

Review and Analysis of Recycling Works Radio Advertising
Pilot- Tonnage Impact Assessment
(Project #331)

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Prepared for:



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1.0 Introduction

In April 2008, a series of radio ads entitled *Recycling Works* ran in the "519" area code, at radio stations in places including Guelph, Cambridge, Kitchener, Waterloo, Stratford, London, Windsor and Sarnia. The ads, commissioned by Stewardship Ontario (SO) as part of E&E Fund project 331, were partially funded by the Essex-Windsor Solid Waste Authority (EWSWA), City of London and Region of Waterloo. The target audience was primarily women aged 25 to 54. The goal of the radio ads was to reach at least 75% of this demographic 11 times. This is considered a standard weight (i.e. frequency of ad play) for radio.

The budget for the media buy was \$165,000. The three 30 second ads ("Fiancé", "Mr. Wiggles", and "Fast food") were designed to encourage Blue Box participation from residents living in both single family homes and those living in multi-residential dwellings. Listeners were directed to www.blueboxmore.ca for additional information.

In order to document and assess the impacts of the *Recycling Works* radio ad campaign, SO asked the municipal partners for assistance in evaluating its success. Municipalities were given standardized spreadsheets to complete. Data collection focused on comparing total and household capture (kg/month/household) for March-May 2008 (study period) and comparing it to the same time in 2007 (baseline). The study period started one month before and was completed one month after the launch of the *Recycling Works* radio ad campaign.

This report is a summary of findings from each municipal partner regarding the impact of the *Recycling Works* radio ad campaign. It includes a summary of the quantitative data provided by each municipality, aggregated analysis of this data and results of interviews with municipalities.

2.0 Summary of *Recycling Works* Campaign Results

Table 2.1 presents an overview of the waste management programs of each of the municipal partners.



Table 2.1 Summary of Recycling Programs in Participating Municipalities

Municipalities	Program Possibilities							
	Recycling					Waste		Composting
	Two Stream	Four Stream	Weekly Collection	Bi-weekly Collection	Depots	Bag Limit	User Pay System	Organics Program
Essex-Windsor Solid Waste Authority	X			X	X			
City of London	X		X			X		
Region of Waterloo*		X	X	X	X			X

*Have communities that are collected weekly and biweekly.

The following section outlines the participating municipal programs.

2.1 Essex-Windsor Solid Waste Authority

The Essex-Windsor Solid Waste Authority (EWSWA) operates under the auspices of the County of Essex and the City of Windsor. The EWSWA provides bi-weekly residential curbside Blue Box recycling collection for both city and county residents to approximately 130,000 households. The Authority’s recycling program is divided into two streams; containers are collected in the Blue Box and fibre products are collected in the Red Box.

The Authority owns and operates a Regional Landfill, two Transfer Stations, two Household Chemical Collection Centres, three Composting Pads, two Public Drop Off Depots, and a MRF which comprises both a Container Recycling Building and a Fibre Recycling Building.

The Public Drop Off Depots (one in the city and one in the county) are open to the public for the receipt of: excess recyclables, garbage, yard waste, electronics, scrap metal, tires, white goods, and household chemical waste.

Performance

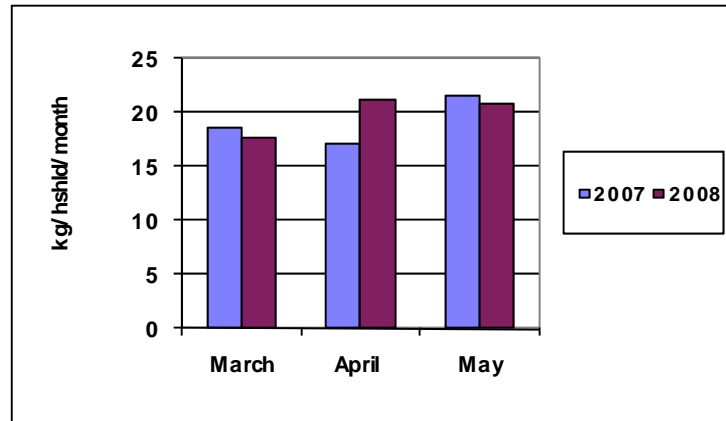
Recyclables Collected

Relative to Mar-May 2007, the study period of Mar-May 2008 saw an increase in the total capture rate of recyclables collected by 4.0% (i.e. three month period in 2008



compared with same period in 2007). There was a very small decrease in population noted and therefore it is assumed that on a per household basis there was an increase in capture rate of 4.0%. Figure 2.1 shows per household recyclables collected during the study period.

Figure 2.1 EWSWA Per Household Recyclables Collected Mar-May 2007 vs. 2008



Summary of Impact of Promotional Campaign

The radio ads ran at the same time as the release of their bi-annual newsletter 'Enviro Tips'. This always results in an increase in phone calls and visits to their website. The public didn't acknowledge the *Recycling Works* radio ad campaign directly by either phone calls or emails.

EWSWA added a new material to their Blue Box (tubs and lids), commencing in April 2008. This and the publicity surrounding the addition of tubs and lids could account for at least part of the capture rate increase noted during April 2008.

2.2 City of London

The recycling program in the City of London serves approximately 112,000 single family households and 42,000 multi-residential units for a total of about 154,000 households. The Blue Box recyclables are collected on an 8 day rotation. The City has a four container garbage limit, which was implemented in 2007.

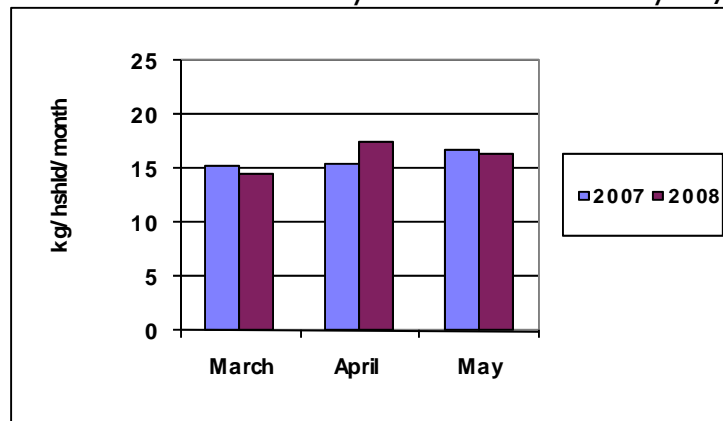


Performance

Recyclables Collected

Relative to Mar-May 2007, the study period of Mar-May 2008 saw an increase in the total capture rate of recyclables collected by 4.5% (i.e. three month period in 2008 compared with same period in 2007). On a per household basis there was an increase in capture rate of about 2.5% (i.e. population growth was about 2%). Figure 2.2 shows per household recyclables collected during the study period. The radio ads were aired during the month of April and when we focus on April results and account for household growth we find that in London there was a 14% increase in kg per household recycled, from 15.5 to 17.5 kg per household recycled.

Figure 2.2 London Per Household Recyclables Collected Mar-May 2007 vs. 2008



Summary of Impact of Promotional Campaign

There were no other waste management campaigns when the *Recycling Works* radio ad campaign was running that could have contributed to increased capture rates.

There were no specific hits to their web-site or public inquiries to their hot-line regarding the *Recycling Works* radio ad campaign.

2.3 Region of Waterloo

The Region is responsible for waste disposal and collection programs for the local area municipalities. Approximately 186,000 single family households and multi-residential units are serviced by the Region's waste and Blue Box recycling program.



Residents recycle in a number of ways - the curbside Blue Box program, the multi-residential Cart recycling program, depots and transfer stations. The same Blue Box recyclables are collected through these programs and at these facilities. The cities of Cambridge, Kitchener and Waterloo have weekly curbside collection. The four townships of North Dumfries, Wellesley, Wilmot and Woolwich have different collection schedules ranging from weekly to bi-weekly collection to recycling depot drop-off. (Note: due to expanded curbside services in the Townships, in June 2009, the recycling depots were closed). The collection truck drivers sort Blue Box recyclables at the curb into four streams: mixed fibres, co-mingled plastic and metal containers, clear glass and colored glass.

The Region of Waterloo introduced several new initiatives, both with focused promotional campaigns; the launch of the Green Bin organics collection and the first school year of the Environmental Education Centre. Campaigns encouraged residents to properly identify, prepare and set out acceptable recyclables and to encourage reduction of their overall waste.

A Green Bin organics pilot program was launched in October 2006, servicing 5,000 households. The program was expanded to an additional 5,000 households in October 2007. Presently 50,000 households have access to this program with an additional 41,000 coming on line October 2009.

Landfill bans are in place for tires, corrugated cardboard, wood pallets and electronic waste. Curbside collection bans are in place for grass and electronic waste.

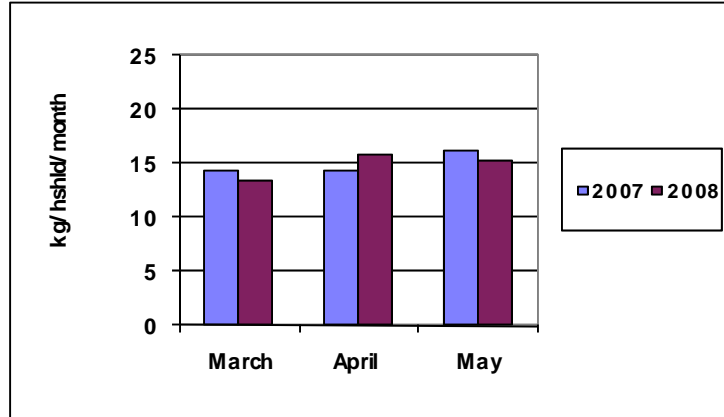
The introduction of the Ontario Deposit Return Program in February 2007 led to a reduction in glass collection and in overall tonnage.

Recyclables Collected

Relative to Mar-May 2007, the study period of Mar-May 2008 saw a marginal decrease in capture rate of -0.9%. There was no change in population noted and therefore it is assumed that the per household capture rate saw a decrease in -0.9%. Figure 2.3 shows per household recyclables collected during the study period.



Figure 2.3 Waterloo Per Household Recyclables Collected Mar-May 2007 vs. 2008



Summary of Impact of Promotional Campaign

In April 2007, some promotional initiatives were held, such as public tours on one Saturday and the commencement of yard waste collection which enjoys extra promotion. As well in April, many local organizations run Earth Week celebrations which can bring a general heightened awareness to waste disposal decisions. However, there were no public tours held in April of 2008 or other new major Regional promotional initiatives running during the time frame of these commercials.

In January 2008, the Region, through its contractors, increased vigilance on contaminations in the carts. As a result of visual inspections, a larger number of carts with contamination were being left uncollected; efforts with increased education continue.

There was not a noticeable increase to the number of website hits or to specific public inquiries regarding these commercials. Several general comments were received during other telephone inquiries on the content of the radio ads, i.e. the fiancé, indicating that residents had heard and remembered the ad.

3.0 Aggregate Data Analysis

3.1 Background

The data was aggregated and analyzed to determine if the *Recycling Works* radio ad campaign had a measurable collective impact on recyclables collection.



The data analysis examined the March-May 2008 study period and compared it to the same months in the previous year.

The emphasis of data analysis was on recyclables collected and included an assessment of the impact of population change (i.e. assessing change on a per household basis), where this data was provided.

3.2 Recyclables Collected

Table 3.1 depicts tonnes of recyclables collected by each municipality for the study period and the same months in the prior year. Overall there was a modest average 2.4% increase in tonnage collected. Two municipalities had a 4% percentage point increase and one had about a 1% percentage point decrease.

Table 3.1 Recycling (tonnes) Collected and Percent Change for all 3 Programs

Municipalities	Mar-May 2007	Study Period Mar-May 2008	Percentage Change
	tonnes		
Essex Windsor Solid Waste Authority	7,412.0	7,712.0	4.0%
City of London	7,151.0	7,469.0	4.4%
Region of Waterloo	8,377.0	8,303.0	-0.9%
Average	22,940.0	23,484.0	2.4%

Table 3.2 depicts the change in households served between the study period and the previous year (i.e. average for each three month period).

Table 3.2 Change in Number of Households served for all 3 Programs

Municipalities	Mar-May 2007	Study Period Mar-May 2008	Percentage Change
	Households		
Essex Windsor Solid Waste Authority	130,075.0	129,812.0	-0.2%
City of London	151,215.0	154,092.0	1.9%
Region of Waterloo	186,350.0	186,350.0	0.0%
Total	467,640.0	470,254.0	0.6%

On average it appears there was a 0.6% increase in households served.

Table 3.3 depicts recyclables collected per household. Using a weighted average it appears there was a 1.9% increase in recyclables collected which was greater than the increase in the number of households served noted in Table 3.2. It was also noted that residents of EWSWA collected considerably more recyclables than those in London and the Region of Waterloo.

The weighted average accounts for the population of the various municipalities on the overall average (e.g. a populous municipality has a larger impact on the average than communities with smaller populations). For EWSWA and Region of Waterloo the percentage change was similar to the percentage change for recyclables collected (i.e. Table 3.1). This is due to a very small decrease in population (EWSWA) or no reporting of a change in population (Region of Waterloo). The City of London noted a 2% increase in population so the 2.5% percentage point increase noted has fully accounted for population change.

Table 3.3 Recyclables Collected Per Household for all 3 Programs

Municipalities	Mar-May 2007	Study Period Mar-May 2008	Percentage Change
	kg/ hshld		
Essex Windsor Solid Waste Authority	57.0	59.4	4.2%
City of London	47.3	48.5	2.5%
Region of Waterloo	44.9	44.6	-0.7%
Weighted average	49.0	50.0	1.9%

This data was separated on a month-by-month basis.

Table 3.4 depicts data for March. There was a consistent decrease in recyclables collected for each municipality.



Table 3.4 Recyclables Collected Per Household for all 3 Programs-March

Municipalities	March 2007	Study Period March 2008	Percentage Change
	kg/ hshld		
Essex Windsor Solid Waste Authority	18.6	17.5	-5.9%
City of London	15.2	14.6	-3.9%
Region of Waterloo	14.4	13.5	-6.3%
Weighted average	15.8	15.0	-5.4%

Table 3.5 depicts data for April. There was a consistent and considerable increase of 11-24% in recyclables collected for each municipality. This coincided with the month the radio ads were played. As noted in Section 2.1 at least a portion of EWSWA's increased capture rate can be attributed to the introduction of tubs and lids to the Blue Box in April 2008.

The average increase in April was 2.5 kg per household across the three municipalities. Based on the combined count of 470,000 households the total increase of tonnes recycled was 1,200 tonnes in April 2008. The resulting revenue, based on \$100 per tonne, and mindful that it cannot be entirely attributed to the radio ads would be over \$100,000 for April.

Table 3.5 Recyclables Collected Per Household for all 3 Programs-April

Municipalities	April 2007	Study Period April 2008	Percentage Change
	kg/ hshld		
Essex Windsor Solid Waste Authority	17.0	21.1	24.1%
City of London	15.4	17.5	13.6%
Region of Waterloo	14.3	15.9	11.2%
Weighted average	15.4	17.9	15.9%

Table 3.6 depicts data for May. There was a consistent decrease, of -1.8 to -6.2% in recyclables collected for each municipality.



Table 3.6 Recyclables Collected Per Household for all 3 Programs-May

Municipalities	May 2007	Study Period May 2008	Percentage Change
	kg/ hshld		
Essex Windsor Solid Waste Authority	21.4	20.8	-2.8%
City of London	16.7	16.4	-1.8%
Region of Waterloo	16.2	15.2	-6.2%
Weighted average	17.8	17.1	-3.8%

3.3 Web-site Data

Listeners of the radio ads were directed to www.blueboxmore.ca for additional information.

Table 3.7 depicts web-site hits for March through May 2008 and compares them to March through May 2007.

The web-site hits in 2008 were 3-10 times greater when comparing the same months in 2007. This is at least in part due to the fact that the web site had become more established.

There is a definite spike in web-site hits for the month of April and this spike is ten times greater than April 2007. This could in part be attributable to the Recycling Works radio ad campaign.

Table 3.7 Web-site Hits at Blue Box More Web-Site

	2007	2008
	Web site hits/month	
March	5,039	14,437
April	2,424	27,546
May	6,223	19,753

3.4 Data Analysis- Informa

An analysis of the *Recycling Works* ad campaign was undertaken for Stewardship Ontario by Informa and completed in December 2008 (i.e. Tracking Radio Ad Campaign). It presents the results of a detailed survey completed after the radio ad campaign was completed and includes data on the television and newspaper ads. The aided recall of the radio ads was about 11% and this was lower than for television ads



(41%) and newspaper ads (13%). About 71% indicated that they had definitely not heard the ads. In further analysis it was noted that radio was ranked the lowest by survey respondents in terms of a preferred message media to receive recycling information.

4.0 Conclusions

Based on the data provided and analyzed the *Recycling Works* ad campaign could have effected a measureable individual and collective impact on the recyclables collected during the study period relative to the same months in the previous year.

The following was noted:

- In March and May 2008, the months before and after the ad campaign all municipalities saw a decrease in recyclables collected as compared to the previous year;
- In April 2008, the month in which the ads ran, all municipalities saw increases in kg/household ranging from 11 to 24% compared to the previous year;
- There was an average 15.9% increase (about 2.5 kg/hshld) in recyclables collected during April 2008 as compared to April 2007;
- There was a population change corrected average 1.9% increase (about 1 kg/hshld) in recyclables collected during the study period; and
- There was an increase in web-site hits in 2008 compared to 2007 and a definite spike in April 2008.

5.0 Recommendations

As part of recommendations emanating from "Review and Analysis of Recycling Works TV Advertising Campaign Municipal Reports and Aggregate Data" (project #294) data analysis focused on recyclables collected. This resulted in streamlined data analysis of "real time" data for this Study.

The final result was that it appeared that the *Recycling Works* radio ad campaign could have contributed to a spike in recyclables captured in April 2008 followed by a smaller decrease in May 2008. The increases did not appear to be sustained beyond the *Recycling Works* radio ad campaign.

It is **recommended** that a system be further developed to exclusively collect data in "real-time". This could involve collecting and assessing additional recyclables collected data on a more detailed week-by-week basis shortly before, during and shortly after an



ad campaign.

Data collection for this study focused on “macro” and collective municipal data. It is **recommended** that a system be developed to supplement this data with “micro” municipal data from representative municipal neighbourhoods, while an ad campaign is underway. It is envisioned that recyclables and/or wastes would be collected for auditing purposes in the same fashion as they have been for previous Stewardship Ontario projects. The parameters to be measured would need to be determined but could include weight of recyclables, weight of specific recyclables etc. This assessment could be not detailed or detailed. It would be necessary to ensure that representative neighbourhoods had received quantitative advertising opportunities (e.g. xx showings of an ad, print ad received at homes etc.) so that a “cause and effect” could be more clearly measured.

Clearly the efficacy of advertising methods to stimulate desired behavior should be well known from marketing theory and marketing sectors and it is **recommended** that these should be more thoroughly consulted when developing a revised data collection and assessment system for these types of projects.

Finally, it is also **recommended** that the system to drive recipients of advertising to the www.blueboxmore.ca web-site be enhanced. Web-site hits were tracked for the *Recycling Works* radio ad campaign, although the detail could be increased (i.e. location of web hits to see if regional ad campaign is having a regional impact on web hits). It is **recommended** that a short survey that asks users, by municipality, how the ads impacted them directly be developed and posted on this web site, during ad campaigns.

