more sustainable. It is (or has the potential to be) a feel-good activity with positive social consequences (as well as positive economic and environmental consequences);
- Garbage bag limits also are important but to a lesser degree (52% compared to 62% pre-campaign survey). 32% say garbage bag limits are not important. Social

- pressure (peer, neighbourhood) does not seem to have a major impact on a person's participation in recycling — 54% say social pressure is not important; and
- When asked about the importance of the Region's 65% waste diversion goal, 83% of respondents said that achieving that goal was important, compared to 91% in the pre-campaign survey — 12% of residents were indifferent. Only 3% considered it unimportant. Although less than the pre-campaign survey, the result demonstrates an overwhelming consensus that supports the expansion of recycling and the minimization of waste. It is not; however, an endorsement of specific Region programs or service level changes, and any such programs or changes will have to be persuasively presented to ensure community support.

Additional feedback provided through these consultation activities which are related to promotion and education is also referenced in Section 5 Social Marketing and Education Plan.

### **3.0 Best Practices**

It is a requirement to review Niagara's Blue Box Program in relation to the Blue Box Program Enhancement and Best Practices Assessment Project Report and the associated 2007 KPMG report on Niagara's current state and opportunities for improvement. The KPMG report delineates the fundamental best practices that all Ontario municipalities should implement, as part of their Blue Box Recycling Plan, in addition to Niagara specific best practices. The best practices are presented as opportunities for optimizing Blue Box Program collection operations and processing; however, in some cases, the recommendations need further assessment to determine feasibility in Niagara's program context.

The significant best practices applicable to Niagara's program are highlighted below with a corresponding description of the changes being implemented and/or considered.

#### **3.1 Incremental – Short Term Opportunities for Improvement**

- 3.1.1 Provide free replacement Blue and Grey boxes to residents on an as-needed basis to increase the recovery of recyclable materials through increased capacity and consider halting the policy of allowing recyclables to be set out in plastic bags:
- Blue and Grey Boxes are provided free of charge to new homeowners and free replacements are provided in exchange for broken containers;
  - Additional capacity now exists in the Blue and Grey boxes since both material streams are now collected weekly across the Region as part of the new collection contract which began February 28, 2011;
  - Although use of plastic bags is not advertised, the practice is tolerated mainly to minimize windblown litter; and

- A drum feeder/bag opener, which will alleviate processing inefficiencies relating to the use of bags as a container, is being installed in 2012.
- 3.1.2 Request a WDO financial audit to be conducted on the Region's program:
- The audit will be considered for 2013-2015, pending budget approval; WDO also initiates annual financial audits of WDO datacall submissions in select municipal programs.
- 3.1.3 As the paper purchasing contract with Abitibi has expired, the Region should consider other alternatives within the paper market for its fibre materials. Due to its proximity to major Ontario municipalities, the Region may receive revenues that exceed those from Abitibi:
- Staff monitors monthly market pricing for comparison to AbiBow's (Abitibi) pricing and redirect up to 40% of newsprint to other mills in order to maximize revenues.

### **3.2 Transformational Medium- and Long-Term Opportunities for Improvement**

- 3.2.1 For the next collection contract, the Region should consider alternatives to its current alternate week collection process for Blue and Grey boxes, including a biweekly two stream process using co-collection or weekly collection:
- Weekly collection of both Blue and Grey Box recyclable materials and alternating weekly collection of Blue and Grey Box recyclable materials (status quo) were included for pricing in the 2010 collection Request for Proposals (RFP) – weekly two stream process using co-collection was approved and implemented as of February 28, 2011.
- 3.2.2 For the next contract, the Region should evaluate changes to the collection fleet to require that the contractor employ collection vehicles with collection capacity matching the optimal compaction ratio of materials, and/or trucks that would allow the collection process to be done by a single operator:
- The specifications in the 2010 RFP for the seven year collection contract (2011 – 2018), required that:
    - ‘All collection vehicles being utilized to collect Blue Box Materials must have a compaction ratio of no greater than 2:1. Audits will be performed periodically during the duration of the Contract to verify the compaction ratio.’
    - Audits are being completed to ensure the appropriate compaction ratio is being applied;
  - Majority of recycling collection under the new contract is completed by single operator vehicles; and
  - The RFP reflected numerous other efficiencies based on a comprehensive assessment of the collection system:



- Elimination of inefficient municipal collection boundaries; and
- Use of alternative fuels (biodiesel).

3.2.3 For school and depot collection, the Region should consider using containers that could be mechanically tipped into the collection truck:

- Niagara Recycling continues to use the cart based program with a semi-automatic lift on the collection vehicles for schools serviced based on cost benefit analysis, however, the need for containerized recycling collection will be reviewed in the future;
- Containerized recycling collection was evaluated for multi-residential collection and was determined to be a more expensive alternative;
- Cart-based multi-residential collection system (with semi-automated lift on collection vehicles), combined with placement of bundled cardboard beside the carts, has been implemented; and
- For large volume materials such as cardboard, roll-off containers are used at drop-off depots.

3.2.4 In order to better align the objectives of the Region and of Niagara Recycling, the Region of Niagara should consider and evaluate compensation and remuneration methodology that provides incentives and motivation to the contractor to decrease cost, increase diversion, and add value:

- The agreement between the Region and Niagara Recycling, the non-profit agency contracted to operate the recycling processing facility, has been renegotiated as approved by Council and makes provision for incentives to decrease operating costs, maximize revenue and minimize residue; and
- Prior to the expiration of the agreement (in April 14, 2014), staff will be evaluating Niagara's net processing costs against costs in other municipalities.

3.2.5 Evaluate the Material Recovery Facility (MRF) or Recycling Centre optimization study in terms of possible changes to increase the degree of mechanization at the MRF and optimize the sorting process:

- Based on the results of a detailed feasibility study, plastics optical sorting technology was installed in summer of 2010;
- Separate line and baler installed in 2011 to manage hard pack (corrugated cardboard and boxboard) to reduce costs, specifically by reducing loader time and overtime hours for baling;
- Sorting process has been further optimized by having sorters remove newsprint from the hard pack line which is blended with the rest of the newsprint, resulting in cleaner material for marketing; and
- On an ongoing basis, Recycling Centre efficiency assessments are completed, including audits to monitor quality of the processed materials; results are used to develop long term capital budgets and identify changes to be implemented as part of the existing processing related contracts and operational procedures.

3.2.6 While some third party materials have been delivered to the MRF in the past, the Region should continue to seek out new sources of recyclables in order to maximize the use of the processing equipment, facility, and labour and bring the operation up to full capacity:

- Early in 2009, Niagara was awarded a five-year contract to transport, process and market fibre material collected in the Region of Waterloo's curbside recycling program. Niagara competed against four private sector firms to win the contract, and has increased the facility throughput by over 26,000 tonnes annually;
- In late 2010, Niagara was awarded a five-year contract to transport, process and market both container and fibre streams collected in the Haldimand County Blue Box Program, which has further increased throughput by 2,700 tonnes annually; and
- On an ongoing basis recyclables (mainly cardboard) from commercial sources are purchased for processing and resale at a higher price.

### **3.3 General Best Practices Applicable to Niagara's Program**

3.3.1 Defined diversion targets and performance measures, supported by data collection and analysis are needed to measure the effectiveness of the Plan and its implementation. Performance measures and data to be obtained include monitoring of diversion amounts, conducting waste audits, and conducting participation studies:

- See Section 3 in this Plan for a description of performance measures, targets and associated monitoring activities proposed for Niagara.

3.3.2 Collection of multi-family recyclables needs to be a substantial part of this program. On-site collection of recyclables should be used to service all available multi-family households in the community, and should be integrated with curbside collection of recyclables wherever possible in order to ensure program success:

- A consistent Region-wide multi-residential recycling program, consisting of weekly cart collection of both Blue and Grey Box materials, has been implemented as part of the new collection contract, which began February 28, 2011. By mid 2012, it is expected that the multi-residential program launch with associated support activities including follow-up audits will be complete.

3.3.3 Providing sufficient rigid collection containers free of charge to residents will ensure that overflow materials are not disposed. Selection of the size and/or number of containers needs to take into consideration estimated set out volume of recyclables, based on the frequency of collection. Most programs will provide weekly or bi-weekly collection of recyclables. Collection of Blue Box materials should be at least as frequent as waste collection:

- Blue Boxes with a larger capacity of 83.28 litres (increase of ~ 30%) are made available free of charge to new homeowners and as free replacements for broken boxes; and are otherwise sold at a cost of \$6/box; and
- Increased collection frequency for recycling (both Blue and Grey Box materials weekly) and reduced collection frequency for waste (every other week) were included for pricing in the 2010 collection Request for Proposals (RFP) – weekly collection of both recyclables and waste was approved and implemented as of February 28, 2011.

3.3.4 Single-stream recycling may become more economically attractive as the volume of processed materials escalates with time and improved recycling habits of residents. Since the MRF underwent a significant upgrade in 2004 with \$13.3 million in capital expenditures, it is not likely that single stream recycling will be considered in Niagara in the near future. However, the current MRF optimization may produce scenarios where a single-stream model is a viable alternative for the Region. Another collection practice that is enabled by single stream collection is providing program participants with carts for their Blue Box materials instead of bins:

- *Collection Efficiencies and System Costs for Niagara Region* was a study which was received by Council in April 2008 that determined the Region should not consider implementing a single-stream system given the high capital costs and the reduced revenue from the sale of recyclables versus the savings in collection costs. Further this option was not considered cost effective when factoring in the cost of carts - the estimated 10 year cost is approximately \$4.6 million higher than under a system without carts (i.e. Blue/Grey Box, Green Bin, kraft bags for leaves, bags/cans for garbage).
- Single-stream recycling with cart collection may be more viable in the future with improvements in processing technology, which could also reduce the typical problem of high residue rates attributed to single stream collection, and could be considered for the future collection contract which will begin in 2018.

3.3.5 Key program staff adequately trained in the core competencies required for each duty:

- Staff are well trained in core competencies from workshops, courses, formal in-house training or on-the-job training; and
- In the case of contracted services e.g. waste/recycling/organics collection, the in-house and on-the-job training received by the respective contractors is monitored and Regional staff also provide training materials and deliver training to the contractors.

3.3.6 An effective promotion and education (P&E) program leads to higher residential participation rates, improved material quality, lower residue rates, and increased customer satisfaction:

- See Section 5 for a description of the Social Marketing and Education Plan.

3.3.7 In order to achieve the 60% diversion target set by the Province, programs in this category will need to use incentives and policies that promote waste diversion. Such tools may include solid waste bag limits, user pay program for waste, and/or enforced mandatory recycling bylaws:

- As of February 28, 2011, Niagara implemented a reduced waste container limit for all sectors including a one bag/can per unit waste set out limit for the residential sector (up to a limit of twelve containers for multi-residential properties);
- A partial user pay system (\$1 bag tags for residential waste over the set out limit) is in place;
- In terms of enforcement, the Region's first approach is to make use of various social marketing strategies to encourage participation in the Region's waste diversion programs (e.g. "It Takes Three" awards program, GreenScene newsletter, annual collection calendar). The By-Law Officers practice outreach activities, such as letters to landlords and tenants requesting voluntary compliance, as part of due process before applying fines under the By-Law. The primary objective is education and to only use the powers available under the By-law for enforcement in those cases where residents or businesses refuse to comply.
- Curbside collection and drop-off depot bans of waste that contains recyclables is included in Solid Waste Management By-Law 04-2011.

3.3.8 To achieve 60% diversion of Blue Box materials there is a need to collect the five mandatory Blue Box materials as well as several of the "supplementary" Blue Box materials that: comprise a significant portion of the waste stream (as determined by waste audits), have reliable markets, and can be practically recovered for recycling:

- Niagara collects the mandatory materials in addition to the majority of the supplementary materials. The most recent program additions include spiral wound cans (cardboard cans) in 2008 and empty paint cans and household aerosol cans in 2010; and
- The addition of plastic packaging with the numbers 3 and 7 is being considered for introduction to the program in the spring of 2012 (all numbered plastic packaging would then be accepted).

#### **4.0 Performance Measurement Targets and Monitoring Plan**

Baseline Blue Box Program data from 2009 and 2010, and in some cases historical trends, were used as a general basis for developing performance targets. Other municipal data were referenced where possible, for comparison purposes.

Performance targets have also been established based on approved program changes, targeted communications and processing facility improvements.

The proposed monitoring plan will be used to evaluate if the Blue Box Program achieves the proposed targets. The review of the 2009 and 2010 Blue Box monitoring results compared to the targets set in the previous Niagara Region Blue Box Program Plan are documented in a separate report to Committee and Council.

#### **4.1 WDO Related Performance Measures**

The WDO utilizes a standard methodology (Generally Accepted Principles or GAP analysis) for municipal waste management reporting and residential waste diversion calculations. On an annual basis, municipalities complete the WDO datacall, which compiles tonnage data, a range of operational/capital costs and diversion program and policy information.

WDO classifies municipalities into groups based on population and population density and in the case of more rural municipalities secondary criteria are used (i.e. type of service - curbside or depot only). WDO evaluates and compares the municipalities within each group for program effectiveness and efficiency. Niagara is classified by WDO in the Urban Regional group based on:

- Population greater than 250,000; and
- Population density less than 4.

The performance measures, which are an output of the WDO datacall process, are described below with associated targets. Where available, data from the municipalities in Niagara's group and the larger Ontario municipalities are included for reference. Limited 2010 data has been released by WDO at this point in time.

##### **4.1.1 WDO Residential Waste Diversion Rate**

The WDO residential waste diversion rate is calculated based on tonnes diverted in the following main categories:

- Recyclables material stream which consists of marketed Blue Box material, electronics, scrap metal, construction/demolition material, asphalt shingles and other miscellaneous categories;
- Green Bin organics and leaf, yard and branch material; and
- Other material which is primarily comprised of a WDO calculated tonnage credit for grasscycling/grass ban, return-deposit and backyard composting.

The following section provides details on the Blue Box tonnage marketed (diverted), the three main WDO diversion material categories and the resulting actual and projected diversion rate for Niagara Region.

In 2010, Niagara generated 201,432 tonnes of residential solid waste. Of this, 35,265 tonnes, or 18 percent, was diverted through the Blue Box Program. The most common material recycled was the paper stream, while the least was glass based on tonnage.

Table 1 summarizes the amount of Blue Box material diverted as a percentage of the total solid waste generated in 2010.

<b>Table 1 - Residential Blue Box Material Diverted as a Percentage of Total Solid Waste Generated in 2010</b>		
<b>Residential Waste Stream/Blue Box Material</b>	<b>Tonnes</b>	<b>Percent of Total Waste</b>
Total waste generated	201,432	100%
Papers (newsprint, magazines, boxboard, cardboard and fine papers)	27,337	14%
Metals (aluminum, steel, mixed metal)	2,082	1%
Plastics (containers, film, tubs and lids)	3,866	2%
Glass	1,980	1%
<b>Total Blue Box material currently diverted</b>	<b>35,265</b>	<b>18%</b>

For comparison across Ontario, Table 2 provides the residential diversion percentage by diverted material stream for the municipalities in Niagara’s Urban Regional group and in the Large Urban municipalities based on 2009 WDO data (2010 data for other municipalities has not yet been made available by WDO).

The recyclables material stream (marketed Blue Box and other recycled materials) in Table 2 accounts for almost a half of the total tonnage diverted. Niagara diverted 19.47% of recyclables (as a percentage of total waste) in 2009.

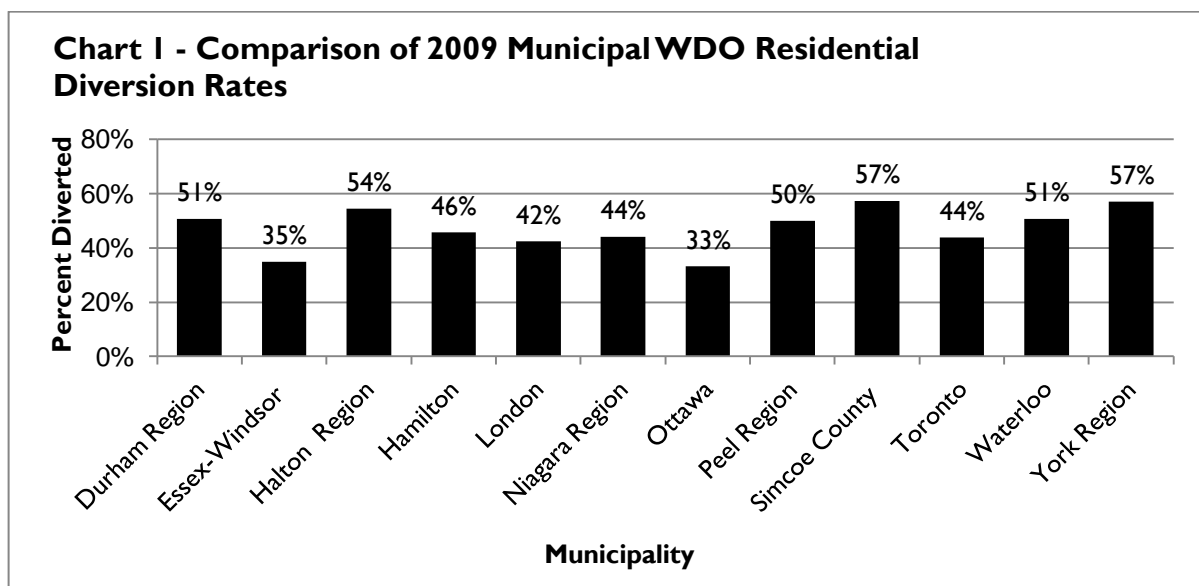
The average percentage of recyclables diverted (as a percentage of total waste) between the twelve municipalities, which is approximately 22%, is a reasonable target for Niagara to achieve by 2015. Staff will be investigating the potential for additional residential construction/demolition material and asphalt shingle recycling opportunities in 2012, which may contribute to a higher tonnage of recyclables diverted. Marketed Blue Box tonnages are also expected to increase due to the changes outlined in the sections of the Plan which discuss the Blue Box specific performance measures (see Sections 4.1.2 Blue Box Diversion (Recovery) Rate and 4.1.3 Blue Box Residue Rate).

The tonnage of recyclables, organics and other material (i.e. WDO tonnage credit) which are diverted all contribute to the overall WDO residential diversion rate. The resulting 2009 WDO residential diversion rate is included in both Table 2 and Chart 1 below.

**Table 2 – WDO Residential Diversion Percentage By Material Stream for 2009**

Municipality	Total Hhlds	Reported Population	Recyclables Diverted	Organics Diverted	Other Diversion	Diversion Rate
			%	%	%	%
<b>Large Urban</b>						
Halton Region	171,478	475,414	23.66%	26.37%	4.25%	<b>54%</b>
Hamilton	208,183	525,697	19.56%	19.99%	6.08%	<b>46%</b>
London	162,087	381,990	21.37%	13.69%	7.28%	<b>42%</b>
Peel Region	395,000	1,220,000	27.86%	17.66%	4.46%	<b>50%</b>
Toronto	943,794	2,516,352	17.99%	19.91%	5.83%	<b>44%</b>
York Region	308,852	1,032,606	23.43%	27.14%	6.42%	<b>57%</b>
<b>Urban Regional</b>						
Durham Region	203,969	614,960	21.94%	22.28%	6.39%	<b>51%</b>
Essex-Windsor	153,529	393,115	17.89%	11.74%	5.23%	<b>35%</b>
Niagara Region	186,504	442,908	19.47%	18.52%	6.00%	<b>44%</b>
Ottawa	369,271	908,389	18.38%	10.66%	4.18%	<b>33%</b>
Simcoe County	133,734	326,440	32.67%	18.60%	5.91%	<b>57%</b>
Waterloo Region	191,170	534,900	20.57%	21.46%	8.53%	<b>51%</b>
Totals	3,427,571	9,372,771				
Average			22.07%	19.00%	5.88%	47%

Chart I below illustrates the 2009 WDO residential waste diversion rates for municipalities in Niagara’s Urban Regional group and in the Large Urban group (see Table 2 for the list of municipalities in each group). York, Halton, and Durham have some of the highest diversion rates, which are generally attributable to every other week garbage collection. In the case of Toronto, also with every other week garbage, it should be noted that residents living in single family homes had a higher diversion rate approaching 60% but the overall rate is offset by the lower multi-residential diversion rate. This is due to the numerous challenges associated with implementing diversion programs in high-rise buildings. Simcoe County’s diversion rate was also reported to be one of the highest at 57% with a weekly one container garbage limit parallel to Niagara’s program.

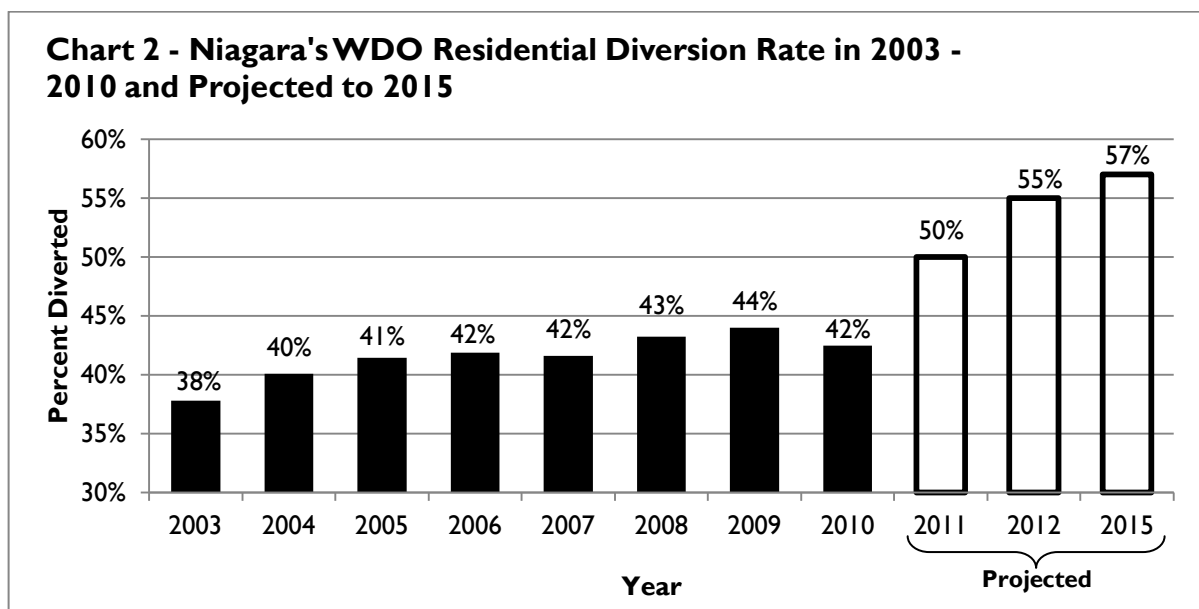


Niagara's 2003 to 2010 residential waste diversion rates, which are based on the Region's previous WDO datacall submissions, along with the proposed five year targets are illustrated in Chart 2 below.

The residential waste diversion rate is projected to increase to 50% in 2011 and 57% in 2015 due to:

- Blue Box Program enhancements described in Section 3 of this Plan;
- Improved overall diversion efforts as a result of the one garbage container (bag/can) limit per residential unit (to a maximum of twelve containers);
- Expansion of Green Bin organics collection to two municipalities which were previously excluded from the program; and
- Composting all of the Green Bin organics (i.e. avoiding the landfilling of organics at Walker, which occurred in 2009 and 2010).





These targets are generally consistent with the tonnages and diversion projections in the most recent version of the Level of Service rate model, reflecting the new service levels approved as part of the new collection contract. These targets are also in line with Simcoe County’s diversion rates of 47% in 2008 and 57% in 2009 with a weekly one container garbage limit and curbside collection services parallel to Niagara’s program.

**4.1.2 Blue Box Diversion (Recovery) Rate**

The WDO defines the residential Blue Box diversion or recovery rate as the percentage of Blue Box material recovered, as a percentage of Blue Box material generated. It is calculated by determining the capture rate of materials at the curb (from waste audits) and then deducting the residue rates at the processing facility.

As Table 3 below indicates, Niagara’s 2009 residential Blue Box diversion rate was well above average for its WDO municipal grouping and very close to the target established for Niagara’s WDO group. Although not yet released by WDO, it is expected that Niagara’s 2010 Blue Box diversion rate will be similar to the 2009 rate of 74%.

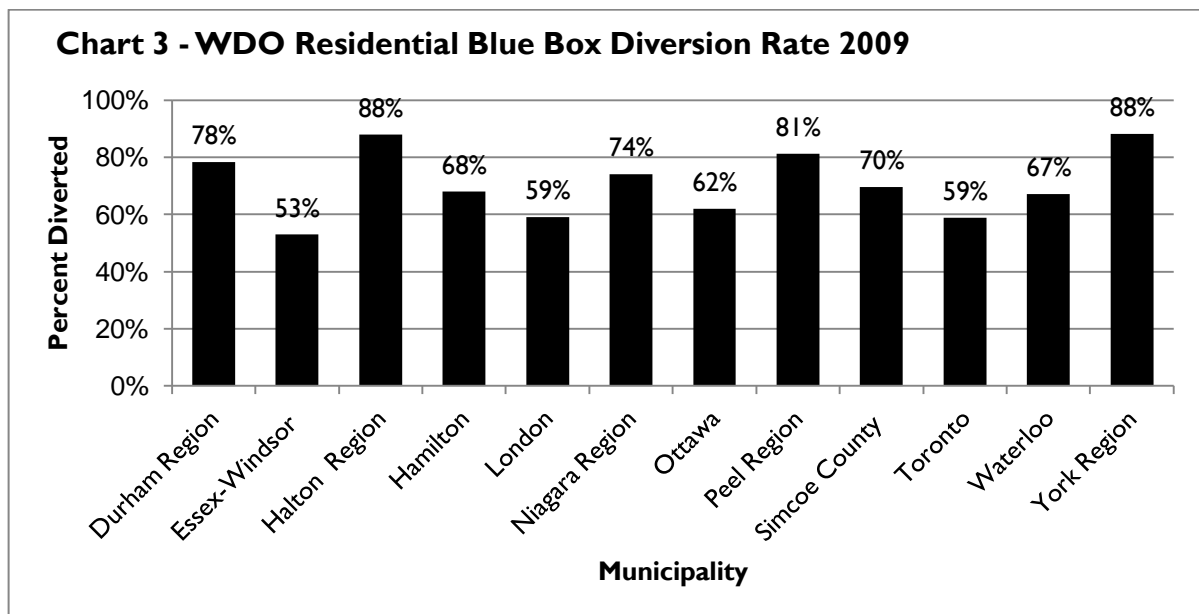
<b>Table 3 - WDO Residential Blue Box Diversion Rate 2009</b>	
Niagara Region 2009	74%
Urban Regional Group average	67%
Urban Regional Group target (based on CIF Guidebook for Municipal Waste Recycling Strategy, Municipal Workshop)	75%

The proposed 2011 Blue Box diversion target rate is 76% increasing to 80% in 2015, based on the following program changes/enhancements:

- Installation of plastics optical sorting technology in the Recycling Centre in mid 2010 to improve the recovery of recyclable plastic containers;

- Installation of a separate line and baler in 2011 to manage hard pack (corrugated card and boxboard) to reduce costs, specifically by reducing loader time and overtime hours for baling;
- Optimization of the sorting process by having sorters remove newsprint from the hard pack line which is blended with the rest of the newsprint, resulting in cleaner material for marketing;
- Potential introduction of plastic packaging numbered 3 and 7 to the Blue Box Program;
- Continuation of promotion and education programs and implementation of targeted campaigns; and
- Outreach and enforcement of the Region’s Solid Waste Management By-law.

Chart 3 illustrates the Blue Box diversion rates for the Large Urban and Urban Regional municipalities based on 2009 WDO datacall. The municipalities with the highest Blue Box diversion rates also experienced higher overall diversion rates. Halton and York achieved the highest Blue Box diversion rate (88%) of the municipalities compared in this parameter.



#### 4.1.3 Blue Box Residue Rate

Blue Box residue rate is defined as the percentage of Blue Box material collected that is rejected during processing.

Based on the 2010 WDO datacall, Niagara Region achieved a Blue Box residue rate of 4.2%.

With the implementation of various improvements to Niagara’s processing facility in 2010 and 2011, in addition to the recent emergence of markets for low grade mixed plastics, Niagara’s residue rate is projected to decrease to 3% in 2011. On the assumption that the

current low grade mixed plastics market will continue over the next few years, the 2.5% residue rate target is proposed for 2012 to 2015.

#### 4.1.4 Net Cost per Tonne Marketed

As Table 4 indicates, Niagara’s net program cost per tonne marketed was \$162 in 2010. In comparison, the 2010 average for the Large Urban and Urban Regional groups was \$209/tonne and specifically in Niagara’s Urban Regional group, the average was \$172/tonne.

Although Niagara currently has a cost effective program in comparison to other jurisdictions, the target is to further decrease the net cost to \$150/tonne by 2015. The 2015 target aligns with the \$150/tonne target set for the Urban Regional group in the CIF Guidebook for Municipal Waste Recycling Strategy.

<b>Table 4 Net Program Cost Per Tonne Marketed 2010</b>			
<b>Municipality</b>	<b>Reported and/or Calculated Marketed Tonnes</b>	<b>Total Net Costs</b>	<b>Net Cost Per Tonne Marketed</b>
<b>Large Urban</b>			
Halton Region	41,736	\$6,801,747	\$163
Hamilton	40,272	\$7,175,514	\$178
London	25,485	\$5,726,694	\$225
Peel Region	90,367	\$22,183,819	\$245
Toronto	155,010	\$42,424,073	\$274
York Region	78,494	\$14,435,314	\$184
<b>Urban Regional</b>			
Durham Region	45,162	\$8,336,765	\$185
Essex-Windsor	24,264	\$3,188,523	\$131
Niagara Region	35,265	\$5,696,508	\$162
Ottawa	63,213	\$9,331,027	\$148
Simcoe	22,103	\$5,666,014	\$256
Waterloo Region	34,968	\$6,373,463	\$182
<b>Totals</b>	<b>656,338</b>	<b>\$137,339,462</b>	<b>\$209</b>

## 4.2 Waste Audits and Visual Surveys – Program Monitoring Parameters

A waste audit or detailed waste composition study is defined as a formal, structured process used to quantify the amount and type of waste, recyclables and organics being generated and diverted. Waste audits of 170 household set-outs were most recently conducted across all twelve area municipalities in 2010 and 2011. Additional details are documented in the WMPSC 2009-2010 Blue Box Program Plan Monitoring Report.

Visual surveys, which were completed annually from 2007 to 2011, also provide data regarding participation and set-out rates. As part of the “It Takes Three Campaign” in 2010 and 2011, visual surveys of over a 1,200 household set-outs were conducted to:

- Determine participation rates and number of full container equivalents of all three of the Region's recycling programs (Blue Box, Grey Box and Green Bin) before and after the new services launch on February 28, 2011;
- Encourage those who did not participate in all three programs to do so by going door-to-door and directly engaging residents;
- Determine why residents did not participate in one or more diversion programs; and
- Provide information to residents about the Region's waste management programs.

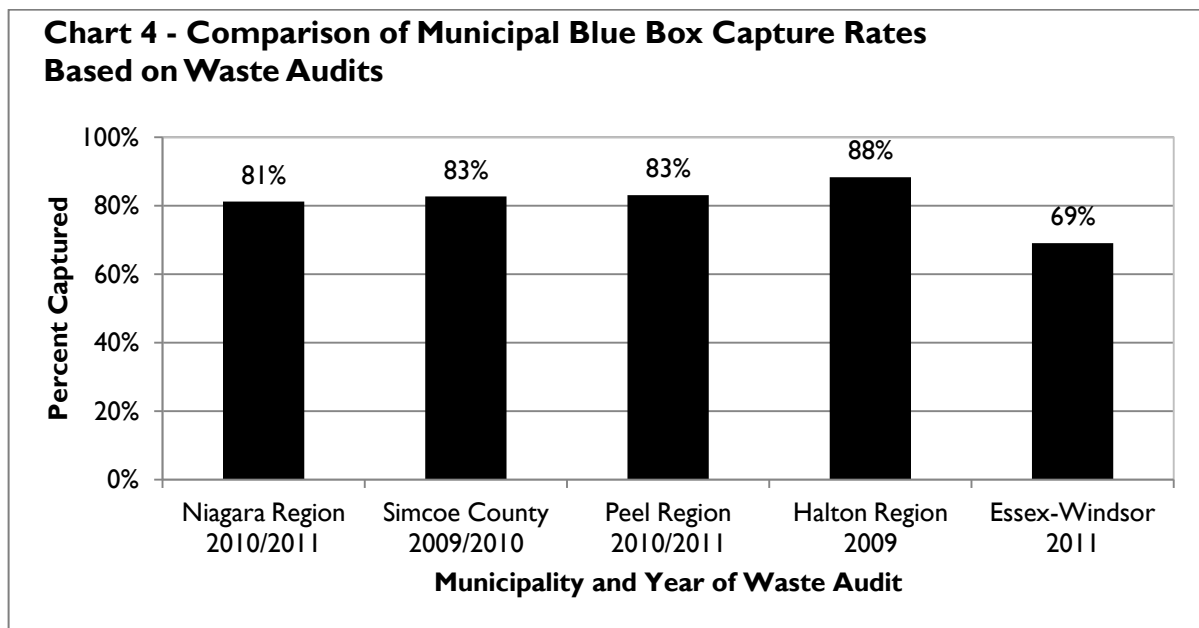
Key performance measures which are based on results of waste audits and visual surveys are identified below.

#### 4.2.1 Blue Box Capture Rate

The Blue Box capture rate is defined as the amount of Blue Box recyclables set out for recycling, divided by the total amount of Blue Box recyclables set out for recycling, plus the recyclables left in the garbage.

Chart 4 below compares Niagara's average 2010 and 2011 Blue Box capture rate to four other municipalities based on available waste audit results. The three municipalities which have a higher capture rate also have the corresponding higher WDO diversion rate.

Simcoe County has a parallel set of curbside programs compared to Niagara and has a 2009/2010 capture rate of 83%. Halton's capture rate is the highest at 88%, however this is partially affected by their every other week garbage collection service, which is a key behavior change incentive. Based on available municipal data for comparison, 85% is considered a reasonable target for Niagara for 2015. The target is expected to be achieved with the implementation of the targeted residential Blue Box social marketing and communications, in addition to the impact of the one container garbage limit and weekly collection of both the container and fibre streams.



#### 4.2.2 Participation Rates

The participation rate is defined as the percentage of households on a curbside collection route who set out recyclables at least once in a consecutive two-week period. Based on the 2010 waste audits which involved a two-week audit period in the fall of 2010 and a second audit period in the winter, the average Blue Box participation rate was 71%.

The two-week fall 2010 “It Takes Three Campaign” survey result with a 70% participation rate is consistent with the audit data. As illustrated in Table 5, since 2006, the trend has been towards an improved participation rate.

<b>Table 5 - Blue Box Participation Rates</b>	
<b>Waste Audits and It Takes Three Survey Period</b>	<b>Participation Rate</b>
2006 – Stewardship Ontario Audits	57%
2004-2007 – Region Audits	58%
2010 - Region Audits	71%
2010– It Takes Three Survey	70%

Niagara’s Blue Box participation rate is expected to further increase after the introduction of new service levels on February 28, 2011.

Other recent municipal data for this performance measure were not available for comparison. However, a reasonable target for 2011 is 73% increasing to a 75% participation rate in 2015 based on the various Blue Box Program changes/enhancements described in this Plan.

### 4.2.3 Set-Out Rates

The set-out rate is defined as the average number of Blue/Grey Boxes or other recycling containers placed at the curb for pick-up on a per household basis, per week. The average number of full container equivalents in addition to the actual number of containers set-out are included in Table 6 for the waste audits conducted between 2004 and 2010.

The average set-out is at its lowest in the 2010 audits at one container per household, per week. The main factor which would affect this rate is the availability of larger recycling containers from retail outlets and the distribution of Regional Blue Boxes with a larger capacity.

<b>Table 6 - Blue Box Program – Waste Audit Set-Out Rates</b>		
<b>Audit Period</b>	<b>No. of Containers Per Household Per Week</b>	<b>No. of Equivalent Full Containers Per Household Per Week</b>
Fall 2004	1.3	Not measured
Summer 2005	1.2	Not measured
Spring 2006	1.4	1.3
Summer 2006	1.5	1.5
Fall 2006	1.5	1.5
Winter 2007	1.5	1.4
Fall 2007	1.6	1.3
Fall and Winter 2010	1.0	1.0

The “It Takes Three Campaign” also recorded one full container equivalent per household per week in the 2010 survey. However, when comparing the set-out from the subset of households that had item(s) placed out for collection (rather than all surveyed households), the full container equivalent increased to 1.4 per household.

In terms of 2011 to 2015 targets, it is expected that the average number of full container equivalents and actual number of containers set-out per household per week, will increase to at least 1.4 for each parameter in both the future audit and survey data.

### 4.3 Monitoring Plan

A review process has been developed in order to monitor and evaluate Blue Box Program performance against program goals, objectives and the performance targets.

Quantitative sampling in each area municipality will be used as the key mechanism to evaluate each municipality’s diversion performance. More qualitative monitoring would be utilized to evaluate user satisfaction, effectiveness of communication messages, etc.

Measurements of key program parameters will typically occur in addition to measurements before and after a program change.

#### 4.3.1 Monitoring Objectives

The monitoring plan has the following objectives:

- To assess the Blue Box Program results against the proposed targets;
- To evaluate the effectiveness of program changes;
- To identify areas that should be addressed as part of continuous improvement; and
- To develop/refine previously established performance objectives and targets based on collected data.

#### 4.3.2 Monitoring and Evaluation Process

Qualitative data will be obtained from various consultation activities as part of major program changes, to monitor customer satisfaction and identify opportunities for improvement on an intermittent basis. Consultation options will include:

- Stakeholder engagement e.g. Waste Management Advisory Committee identifies issues, concerns and opportunities;
- Open houses and information sessions;
- Website feedback e.g. posting of Blue Box Recycling Plan;
- Workshops or focus groups;
- Newsletter;
- Social media e.g. Twitter and Facebook;
- Door-to-door or telephone surveys.

Quantitative monitoring will include the following data collection activities:

- Annual WDO tonnage and diversion rate reviews;
- Waste audits:
  - To be completed before and after major program changes, during a minimum of two seasons, or otherwise every three to five years to monitor existing programs;
- Visual surveys:
  - To be completed before and after program change;
  - If staff are available, annual surveys will be completed;
  - May include a continuation of the “It Takes Three” campaign sample areas, or otherwise new residential areas with low recycling participation rates, as well as randomly selected neighbourhoods could be targeted;
- Waste Management Info-Line reports:
  - Tracking of calls for information requests and complaint calls.

Trend analysis reports will be completed annually, in order to compare changes in performance from previous years and flag areas that should be addressed as part of a continuous improvement program.

There may be challenges which may negatively affect program performance in comparison to other jurisdictions. For example, in Niagara, two challenges include:

- Dispersed population across a large geographic area, which affects collection efficiencies; and
- Degree of seasonal residents, particularly along the lakefront communities, which affects the effectiveness of social marketing and outreach and in turn program participation and capture rates.

## **5.0 Social Marketing and Education Plan**

The Social Marketing and Education Plan includes a multi-tiered approach to promotion and education, e.g. radio components, TV, calendars and website offerings. Measurements of the effectiveness of the plan and assessments of the messages and communication mechanisms also occur. On an annual basis, the plan is reviewed and revised based on program changes and results of intermittent communication monitoring/assessments.

### **5.1 Plan Objectives**

The objectives for the Social Marketing and Education Plan are to:

- Increase use of the Blue Box and Grey Box to capture recyclables;
- Educate residents on the proper preparation of Blue/Grey Box material;
- Build commitment to ongoing program participation;
- Improve the quality of materials received at the Recycling Centre;
- Reduce the processing residue rate;
- Improve collection and processing efficiencies; and
- Decrease incidences of maintenance issues at the Recycling Centre, which are related to incorrect set-out or inappropriate materials in the Blue/Grey Box.

### **5.2 Evaluation and Assessment**

The 2011-2015 recommendations in this strategy reflect the feedback garnered from the focus groups, open houses and telephone surveys. These public consultation activities had a number of objectives, one of which was to monitor and provide feedback on the success of the social marketing and education completed over the previous few years and secondly to help plan and design components of the 2011-2015 Plan. A description of each consultation is provided below.



### 5.2.1 Level of Service Public Consultation Activities

As noted in Section 2, focus groups, open houses and telephone surveys were conducted to obtain input on the proposed waste management level of service changes, as part of the Level of Service and Rate Study. The feedback from these consultation activities which is related to social marketing and education is described below.

#### i) Focus Groups

The 43 focus group participants identified the following communication related points as important objectives to ensuring behaviour change and increased participation in diversion programs:

- Increasing communication;
- Targeting communication at school-aged children;
- Clarifying 'confusing' messages (what's recyclable vs. what is not); and
- Addressing concerns about Blue/Grey Box/Green Bin storage.

#### ii) Level of Service Public Open Houses and Telephone Surveys

The results of the public open houses (82 respondents) and telephone survey (800 respondents) related to communications activities included the following:

- The public open house question and answer sessions included feedback that: “More public education is required, especially on the economic benefits of recycling and other diversion programs”; and
- One of the main findings of the telephone survey was that: “77% agree that they would be motivated to put more effort into recycling if they knew that new products and packages were being made out of their recyclables”.

### 5.2.2 WMAC

On an on-going basis, the public advisory committee reviews and provides feedback on various campaigns. Input from WMAC on the 2010 Social Marketing and Public Education Strategy included the following points that were considered by staff in the development of the 2011-2015 Plan:

- Complexity of the requirement is evident in the many facets covered in the document.
- Details identified in the Tactics section are thorough and appear to cover the many options for communicating the goal.
- Because the goal is building a long-term relationship, the Post Implementation and Evaluation process will require an ongoing program of follow up and reporting of diversion/disposal actual results. A timeline and details for such a program should be developed at some point in time prior to completing the Implementation part of the Strategy.

- Pleased to see the current Regional website has very complete Waste Management coverage under the Garbage, Recycling and Organics banner. (And links to Twitter and Facebook) Information of Public Spaces could be a useful addition to the site. One issue however on the present layout. The navigation around the website can be a challenge if one drills down far enough, it is difficult to get back to the page one started on. (As an observation - perhaps we can put on a future WMAC meeting agenda a presentation of the Waste Management material on the website)
- By-law Enforcement. While not a popular topic and not a positive aspect of a Social Marketing and Public Education Strategy, it clearly is missing from the Tactics messaging. Some basis needs to be included - an anecdotal phase-in period, a gentle reminder phase-in period of noting non-compliance behaviour, then followed by enforcement and if needed imposition of penalties under By-law 95. (This would tie into the reporting of diversion/disposal actual results from the Post Implementation and Evaluation process.)
- Audience feedback mechanisms could be provided for throughout the process.

### 5.2.3 Communications Campaign for the New Collection Contract Service Changes

The communications campaign for the new collection contract service changes included the following elements:

- Benchmark telephone survey was conducted to establish the current levels of awareness and understanding of the issues by residents in November 2010;
- Campaign brand (Rethink Your Waste) was created and tested in focus groups;
- Communications plan was developed to identify key audiences, messages, communication tools, an advertising plan, media strategy and evaluation measures; and
- Post campaign telephone survey in September 2011, six months after the implementation of the service changes

The feedback from the focus groups and telephone surveys is described below.

#### i) Recycling and Waste Diversion Focus Groups

Focus groups were held in October 2010 to engage 18 participants on attitudes and behaviours regarding various recycling/waste reduction issues and the proposed creative for the upcoming marketing campaign for the new service levels changes (discussed further in Section 5.5). The following excerpt from the Niagara Region Recycling and Waste Diversion Focus Groups, Summary of Focus Groups/Observations document completed by Pier 8 includes following key messages:

- There was a common notion that the real consequences or outcomes of not reducing garbage or participating in recycling and other waste reduction programs are not understood, not top-of-mind or promoted, nor have much impact on people's attitudes or behaviours. "Consequences" were not a reference specifically

to fear tactics but rather the facts of what may happen if society doesn't change its attitudes and behaviours.

- In short, more effective education to increase awareness and understanding is required (this can be better accomplished through the media which has the ability and means to explore pollution/garbage issues in greater detail). The notion that “consequences equal fear tactics” is overstated. While real fear tactics are less effective in “social” marketing, this has little to do with communicating truthful outcomes in an intelligent, effective and informative manner — people need to be educated regardless of how the issues are perceived.
- In addition, there seemed to be little awareness or understanding of the divergent societal benefits and rewards (individual and community) of reducing our garbage and waste. This too requires more education, and again can be better accomplished through the media.
- When it comes to specific Niagara regional recycling and waste reduction program instructions, directions and/or changes, there was consensus that information must be communicated well in advance, periodically and with clarity.
- The issue of non-recyclable items (i.e., plastics and other packaging) surfaced in all of the focus groups. Many participants suggested that either all non-recyclable items should be separated at recycling depots to make the program easier for residents, or non-recyclable items should be banned from the consumer product manufacturing cycle all together.

ii) Recycling and Waste Telephone Surveys - Benchmark 2010 and Post Campaign 2011 Surveys

In addition to the results outlined in Section 2.4, key observations related to promotion and education plan are included below. This excerpt is from the 2011 Recycling & Waste Collection Service Level Changes, Post-Campaign Survey – October 2011, Oraclepoll Research Limited and the Pier 8 Group:

- In the pre-campaign survey, approximately one-in-three Niagara residents needed more information about what materials can be recycled, how to prepare materials for recycling, and the benefits of recycling. In the post-campaign survey, 91% of respondents indicated they were well or very well informed about what materials can be recycled, and 31% need or want more information. 93% of respondents said they were well or very well informed about how to prepare materials for recycling, but 35% indicated they still need or want more information.
- 54% of Niagara residents reported they are well or very well informed about what happens to their recyclables, however, 62% still have a need or want for more information, down from 79% in the pre-campaign survey.
- 87% of Niagara residents said they are well or very well informed about the benefits of recycling. 41% need or want more information. Only 12% of Niagara residents say they don't know very much about the benefits of recycling, down significantly from one-third of residents during the pre-campaign survey.

- 85% of Niagara residents indicated they are satisfied with the information and communications they receive from the Region about recycling and garbage collection, up from 80% in the pre-campaign survey. 88% of residents say they are satisfied with the recycling services in their community, also an increase from just under 80% in the pre-campaign survey.
- 59% of Niagara residents surveyed are familiar with the Region's publication, Green Scene, an increase from just over half in the pre-campaign survey. 84% of those residents read the publication, and 83% of residents who read it are satisfied with the publication.
- 68% of Niagara residents are aware of the Waste Collection Guide <note terminology change from 'calendar' in 2010 to 'guide' in 2011>, down from 89% in the pre-campaign survey. Of those who were aware of it, 91% use it to guide their recycling efforts, up from 80% — 85% say the publication is important.

### **5.3 Audience Identification**

Generally, the low density residential households have been the target audience for social marketing and education efforts. Multi-residential sector households will be a new target audience in 2011 with the implementation of the multi-residential recycling program across the Region, as part of the new collection contract.

### **5.4 Highlight of Completed Initiatives and the 2011 - 2015 Plan**

#### **5.4.1 Past Initiatives to be Included in the 2011 - 2015 Plan**

A highlight of the annual social marketing and education activities which have been completed in 2009 and 2010, and which also form part of the 2011 - 2015 Plan include:

- i) Outreach activities with schools, community groups and daycares and participation in local parades.
- ii) Continuation of awards programs for residents e.g. It Takes Three.
- iii) Continuation of web-based contests e.g. Recycle and Win and Waste Diversion Hero contest.
- iv) Updates to the 3Rs web based search tool to address resident confusion regarding what item goes in which stream. The resident or any service user can type in a material on the webpage and instructions on how to handle that material and similar items will be returned to the user.
- v) Interactive presentations and workshops for summer camps, daycares, community groups and general public.
- vi) Public outreach displays at shopping malls, home shows, farmer's markets, local festivals and other high traffic public venues.
- vii) Annual distribution of the Collection Guide.

- viii) Free special events recycling program.
- ix) Promotion and education strategy for public space recycling program.
- x) Use of social media e.g. Facebook and Google ads for targeted campaigns.
- xi) Development and updates to program brochure series.

#### 5.4.2 New Initiatives for 2011 - 2015

In 2011 and onwards, the following is planned:

- i) Implementation of the “ReThink Your Waste” campaign to promote new service level changes including weekly collection of Blue and Grey Box materials.
- ii) Implementation of a targeted campaign for the new multi-residential recycling program.
- iii) More face to face program promotion and education with the addition of the new outreach coordinator and on road coordinators; on-road staff target areas that historically have not fully participated in the Blue/Grey Box program.
- iv) Educational videos of co-commingle collection vehicles and Recycling Centre. Videos will be made available to community groups and schools for use.
- v) Utilization of WDO free newspaper ad space;
- vi) Introduction of Blue and Grey Box Mascots and web-based contests to Name the Mascots.
- vii) Campaign to promote the proper recycling of plastics and potentially expanding the program to include all numbered plastics.
- viii) Promotion of site tours at the Recycling Centre (due to completion of installation of dedicated walkway).
- ix) Interactive educational centre at the Recycling Centre.

### **5.5 Special Campaigns**

#### 5.5.1 Past Campaigns to be Reintroduced in 2011-2015

The Social Marketing and Education Plan includes the following special campaigns, which were developed specifically for the recycling program and were completed in 2009-2010. These campaigns will be intermittently reintroduced over the 2011-2015 period.

- i) Improving the Quality of Blue Box Program Materials  
Print ads and website postings with messages that focus on improving the quality of materials received at the Recycling Centre:
  - Plastic bags set out incorrectly in the container stream or improperly prepared bags;

- Stuff-it campaign to encourage boxboard and other small flattened pieces of corrugated cardboard to be stuffed into one larger box;
- Promoting capture of steel food and beverage cans;
- Reducing Blue Box contamination;
- Proper recycling of Tetra-paks and gable top containers.

This overall campaign also aligns with the best practices in Collection and Processing of Challenging Plastics as well as other materials and encourages residents to properly package and set-out the recyclables.

ii) Top Ten Recycling Tips:

This campaign contains multiple messages to change behaviours and habits of the service users who practice one or more of the ten most common Blue Box Program mistakes. The media includes newsletter articles, website postings, display handouts and newspaper ads.

iii) Recycle & Win:

The Recycle and Win campaign (a web-based contest) will continue to educate and inform residents about items that can and cannot be recycled. The interactive contest engages participants by asking them to identify in which recycling containers different everyday items should be placed. This is followed with an interesting fact about what each specific item is recycled into. Participants enter a draw to win an environmental prize package.

iv) It Takes Three:

The “It Takes Three” campaign will continue to be implemented to encourage residents who were not already doing so, to use all three of the Region’s recycling programs (Blue and Grey Box, and Green Bin), by offering a reward. It also rewards residents that already participate in all three recycling programs. Visual curbside audits will be conducted in certain areas of the Region to determine participation rates in the three programs. Residents that participate in all three receive an All Star door hanger. The door hanger is inscribed with a four digit number that residents could use to enter a contest on the Region’s website to win a prize package. Residents who do not participate in all three programs will also be given a door hanger with a ballot to fill out and drop off at any distribution centre when they purchase a recycling container. Follow up door-to-door visits to those residences currently not participating in all three recycling programs will be conducted to find out why residents were not participating and to provide them with information on the Region’s recycling programs.

v) Student Resident Outreach:

Annually, the Region’s Contract Supervisor/By-Law Enforcement Officers accompany Brock University students to disseminate information packages to students in Brock University off-campus housing. This initiative is sponsored by several community partners including Niagara Regional Police Service, City of St. Catharines, Brock Student Off-Campus Housing and the Region. The packages include information on

Niagara's various waste management programs, including the Region's Blue/Grey Box program.

In addition, letters are sent out in the spring and fall to known student housing addresses and landlords. Since letters have been sent out, the By-Law Enforcement Officers have seen a greater compliance in these areas.

vi) Increasing Capture Rates of Target Materials:

Targeted communications to increase capture of the materials which have a high potential for increased capture e.g. boxboard, cardboard and fine paper, in addition to the most recent additions to the program such as aerosols and paint cans.

### 5.5.2 New Campaigns Planned for 2011-2015

New campaigns for 2011-2015 include:

i) ReThink Your Waste" Campaign

The campaign promotes an awareness and support for the service changes, encourages increased use of the Blue Box and Grey Box to capture recyclables and educates residents on the proper preparation of material to go in the Blue/Grey Box. The campaign elements include:

- An initial public notice (postcard) handed out at booths and displays throughout the Region;
- A new collection calendar (four-page tabloid) detailing all program and service changes, distributed to every household;
- The Green Scene newsletter showcasing service changes, distributed to every household;
- Radio advertising (three radio stations, three different commercials, running 28 days during the month of February 2011);
- Newspaper ads (weekly advertising in the community newspapers, throughout the month of February 2011);
- Transit advertising (30 buses for five weeks in January and February 2011 in Niagara Falls, St. Catharines and Welland);
- Displays in municipal offices, libraries, YMCAs and grocery stores;

- Staffed displays at shopping malls (the Pen Centre, Seaway Mall, Niagara Square, and Fairview Mall);
  - Public service announcements produced by the radio stations and the local cable television station TV-Cogeco; and
  - Editorials and news stories published in the daily and weekly newspapers.
- ii) Multi-Residential Recycling Program Campaign:  
This campaign supports the implementation of the new recycling service to the subset of multi-residential buildings with no recycling program in place and the improvement of recycling performance in the subset of buildings which have a partial or full recycling service. Elements include:
- Presentations to superintendents, management companies and property owners
  - Provision of in-unit bags with instructional full photo label for residents in which to store recyclables
  - Instructional posters and labels for recycling carts
  - On-site informational displays with table top display and program banners
  - On-site public open houses and presentations to residents
  - Superintendent handbook;
  - Recycling guide for residents;
  - Follow-up site visits with superintendent, management company and/or property owner and inspection of recycling carts; and
  - Webpages.
- iii) Promotion and Education Continuous Improvement Fund (CIF) Application:  
An application will be submitted to request funds for a campaign to specifically educate residents on the proper recycling of plastics, and the introduction of plastic numbered 3 and 7. Monitoring and evaluation will be undertaken to determine the impact of such a campaign.



## 5.6 Monitoring Impact of Plan

The results of the various initiatives outlined in the promotion and education plan will be reviewed and evaluated using the following data sets:



- Audits to monitor program participation and to determine where to target social marketing and education to address problem areas/gaps;
- Monthly tonnage reports;
- Program complaints received by staff; and
- Volume and type of curbside noncompliance issues.

A challenge of the monitoring plan is to isolate performance changes that are strictly attributable to the social marketing and outreach activities for the Blue Box Program. Multiple waste management program changes or program messages may be included in one major educational campaign.

Outreach and communication initiatives will continue to be integral in future years in helping the Region reach its waste diversion goal of 65% by 2012 and as new programs are implemented or changed.

## **6.0 Continuous Improvement Plan**

The Continuous Improvement Plan related to the 2011-2015 Blue Box Recycling Plan includes the following components:

- Continued review of Blue Box collection and processing operations against best practices;
- Continued staff training i.e. recycling specific workshops and courses;
- Annual updating of available data and completion of review and evaluation of results compared to performance measurement targets;
- Monitoring of social marketing and outreach campaigns and associated evaluation of results;
- Periodic review i.e. every 3 to 5 years of the Blue Box Recycling Plan to monitor and report on progress and to move forward with continuous improvement;
- Public feedback on the 2011-2015 Plan to be used to develop the future plan;
- Public consultation for new programs, waste diversion goals and objectives; and
- Identification of new initiatives for implementation.

## **7.0 Conclusion**

Based on best practices recommendations, positive experience in other jurisdictions and stakeholder input, improvements to the Regional Blue Box Program are being implemented or considered. Every effort is being made to ensure the program is operated efficiently and in a cost-effective manner.