

TOWN OF MARKHAM



Residential Feedback:

Waterworks & Waste Management Department

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EXECUTIVE OVERVIEW & RECOMMENDATIONS

Introduction

Two focus groups (one with women and one with men) of Town of Markham residents/heads of households were conducted April 18th. A total of 19 people participated in these sessions that were organized to provide feedback about Markham's Waterworks and the recycling program.

TOWN OF MARKHAM'S RECYCLING PROGRAM

Recycling is the norm; households that do not follow this neighbourhood practice are visible and harshly judged.

Markham residents are proud that their community has led the way in reducing garbage through enthusiastic recycling (blue boxes, green carts and kraft lawn bags). Programs have been developed in concert with residents, using the continuous improvement approach.

Transparent Bags

The garbage bag has come to represent, for those who think they are efficient recyclers, the last bit that is the hardest to reduce. Some people admit that their garbage often contains things that could be re-used – clothing, toys, household gadgets, etc. And, some people believe they are entitled to dispose of personal things (including hygiene products) privately. Transparent garbage bags represent violation of personal privacy, for others it smacked of 'big brother' prying into personal effects.

- The idea of switching from opaque to transparent plastic bags prompted many questions. The primary one was the purpose of requiring residents to reveal the contents of their garbage by using transparent bags. Most people deduced that the intent is to drive more recycling.
- The proposal came as a shock for those who claimed that they are dedicated recyclers – must everyone suffer because of a few 'deadbeats' who are not recycling?
- Some people viewed it as an invasion of privacy and questioned whether it is ever justifiable?
- It was evident that women were most affected because they are the main sorters of waste within the home. Men, on the other hand, tended to be less involved in this task; however, they usually carry the bins/containers to the curb for collection.
- Objections softened somewhat when respondents learned that the majority of the garbage bag contents were recyclable (source Mission Green, October 2006 newsletter). They agreed

that the three major categories of recyclable items are the difficult ones to divert: 'yucky' personal things (tissues, personal care items), identity theft documents and cast-offs/'stuff' that can be reused.

Recommended Introduction Strategy:

1. Inform residents that 66% of garbage bags have recycled content and that most of the materials can be recycled. Identify the recyclable categories.
2. Introduce and enforce mandatory recycling, creating a level playing field.
3. Provide tips/solutions on recycled content reduction aimed at three major categories:
 - reusables: local charity drop-offs and collection services, community events
 - organics: split bathroom waste bins and allow small grocery bags for 'untouchable' personal hygiene items.
 - Personal papers/documents: inform residents that the place for shredded paper is the green bin and focus on the need to recycle junk mail
4. Promote Town of Markham recycling depots, drop-off points (inc. HHW) and charity collection services
5. Feedback – provide diversion gains and identify remaining items to be recycled
6. Introduce transparent bags only after the above steps have been taken. Allow some small grocery bags (for privacy). Promote and enforce bylaw in tandem with facts about diversion gains.

Blue Box Expander

- The benefits were most evident to men who carry boxes to curb and clean up the litter on windy days. They were very enthusiastic about the Expander.
- The Expander's main benefits are: increase capacity, protection from wind, litter reduction and ease of carrying to and from the curb.
- Women seemed to be less enthusiastic about the Expander, tending to see it as a nuisance for collectors. They might be just as likely to purchase another blue box in order to increase their storage capacity.

- The \$5 price point was seen to be reasonable and probably cheaper than a new blue box. Also, it increased storage capacity without demanding a larger footprint for another recycling bin.

TOWN OF MARKHAM WATERWORKS

- Waterworks provides a seamless, quality service consistent with resident expectations. There was little to no evidence of quality concerns or supply fears. Town of Markham can be trusted to provide quality services.
- Waterworks' infrastructure and operations are hidden from public view, including residential meters. Many people had never looked at their water meters.
- While the quality of Markham's water is excellent competition from the 'lifestyle' branded water market and convenience drives purchasing of bottled water. Also, many residents have become accustomed to the non-chlorine taste of Brita filtered water.
- The price of water is comparatively low (energy, gas, taxes), further cost is not linked with usage patterns. It is one of those cheap commodities that are used assuming infinite supply, aside from periodic lawn watering restrictions. Some residents seem to be unaware of the bylaws and indulge in wasteful watering practices.
- Residents agreed that wasting water is normative but are trying to teach themselves and their children more thoughtful practices, i.e. turn the tap off when they brush your teeth. What else should they be doing? The challenge was to quantify how much water they were using given that it is hidden or unknown – bulk bimonthly cubic metric household figures are useless for conservers. They are consuming water ignorantly – a point of frustration for many residents.
- Most participants were shocked to learn that the average Canadian uses 343 litres daily – this Environment Canada figure prompted many people to think about their behaviour. What reduction steps were recommended? Which activities are the major contributors to this huge volume? Many people felt that water conservation/wise use of water is both logical and necessary; it is part of the mix of new ways of doing things now that the environment matters.
- Water WATCH Newsletter had low recognition. The sample issue (Fall 2006) was judged to be much too complicated and copy dense for the lay reader. Rather it was seen to be written by and directed to technical experts, including plumbers. Residents want facts that apply to them and that will educate them about behaviour; they expressed willingness to modify ingrained actions in order to save water.

EMERGING ISSUES

Participants made the following associations with water usage:

- Conservation of resources is essential – recycling is the gateway
- Energy reduction is front of mind; the focus is on new aids such as energy efficient appliances and behaviour change. Residents want to contain the constantly increasing amount they are paying for energy.
- Water conservation is the next big step in conservation; reducing the amount of warm water used for showers, clothes washing etc. saves both energy and water. This is a double saving which residents appreciate.
- Residents expect Markham to be active in water conservation, consistent with the leading edge nature of community
- Canadians want to retain quality of lifestyles and address environmental imperatives; most residents appear to believe that they are compatible.
- Householders are interested in containing or reducing household operating costs; this affects both seniors and families.

RECOMMENDED ACTIONS

Develop a 'Markham is water smart' strategy with detailed plan elements. Communication and public education are essential in converting Markham residents into informed users and conservers. The key target groups: women, men (lawn care) and children.

Waterworks has information of interest to residents; they expect that Waterworks should be providing this service. While the levels of interest vary, the overall subject is one that many residents believe requires more of their attention.

Accessibility is the key to effective communications. Currently, the direct mail newsletter Water WATCH, is the major vehicle for message delivery. Its impact and educational effectiveness can be increased by changes to design, layout and content. The copy needs to be written in simple language, geared to a wide cross section of the population. While residents both want and expect to see items about testing and infrastructural improvements, they are primarily interested in facts that they can apply to their water usage. Copy should be reduced to a minimum with

ample use of visuals in order to quickly and easily convey facts. Colour and design elements are essential to add to its overall visual appeal.

The education program should include:

1. Facts – ‘water usage 101’ - link with specific actions, including both in-home and lawn/garden watering practices.
2. Connect water volumes with actions and costs.
3. Create messages in lay terms; the focus should be action-oriented. Reduce technical jargon and content which inhibit most residents.
4. Translate water volume (m³) into a meaningful measure such as litres, which can be visualized.
5. Set goals to drive behaviour change showing the current typical family usage versus a ‘water smart’ family consumption volume.
6. Provide tools (lawn water gauges, barrels, etc.), incentives/rebates (low flush toilets, low flow shower heads, etc. Residents expect that a meaningful program will include these components.

Reaching Residents – Waterworks & Recycling/Waste Reduction

Residents indicate they can be reached in a variety of ways, including:

- Articles in local newspapers
- Town of Markham generated newsletters, door hangers – direct mail
- Events, fairs, mall displays
- Bill inserts
- Via children – in school programs (new Ontario environmental curriculum)
- Electronic: website & E-newsletters

As the chart below indicates all or most of the variety of communication channels available to Town of Markham are compatible with content for both Waterworks and Waste Management.

MOST EFFECTIVE WAYS OF REACHING RESIDENTS:	WATER	WASTE	BOTH Water & Waste
Local newspaper/ articles and ads	2	1	16
Newsletter delivered door to door/door hanger	1	2	15
Recycling calendar/ schedule delivered to door	1	4	13
Community event	-	1	11
Posters in community centres, local malls	-	-	10
Town of Markham's website	-	-	10
Insert in bill i.e. hydro	1	-	9
Bus ads/ ads on buses	2	-	7
Electronic newsletter	1	-	7
The children/ children's school	2	2	6

The recommended approach is to adapt the quarterly reader-friendly Mission Green newsletter to include news, tips and feedback about Markham's three environmental services – recycling, water and energy. This makes good sense and would provide residents with a comprehensive approach to three currently separate issues.

It is recommended that residential recycling and energy and water consumption and attitudes be tracked in order to help inform future communication content and conservation initiatives.

STUDY BACKGROUND & AIMS

BACKGROUND

Town of Markham is home to 261,573 people; according to the 2006 Statistics Canada census the population grew 25% since 2001. The Town's mission statement is as follows:

Working with the community to provide high quality municipal services that meet, if not exceeds, the expectations of Town residents and businesses.

Town of Markham's Waterworks and Waste Management departments are planning to jointly conduct a small indepth focus group study. The project will gather input from residents on two issues:

Waterworks

Town of Markham's Waterworks department operates according to the following Mission:

- To provide high quality and sufficient quantity of water supply to all system users with the highest affordable level of service.
- To carry out efficient operation and maintenance of the Town's sanitary sewer system to minimize hazards to public health, safety and property.
- To protect our natural resources, specifically, to conserve the fresh water.

The Department supplies safe drinking water for residential and commercial use and maintains extensive networks of water mains and sanitary sewer lines. Water quality and supply are maintained in tandem with City of Toronto; water is sourced from Lake Ontario.

According to a 2006 Environment Canada report 56% of water provided by municipalities is consumed in-home, yet very little (only 1%) is actually used for drinking.

Most of the 343 litres per capita consumed daily by Canadians is used for dishwashing, laundry, toilets and personal hygiene. Nonetheless, Canadians have come to rely on their municipal governments to provide safe, clean and uninterrupted supplies of water at a very modest cost. Water and wastewater services are a minor household expense. Yet public attention has become focused on the quality and availability of Water – municipal water supply tragedies such as Walkerton resonated across the country. Media reports increasingly provide evidence of pollution and of freshwater scarcity and purchase of bottled drinking water is climbing. It is an opportune time to gather resident's feedback. Probe areas would:

- Town of Markham's Waterworks – associations and direct experiences with the department and its services

- Awareness and level of interest in waterworks functions, including repairs due to water main breaks.
- Awareness and response to reply paid service rating option – ever participated in this option?
- Reliability – any cause for concern?
- Awareness of cost as part of overall fixed household operating expenses. Is it seen as a small fraction of the total cost? Worth comparing water costs to energy costs?
- Presenting water charges – what is most meaningful: % of total average household cost, \$X per week, \$X per year?
- Perceived quality of Markham water and related water consumption preferences (tap, filtered and bottled)
- Desired facts and preferred sources – what do they want to know about the service and the product?
- Awareness of and interest in print Water Watch. Recall receiving it?
- Reaction to sample copies of Water Watch format and content. Other topics that they would like to have featured,
- Interest in website details and current available content
- Ideal way of reaching them with messages – current avenues sufficient or do they need to be enhanced?

Waste Management & Reduction

Currently, Town of Markham's Mission Green three stream residential collections is successfully diverting 68% of solid waste. The Mission's goal of 70% diversion is within sight, however new measures are being considered that could have a significant impact on driving down garbage volumes even further. At last count a significant amount of recyclable or compostable materials continue to be placed in garbage bags.

One strategy that Waste Management wants to explore is the potential impact of stipulating that clear bags would be required for waste. Probes would focus:

- Feedback on current waste collection service – blue box, organics and yard waste.
- Immediate reaction to concept of introducing clear plastic bags for waste collection. Is the waste reduction goal evident? Are residents interested in knowing more about the types and volumes of recyclables and organics that are being put out with the garbage? Reaction to some of these facts, i.e. 66% of garbage bags still contains green bags and blue box items.
- Cooperation - Would residents be willing to comply with this new approach?
- Introduction approaches – should it be phased in? Would a partial step be required – one or two clear bags and one opaque bag (three bag limits per collection) with the aim of moving towards exclusively clear bags?
- Impacts - What are the perceived benefits and drawbacks of requiring clear garbage bags? Is this seen as sufficient rationale for the loss of privacy inherent in using see-through garbage bags?
- Waste Department Tasks - What enforcement methods would be expected and acceptable, i.e. warning stickers, collection refusal, fines, etc.?
- Reaching residents with waste reduction message – aware of current options and ideal ways of getting messages out. Print and electronic options. Awareness of Markham's new Mission Green e-newsletter and desired content.

STUDY DESCRIPTION:

The sessions were conducted according to a Discussion Guide, prepared by the consultant, incorporating the research objectives as listed in this document. Prior to terminating each group, respondents completed a short structured questionnaire which captured key responses.

The sessions were conducted in a meeting room located at Town Centre Boulevard. Proceedings were recorded on DVD and on audio tapes by Parashoot Productions. Clients observed the sessions via closed circuit television, in an adjoining meeting room.

Respondents were recruited by a professional recruiting company to ensure for quality participants. In return for their participation, they received \$75 and were provided a meal (6pm session) or a light snack (8pm session).

Recruiting

The focus groups were recruited by national supplier, Sharper Insight using a screening questionnaire developed by the consultant. In return for their participation, respondents received refreshments and a \$75 honorarium.

Informa Market Research is a member of the Market Research and Intelligence Association, Canada's market research organization, and as such adheres to standards set by the organization. This includes engaging only recruiting companies that belong to the Central Files system, as detailed below. This ensures that focus groups conducted by Informa include only people who qualify and avoids the inclusion of the 'professional respondent'.

Analyses and Report Preparation

Complete transcripts were made of the focus group proceedings and input from the questionnaires was tallied. The consultant then carefully reviewed the transcripts and tallies, viewed the video tapes and incorporated impressions that have been gathered during the course of conducting the focus groups. All of this material has been analyzed and carefully distilled into a detailed report. This report includes:

- a description of the research methodology;
- profile of the participants
- synopsis of the results
- analysis of the outcomes, identification of themes,

Recruiting Specifications:

- one group each, male and female
- recruit 10 for 8 or 9 to show
- residents from across the Town, representing all four areas
- head of household/major decision-makers
- must play major role in recycling and paying household bills
- one third of respondents are empty nesters, 50+ years, adults with no children or mature children

- all households must have a minimum of two occupants, no sole dwellers
- ethnicity: one third of respondents of Asian/Chinese origin
- access to curbside collection (single, detached dwellings only)

Women's Group Profile

Age	Town/FSA	Number of children at home	Occupation
38	Markham/L3P	2	Sales/ Healthcare
58	Thornhill/L3T	1	ECE Teacher/ Education
32	Unionville/L6C	2	Custom Inspector/ Fed Gov
38	Markham/L3P	2	Maintenance/ Tool Co.
59	Markham/L3P	1	Financial Services/ Health
42	Milliken/L3R	2	Admin Asst/ Bank
55	Thornhill/L3T	3	College Instructor
37	Unionville/L3R	2	Homemaker
43	Milliken/L3S	4	Library Administrator

Men's Group Profile

Age	Town/FSA	Number of children at home	Occupation
52	Milliken/L3S	2	Sales and Leasing automobiles
38	Markham/L3S	2	Customer service/ Automotive
55	Thornhill/L3T	1	Sales/ Equinox
44	Milliken/L3R	2	Install Commercial satellites
31	Thornhill/L3T	1	Retail/ Sports
50	Thornhill/L3T	2	High school Teacher
33	Unionville/L6E	2	Actuary/ Insurance
28	L3R	Refused	Refused
40	Unionville/L6C	None	Purchaser/ Automation
50	Markham/L6E	3	Retired Pharmacist

DETAILED FINDINGS

Each session was divided into two equal length segments – one for water and one for waste/recycling collection. The order of presentation was rotated; the men's group started with water while the women's group commenced with waste.

TOWN OF MARKHAM WATERWORKS

Introduction:

The discussion covered the following topics:

- Immediate Associations with Waterworks
- Water Supply Consistency & Quality
- Water Rates & Bills
- Recycling leads to Water Conservation
- Reaction to Water Usage Data
- Wasteful Types of Behaviour
- Lawn Watering – Time or Volume?
- Conservation Aids – Water Barrels
- Water Meters
- In-home Water Add-on/Water Purification Systems
- Rating Waterworks
- Door hangers/Notices
- Water Watch – Newsletter from Town of Markham Waterworks
- Suggestions for Future WaterWATCH Articles
- Written Suggestions

- Other ways of communicating with residents
- Town Fairs/Events
- Local Newspaper
- Water Conservation Incentives

Immediate Associations with Waterworks

Town of Markham's Waterworks provides a seamless, reliable service to the point that residents rarely have occasion to think about. Beyond benefiting from the constantly available flow of water from taps and toilets, the only contact with Waterworks is through the bimonthly bill. However, because it comes from the energy provider, Power Stream prime attention is focused on the electricity charge; water and sewage costs are a fraction of the total.

Residents admitted that they knew nothing about Markham's water from infrastructure to source. Did it come from Lake Ontario? Is it the same water as Toronto's? They have had no particular reason to know these things; however some people are starting to become more attuned via the growing global concern about pollution, availability/supply and profligate use.

I think it only kind of brought it to mind once when I came over statistics where somebody—it's—in some countries some people only get to use six litres of water a day. And I'm thinking, Oh, my goodness! I flushed my toilet, that's six litres. Like, you know, and that's a—you know, a energy—water-saving unit already, so and the older ones use 11 or something like that. So you don't really think about it and you don't measure it. You know, I you know, when I saw that, I'm thinking, I should use less water. Let's put a basin of water, wash the dishes and rinse them in one basin. And then you forget it because it's not your usual practice.

Water conservation was the key topic that came to mind when water was mentioned. Many residents expressed considerable interest in this topic describing reduction methods that they had used (taking showers instead of baths) or were contemplating (capturing rain water in barrels for watering the garden). From the outset, conservation content dominated the discussion spanning both general and personal usage comments and queries— was it wiser to wash dishes by hand or in the dishwasher? There was little to no reference about infrastructure matters.

The Town's activity on conservation was limited; a few residents recalled door-to-door visits offering low flow shower heads some time ago. Since then there was no widespread initiative to educate and encourage residents to adopt wiser water use habits. This point was decried by a few of the more vocal participants. Clearly, they would have expected Town of Markham to be on the forefront on this matter. There was evidence however, that Toronto was taking action through a variety of programs – they saw promotions and had heard about them. The rebate program offering up to \$60 for installing low-flow toilets was mentioned.

Water Supply Consistency & Quality

Town of Markham's water supply arrives in homes predictably and upon demand – the tap is turned on or toilets are flushed and predictably water is available. Service interruption is not something that people must fear or contend with. Participants were confident that Waterworks was providing quality service, which is consistent with overall quality delivered by Town of Markham.

I thought over the years with all the taxes I've paid that we had competent people looking after things. This more or less just highlighted it, but I just assumed that after 26 years of paying taxes, that I—there are some competent people looking after stuff.

Occasionally, however, at certain times in the year, the water may smell or taste of algae; this can occur in the summer months. Or some people noted that the level of chlorine, based on taste or odour, might be elevated.

Yes, a very strong smell of chlorine at certain—especially around this time of the year when they get the spring run offs.

On the rare occasion, some time in the past, some respondents recalled that residents were advised to run their taps for a minute before drinking the water. This requirement was due to the old lead pipes, not the quality of the water.

Water Rates & Bills

The cost of water was seen as insignificant, not worth noting or objecting to. In fact some residents were not really sure if the rates had changed recently. Their interest in becoming informed users was based on their belief in environmental matters, not saving a buck. But many pointed out that the significant savings that came from reducing energy for heating water. Women appeared to be most interested in the water facts about 'water smart' bathing and cleaning.

Nonetheless, both men and women tended to be more interested in conservation and how much water they were currently using.

It's like anything, I get a bill and I don't even question it. I pay it and that's it. But like you said, if we had a break down of how much water we use per—per cooking our food, or washing cars, or clothes, or whatever it is, that would help us to—to conserve a little more. And we could use a little less water to wash the dishes and the clothes. And then it would help us do better.

A few thought that it had increased recently but couldn't assign a value to that increase. The cost categories that did get their attention were for electricity and gas; these bills got their attention given the cumulative totals.


We're too busy complaining about gas prices.

There's mortgage, property tax. Then the next big—the next big chunk has to be Hydro. Water is, really, water's pretty low on the totem pole of stuff you've got to pay for. You've got gas.

Comparatively, water was a low interest fixed cost; however some people did note that sewage costs were higher than their water bills. This was the one category that might attract their attention momentarily, although it was still relatively inexpensive compared to the other household operating costs. None of the respondents questioned the cost of water; there were no indications that pricing was an issue.

It seems very consistent.

No, we just pay so much more for other things that it does just sort of get lost in the fray.



Customer Service 1-877-963-6900
8:00 a.m. to 4:30 p.m. (Mon-Fri)

Bill # 307153286

RESIDENTIAL
PLEASE DETACH AND ENCLOSE THIS PORTION WITH
YOUR PAYMENT. PLEASE BRING ENTIRE BILL
WHEN PAYING AT OUR OFFICE.
E&OE

ACCOUNT NUMBER [REDACTED] SERVICE AT [REDACTED]

PLEASE RETURN THIS PORTION

0000900002 40 R

[REDACTED]

AMOUNT PAID

BILLING DATE
Dec 29, 2006

AMOUNT DUE
\$ 203.77

DUE DATE
Jan 22, 2007

40701220000206700000203770802303880115

0043470000 96

ACCOUNT NUMBER 80-23-03880-115 SERVICE AT [REDACTED]

BILLING PERIOD					READ BY
SERVICE	FROM	TO	DAYS	RATE CODE	
Elect.	Oct 18, 06	Dec 13, 06	56	24	METER READER
Water	Oct 18, 06	Dec 13, 06	56	800	METER READER

METER NUMBER	PREVIOUS READING	PRESENT READING	MULT.	CONSUMPTION	UNITS
M004584 EL	32144	33430	1	1286	kWh
39012833 Wtr	54075	54440	.1	36.5	m3

P.C.

BILLING DATE	
Dec 29, 2006	RESIDENTIAL

DESCRIPTION	AMOUNT
Previous Bill	281.24
TELE-PAYMENTS Nov 15	281.24 CR
Your Electricity Charges	
..... Electricity 276 kWh @ 0.058	16.01 *
..... Electricity 58 kWh @ 0.067	3.89 *
..... Electricity 1003 kWh @ 0.055	55.17 *
..... Delivery	48.08 *
..... Regulatory Charges	8.75 *
..... Debt Retirement Charge	9.00 *
* G.S.T. (Reg. # 857 503 346)	8.45
Water Charge	31.17
Sewer Charge	23.25

NEW POWER OUTAGE COMMUNICATION SERVICE

On those rare occasions when there's a power outage, PowerStream can now provide customers with a quick and efficient way of reporting and accessing outage information.

Simply call our Power Outage Communication Service telephone line at 1-877-777-3810 or visit our website at www.powerstream.ca

Energy provided through STANDARD SERVICE SUPPLY
Loss Factor of 3.93 % applied to kWh. Adjusted kWh 1337


HYDRO CONSUMPTION HISTORY			
READ DATE	DAYS	CONSUMPTION	kWh/DAY
Dec 13, 06	56	1286	23
Oct 18, 06	61	1694	28
Aug 18, 06	65	2968	46
Jun 14, 06	64	1649	26
Apr 11, 06	57	1261	22
Feb 13, 06	62	1546	25
Dec 13, 05	60	1385	23

WATER CONSUMPTION HISTORY			
READ DATE	DAYS	CONSUMPTION	m ³ /DAY
Dec 13, 06	56	37	.66
Oct 18, 06	61	57	.93
Aug 18, 06	65	122	1.88
Jun 14, 06	64	76	1.19
Apr 11, 06	57	38	.67
Feb 13, 06	62	42	.68
Dec 13, 05	60	41	.68

AMOUNT DUE
\$ 203.77

DUE DATE
Jan 22, 2007

22 Jan 10/07



Customer Service 1-877-963-6900
8:00 a.m. to 4:30 p.m. (Mon-Fri)

80-23-03880-115 Bill # 307153286

PLEASE RETAIN THIS PORTION OF THE BILL FOR YOUR RECORDS
PLEASE BRING THE ENTIRE BILL WHEN PAYING AT OUR OFFICE
E&OE

While bimonthly water and sewage billing frequency made sense, some respondents noted that it would help them monitor usage comparatively if water usage was itemized on a monthly basis.

So I think if we had it even bi-monthly so that they clock it the way that they do now, so that we can actually see the usage on a month by month basis we can take it. Obviously, in the summer months you're going to use more than the winter months. But I think you—you know, it would certainly be a lot more—a lot more, ah, it would be a lot more beneficial if you could take a look at it and be able to say, Jeez, well, what am I doing, you know, using so much water? Like, Can I cut it down here? Can I cut it down there? What am I doing? You know? Those people that—that wash their driveways, you know, you take a look at it, Gee, I wonder why there's so much ... oh, yeah! I washed my driveway six times last month.

The cost of water was also associated with conservation – this connection appeared to be particularly strong with some male respondents.

Conservation begins at home, however, if you have a monetary number to it, conservation becomes much more easier for the average person to look at. It's incentive. There's—that's the point: you need that incentive.

We—we have all have great, um, ah, aspirations to be good citizens and—of the world, to be very green. But when it comes down, it comes to another kind of green. That's right. It's the colour of money that makes the difference. That's why they raise the prices on stuff.

Some participants cautioned against including educational materials with the bill; their practice was to focus simply on the bill and to recycle all the other leaflets. The preferred way of receiving water related facts was a separate mailing or door hanger.

Recycling leads to Water Conservation

Recycling is the gateway to reducing waste, energy and water, according to study participants.

if you're a recycler, as we all seem to be in this room, I mean, I time my dishwasher and it runs in the middle of the night; because I have a timer on it. So it never runs during peak, you know, during the peak hours. And so there's always these little things that we do, and I don't run the water when you're brushing your teeth.

And I do always think about stuff like that. And, you know, we actually do have sprinklers on our lawn, but it's timed to go off, you know, in the early, early mornings when it doesn't consume—when the energy—it duh—it takes a lot less water to—to do your lawn. So, I mean, it's always on top of mind, but that's just the whole recycling mentality. If you believe in it, you look at every aspect ...

Comparing recycling/waste reduction with water – one is a very public act while the latter is individual and often very private. Only a few activities are visible to neighbours, such as lawn/garden watering and washing of cars and driveways however recycling gains or barriers are visible based on the proportion of recyclables to waste – the weekly parade of blue boxes to garbage bags. Water consumption and conservation, on the other hand, are incremental, hidden and not cumulatively evident.

I think it's less, um, sexy as a topic in terms of like, ah, in comparison with recycling because you put your recyclables out. And when you put your things out you look sort of—you know, your neighbours put it out...Whereas your water usage, it's inside your house. You know, you don't know what your husband uses when he goes to the washroom and turns on the tap, and you don't know what you use when you turn on the tap because it's no measurement. You don't contain it and say, "Oh, you know, it took me this much water to brush my teeth today. Versus, you know, what do people in other countries use? Or what do—do they not have?

The amount of water used, presented in cubic meters (m³) cannot be visualized. Respondents could not translate it into water usage; say for flushing toilets, doing a load of washing, brushing your teeth with the tap running, etc. Hence, the water consumption as noted on the bimonthly bill did not register with residents; rather the prime focus tends to be on the total cost of energy.

I agree fully is that we have no concept of what is too much,

Well, litres is how we interpret any type of liquid measurement.

You know, it's—it's too challenging (cubic meter). But you know what a litre of milk is. Same thing like you know a pound of butter, that's a pound. A litre of milk is a litre.

Comparative standards do not exist for water, whereas Town of Markham residents have the option of putting out a maximum of three bags per biweekly collection and can recycle as much as they want.

Well, if they made you visualize, you know, how many litres it is to flush your toilet and make you visualize how many times you'd have to go to a well to go and carry that water to do it ...

Reaction to Water Usage Data

The facilitator informed participants that recently Environment Canada reported that the per capita daily consumption of water was 343 litres. Reaction was slow initially, several people asked to have this information repeated given that it clearly was new. However, once they absorbed this figure they were startled by this very large amount. They imagined the large meeting room table covered with half litre plastic bottles of water – 646 bottles was a lot, and it just represented one persons share.

Holy smokes!

... if that was gas....

Residents had no idea what is normative water volume usage for a typical family. Are they above or below the average?

Wasteful Types of Behaviour

While residents did not know where they stood in terms of water usage and thought that they should be informed on the subject, they did draw the line on certain actions. Some things are truly wasteful. The stereotypical ‘dumb’ uses included using water sprinklers on rainy days or letting them run for hours and washing driveways instead of sweeping them. Men mentioned the wisdom of washing a car using a bucket of water rather than running the hose.

Insane? And people who wash their driveways. Stop washing your driveways! How much water does that really waste? So it's—you can think about it's inside your house, but then when we're all outside going, "Why is that on? And why are they doing that?" And so it comes top of mind when you see really ridiculous things.

Lawn Watering – Time or Volume?

In some households lawn watering was handled by men, who according to their wives, could be wasteful. One woman had made sure her husband read Water Watch's lawn watering tips because her attempts to curb the amount of water he used on the lawn had failed. He changed his behaviour when he got the official directions from a reputable expert.

See, and I find I have to show that to my husband rather than telling him. If I say, You know what? You can only fill a tuna tin, or whatever. No, no, no. He's got to read it there rather than what I'm telling him.

Many respondents were not sure how much water was needed – should it be measured in sprinkler time or in volume/depth? It appeared that the former measure, sprinkler time, was favoured by many people. However, some participants were using volume as the guide. One woman had received a handy blue cup designed to measure the amount of water applied to lawns at the Markham Fair. Another person had learned to measure the water using a tuna can – a full can signaled that it was time to turn off the sprinkler. The lawn had sufficient water at that point. This was clearly of interest to several other women who reported that their husbands were overzealously watering the lawns – working on the time measure.

My husband would leave it running forever; a baseball game or something. Like he just—yeah. And it makes me crazy. So I'm like, No, it says here!

I just turn it off after an hour, and then he comes out, What happened to the sprinkler? I don't know.

Awareness of the water usage by-law was limited. One vocal respondent had had a visit from an enforcement officer; this was an exception.

Is that actually a by-law?

I just thought it was a strong recommendation?

Conservation Aids – Water Barrels

Some respondents noted that Town of Markham had not recently made any direct efforts to help residents reduce their water usage. In the past, the Town had distributed low flow shower heads; currently neighbouring communities were being offered incentives to install low flow toilets, shower heads, tap aerators, and water barrels.

A few respondents were particularly interested in installing a water barrel in order to conserve rainwater for garden usage. While it made good sense to them, some others were initially concerned that barrels of water would provide a medium for mosquito breeding (West Nile virus). They appeared to be reassured that barrels did not pose a potential health problem when they were told that the barrels were sealed units.

If we were to get the water barrels it might that might help a little bit. Like I said, you know, couple of hundred gallons a season it's still . When you multiply by the number of homes in Markham, even if only a quarter of us use it, the numbers are—are gigantic.

Water Meters

In keeping with the overall low profile nature of the water delivery system, many respondents were not certain where their water meter was located. Some people suggested that it was probably at the side of their house but had not taken time to have a look at it. Respondents agreed that it was out of sight and not something that they ever thought about.

How do they know? Do we have a water meter that I don't know about? Is it near the gas meter?

A sample of a water meter installation notice helped clarify the issue – it reminded respondents what a meter looked like. But still it did not answer the question of how the Town reads the meter – was it done in person or from the Town's office? This was not a burning question, merely a point of interest, given that there was no quarrel or challenge with their bill.

In-home Water Add-on/Water Purification Systems

A few householders had installed reverse osmosis or other water purification systems – men appeared to be more interested in this equipment than women. More common was Brita water filters; the unit was a fixture in their refrigerator delivering cold, charcoal filtered water. Purchasing bottled water had become normative in some households. As one woman noted - It's the trendy thing to do.

Yeah. It's programmed in our mind that, you know, that's the best thing to do. I don't know if it's doing anything at all, but we do it.

For me, I use the Britta only because it's colder than the tap water. And my son drinks like constantly.

Well, we have the water coming out of the fridge, like, filtered water but we don't even ... I prefer the tap water.

Women noted that the habit of drinking filtered or bottled water was hard to break because of the taste – water straight out of the tap was distinct and comparably less pleasant. However, they agreed that Town of Markham's water was safe, safe enough to give a baby. There was nothing technically unsafe about it; simply they had become accustomed to drinking water that had a different (non-chlorine) taste or that was flavoured.

I buy the flavoured water. I'm kind of hooked to it.

I do bottled water for going out in the car or out and about. That kind of thing, but not at home.

Rating Waterworks

Waterworks received very high ratings for overall satisfaction and for water quality.

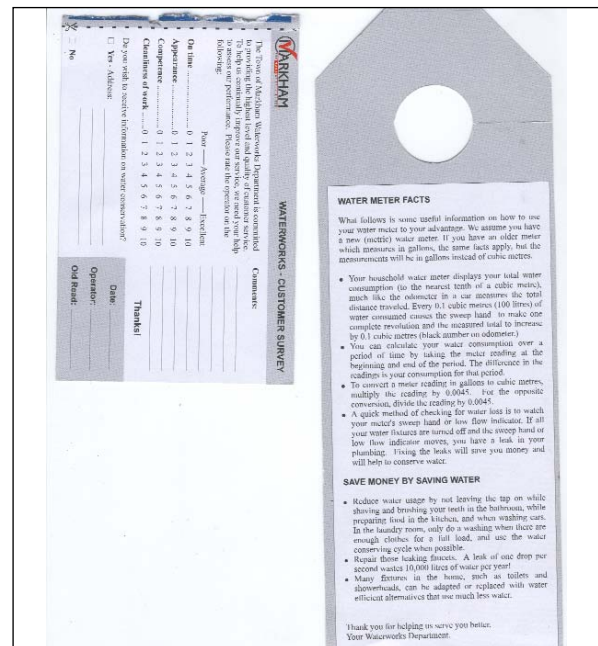
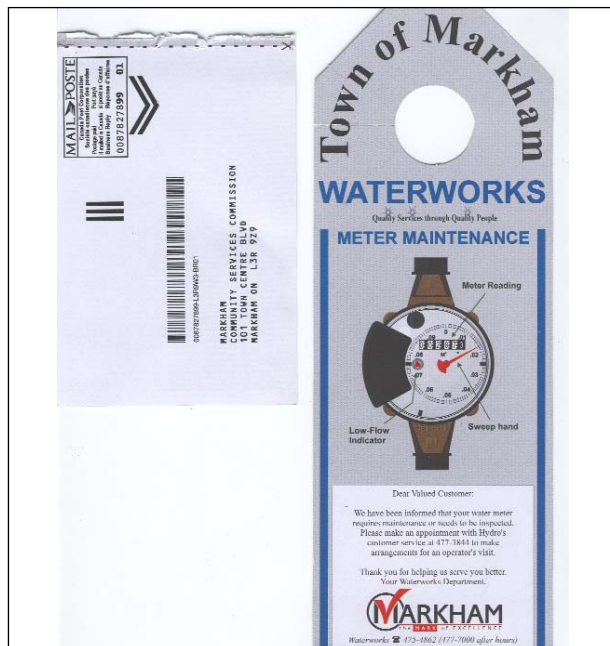
Rating – 1 to 10 (1 lowest – 10 lowest)	3-Jan	6-Apr	9-Jul	10	AVERAGE
Quality of water from waterworks	-	-	13	6	9.5
Overall satisfaction with Town of Markham's waterworks	-	-	15	4	9.5
Reliability of waterworks services	-	2	12	5	7.6
Frequency of getting educational information with Town of Markham's waterworks	2	8	9	-	6.3
Clarity of the educational materials	1	10	7	1	4.7

WATERWORKS COMMUNICATION

Door hangers/Notices

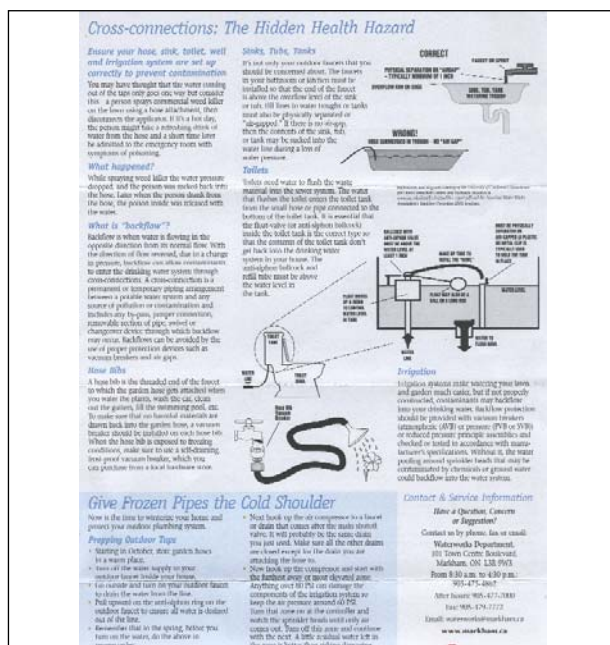
Samples of Waterworks' service notification door hanger's i.e. emergency shutdown, sewer flushing, planned repairs, temporary water supply connection, water supply restoration, etc were introduced for comment. None of the respondents recalled having seen any of these door hangers; however their overall design and format was seen, by some, to be much more reader friendly than the Water WATCH newsletters.

a lot easier than this thing every quarterly on your bill. Because honestly you talked about it, nobody even reads this. It's too much jargon, too much—it's too much, you know, it's hard on the eyes. So make it something simple. This comes to your door. We have to open our door. We'll look at it. I'll look at that. I'll look at it and say, "Oh, I should do this. My—oh, my dishwasher is taking this much? Maybe I shouldn't—I should only use my dishwasher when I have big parties on the weekend. During the week I'll just hand, you know. Make it easy for us, you know, because we're not all experts in this field.



Water Watch – Newsletter from Town of Markham Waterworks

Several respondents recalled receiving this newsletter; however it appeared that most of them had given it fleeting attention. One woman indicated that this was something aimed at men, however others who were interested in water conservation did not agree. They recalled articles on low flow toilets and lawn watering tips.



Copies of Water WATCH were circulated for comment. Some respondents recognized the format; however several people noted that it did not have visual appeal. Women compared it to the Mission Green newsletter (waste issues preceded water in the women's group) and saw it to be lacking:

I hate to tell you this, but, um, getting that and getting this, I'm more likely to read this (Mission Green).

That one's a little more interesting to look at. Like it's the format.

I don't know if it's the colours or the format.

I'm interested in wanting to read that, but I'm more likely to (read Mission Green) ..

Like, I mean, we all try to get tips and stuff out of this whereas that's kind of a bunch of... boxes and like little ...

That one's (Water WATCH) like my RSP statement or something ...

Use one side of it maybe to say what the town is doing. And the other one—the other side maybe to give out household tips as to what you can ...

Male residents were equally critical of Water WATCH. Clearly, both the density of print and the content were not accessible. It was not deemed to be reader friendly in both regards.

Yeah, well, the average person doesn't want to hear about back flow and hose bins(?).

I'm sure this is very helpful to plumbers and stuff like that. But to me, it's really not a whole heck of a lot. I don't think I have any bypassed jumper connections or swivels. I might, I don't know.

...when I first read this that sort of just reassured me especially in light of the Walkerton situation (ref. to Testing Tap Water Every Day, Fall 2006 issue).

Suggestions for Future WaterWATCH Articles:

Respondents were invited to suggest topics that they would like to see covered in future issues of Water WATCH, they included:

I'd—I'd like to know what the—what a good target would be for a household to consume—like let's aim for 20 cubic whatever. Yeah, maybe that would be a good place to—to show what a family (consumes)

But not only that, even specific tasks. Like, you know, I know a washing machine uses a lot of water, but I only use one rinse cycle. You know, you could have two rinse cycles. But like how much water does an average load of dishes do? Or how much water does—I just have no idea.

I'd like to see something about, um, a comparison tap water and bottled water The merits of each.

And more—more, um, garden friendly type tips as far as reducing your water consumption in—on your property.

Like if you have more trees you would use less water. Or like just things that you can do or maybe that the town would be prepared to do. Like grasses that more (water conserving) .. And maybe if there was an education place you could go to and see the different things or get a sample of something.

Tips on how to reduce daily activity water use. Like, you know, how to, um, ah, when you're washing, like if you don't put it all into the dishwasher or whatever, how do you go about—like your normal day-to-day things, but how to reduce the amount you use.

Or things that you might not have known, because I just—again, I don't know where I heard it or read it. But I heard that your dishwasher uses less water than actually doing your dishes by hand.

The men's suggestions for improving Water WATCH content and presentation would make the newsletter more accessible to residents. They wanted action-oriented messages directed to them:

More informative in terms of dollars and cents. You know, saving this much water would save you this much money type of thing would be a little bit more beneficial to me.

Tips on—tips on conservation.

Yeah, tips on conservation...this..is this really doing anything for me? Not a whole hell of a lot. Testing tap water, that's great. Like it's reassuring, like you said, but, you know, how is this really affecting me? So put some dollars and cents.

They could make it a little bit shorter. Rather than doing it on legal paper, just do it on regular sized paper.

And people get—I don't know. I have a (inaudible) this big. It looks like something from my office and I really don't want to read something like I'm at home now. Work time is over.

Something that's a one page—like I was always taught years and years ago, and to this day I still adhere to that, but any report I do, brevity is the soul of wit. And when it runs on for two sides of a—of a legal sized document, it's just too much.

If you have a problem you have to call in the plumber. He's the one who's a little bit more interested in this stuff. I would hope the plumber would know this.

Really, if you look at this—most of this—if you look at this, is the water department saying how great they are. Testing tap water every day. That's reassuring, but that's them saying We're doing our job and we're not like Walkerton. Right? If you take a look here, We're doing the replacement on the water system. We're ensuring the water doesn't go down the drain. All of this is telling us what they're doing for us. There's a small section on the back here in the hidden—hidden sections, but if you're not a hydraulic engineer, it doesn't mean anything. So most of the things that they have on this, with the exception of a couple of things, Give frozen pipes the cold shoulder, etc. A lot of this is the department talking themselves up. I don't know. Maybe I'm wrong, but that's the way I perceive it. That's the way I perceived it in the first place when I read it.

Written Suggestions

The following table lists written comments provided on the Feedback form at the end of the session.

Topics of Most Interest – Waterworks- Male Group	Topics of Most Interest – Waterworks-Female Group
monthly tips on how to conserve water	stress to residents re: watering bylaw in summer, however publish in languages common in the individual communities
use of water	ways to reduce (sic)
quality of water used per duty etc. carwash etc	comparisons-are we good or bad-high consumption or average
change method of measurement	stats on water consumption
educate the public on conservation	conservation
they think it is an infinite resource	comparing how were doing as far as consumption
tips on water conservation (regular)	incentives to reduce i.e. a rebate or a coupon for a garden centre if you reduce by a %...
monthly billing instead of every two months	comparison study
None	more tips on reducing
better way to explain water usage	creating more public awareness
water conservation ideas	rainbarrels
newsletter-topics	how to reduce usage
water saving devices installed	how much water use in lives
water usage	in comparison w/ other average families
tips to conservation	ideal targets for use and ways to reduce
procedures to ensure water quality	safety of our drinking water vs. bottled water
education about conservation	how to reduce water use

OTHER WAYS OF COMMUNICATING WITH RESIDENTS:

Town Fairs/Events

Some residents had visited the Town of Markham display at local fairs and received useful information, including a blue water measurement cup. However, this type of venue provides limited opportunity for residents – if they can't get near the booth or happen to miss the event. More opportunities for accessing water conservation aids was requested.

Several women mentioned Home Depot's current 'green' program which included lectures and demonstrations on energy saving. This made very good sense and could work in tandem with Town of Markham booths located in local malls.

Local Newspaper

Editorial and ads in The Liberal was also a good way to reach some residents. The newspaper covered topics of local interest and would be expected to provide information about water conservation.

Water Conservation Incentives

Some residents urged Water Works to be pro-active in stimulating water conservation by offering incentives or rewards for reducing usage. In addition, they expected that the Town would offer rebates for installing low flow toilets akin to those provided by Toronto.

Sorry, I just wanted to mention one thing. As far as conserving water, incentives would be nice too. Like, if there was some way they could say, Here, if you can conserve your water this summer by 10% we'll give you \$5 to spend at Sheridan. Or something like that. Like something to make you really go, Okay, we're turning the water off now. Do you know what I mean? Just something—I think people respond to that.

TOWN OF MARKHAM'S RECYCLING PROGRAM

Introduction:

The discussion covered the following topics:

- Program Feedback
- Rating the Recycling Program
- Reaction to transparent garbage bags
- Reaction to Facts introduced from Mission Green newsletter

- Transparent garbage bags: Good or Bad Idea
- Launching transparent garbage bags
- Reactions to Blue Box expander
- Mission Green Newsletter and Topics of Interest

PROGRAM FEEDBACK

Concerns and service complaints:

■ Town of Markham residents are accustomed to having seamless, predictable collection and when there is an interruption or delay it is memorable. For instance, a few people noted that on a few occasions waste material collection had been delayed by several hours or a day. This was annoying especially in the summer months and when full garbage bags could be raided by hungry raccoons. However, some respondents pointed out that if people were diverting kitchen waste as directed in the green bin, that garbage bag contents would be safe from four legged marauders.

■ Some residents were annoyed that collectors would not pick up recyclables that had been placed in cardboard boxes or transparent blue bags – logical solutions when they have excess amounts of recyclables.

.. you know, a transparent bag and they can see that it's all tin cans, or all shredded newspaper or something, because most of my stuff is confidential so I have to shred it all. So if I bring all that shredded stuff up, I have—you know, it fills a whole blue box and I've got to pack the box down. So, you know, they're—they're very inflexible in regard to that. If it was a transparent bag—if it was a transparent bag or a blue bag, ah, it would give a little bit of flexibility. I've had to go out and buy a third box. You know..

- Collector refusal to pick up construction waste, such as pieces of dry wall was seen as punitive. Forcing residents to take these materials to a depot was seen as overzealous and greedy.
- Refusal to collect recyclables (paper or pop cans for instance) that are in plastic grocery bags that are placed in blue boxes.
- What should be done with styrofoam? Why can't it be recycled?
- Broken glass – why can't it be placed in blue box, given that glass gets broken as it is tipped into the truck?

- Insisting that corrugated cardboard boxes be broken down and presented in bundles of precise measurement. It is extremely frustrating for people who think that they have complied with these guidelines to have their bundles left behind.
- Some residents reported that their green bins were vulnerable to crafty raccoons that were able to open the latch. They were relieved to learn from the moderator that the Town would provide an additional latch which addressed this problem.

One thing: they are a stickler for the rules. They will not take anything they don't have to take.

While residents agreed that collectors tended to strictly follow the set-out rules, there were some indications that they also were willing to work with residents and would take extra items (i.e. small amounts of construction waste) on occasion.

Several people noted that Markham's recycling program with the combination of blue boxes and green bins had substantially reduced waste volumes. A few noted that Markham was a leading recycling community, achieving 65% diversion.

If you recycle diligently, you can bring the amount of trash that you put out—you don't have to put out more than one or two—even when you've got company out(?), you can get out(?) of(?) it(?) with one or two bags. But the stuff that you start putting in those blue boxes? It really accumulates. There's lots of stuff.

Rating – 1 to 10 (10 highest – 1 lowest)	3-Jan	6-Apr	9-Jul	10	Average
Ability of recycling to reduce the amount of waste that goes to landfill	-	5	14	-	9.5
Frequency of getting educational information about our recycling program	1	5	13	-	6.3
Reliability of the collectors	1	-	16	2	6.3
Overall satisfaction with Markham's recycling program	-	1	16	2	6.3
Clarity of the educational materials	2	4	12	1	4.7

REACTION TO TRANSPARENT GARBAGE BAGS

The idea of requiring transparent instead of the current opaque black/green garbage bag immediately evoked many questions and reactions. Here is a summary of these points:

- **Why?** What is the reason for this change? Many people seemed to assume that Markham was considering this step because there must be many recyclables in the bags. This must be needed to catch those residents who were not recycling. Was this an acute problem or were they simply trying to force non-recyclers to use the blue boxes? Did the majority have to “suffer” because of a minority of lazy people?
- **Loss of Privacy** - Some residents immediately resisted the idea – it was an invasion of privacy. They should be allowed to keep some things from the prying eyes of neighbours. For instance, one woman kept insisting that she should have the right to hide evidence of her particular food craving (chocolate bars).
- **Any Exceptions?** Would this mean that small grocery bags filled with kitchen or bathroom waste could no longer be used? Were they supposed to empty these bags into a large transparent bag? What should they use to line their small kitchen garbage bins.
- **Cans?** Would garbage cans still be acceptable? Could they continue to fill their cans with small grocery bags of garbage? Why force residents who preferred to use garbage cans to purchase one-time use transparent bags?
- **Bathroom Items** - Several women noted that they emptied the bathroom waste bin in the garbage because they did not want to sort it. Picking through the array of used tissues, feminine hygiene items, dental floss, etc. was not a pleasant task. While they knew that the solution was to keep the green bin items (tissues, etc.) separate from the non-recyclable things (dental floss, hair etc.) the bathroom space was too small for two garbage containers. Will Markham force residents to separate “gross” bathroom waste? Or will they allow a few grocery bags for personal items?
- **Reusables** - Residents place non-recyclable item such as kids toys, old clothes, broken flower pots etc. in the garbage because there was nothing else to do with these things. However, some women noted that they passed some items on to charity or to friends. Others were either not aware of local charitable options or did not seem to be interested in making the effort.

- Confusion - Even though the majority of items now seem to be part of the recycling/green bin stream, it is hard to keep up with program advances. Some residents admitted that they were lagging behind – they were “confused” by what could and could not be recycled and consequently make mistakes.
- New Habits - Room by room recycling would be required in order to ensure that no recyclable items were placed in the garbage.
- Free bags? Does the Town provide the bags? If not, where could they purchase transparent bags? What were they supposed to do with the supply of garbage bags they had on hand?
- More plastic pollution? What will happen to the transparent bags of garbage? Will they be landfilled?
- Enforcement - How will the Town monitor this new requirement? Will there be “garbage police” that will inspect each bag for recyclables? Who will enforce it?
- Penalties? What is the penalty for placing recyclables in the garbage? Will they get an ‘oops’ sticker and will the bag be left behind? Will they be fined for a simple infraction?

Reaction to Fact: 66% of garbage bags contain recyclables

This fact was surprising and explained why Markham was considering introducing transparent garbage bags. Yet those who insisted that they were excellent recyclers thought it did not apply to them, although occasionally a pop can may end up in the garbage. This defense was abandoned when they had an opportunity to see what this recyclable stream consisted of – this information was summarized in the following graph:

What’s in our Garbage Bags? (Mission Green Newsletter, Issue 5, October 2006)



This garbage breakdown confirmed what dedicated recyclers suspected, namely that a very small fraction (4%) of the waste consisted of blue box items. The three major categories, reusable items, paper and tissues/personal hygiene products, made sense but many participants seemed to agree that these were the kinds of things they put in the garbage. But what was the solution? Each of the three types of materials posed challenges for recycling. Redirecting reusable items to local charities, for instance, required knowledge and extra time. Free pick-up was ideal, however Goodwill no longer offers this service and others might charge for it. Clothing drop-off bins had some appeal, however, some people suspected that these bins were raided by scavengers or that these materials were shipped to remote locations such as Africa. Men appeared to be less aware of reuse options than women.

It is a time and effort issue...last thing I want to do on a Saturday is make the rounds.

Yeah, the items that could be—could have been donated to charity. You know, it kind of makes you feel guilty.

Twenty-seven percent. That's a lot. That's like one third.

Refusal to recycle personal documents due to identity theft concerns appears to be widespread. Over half (53%) of GTA residents indicated that they did not recycle personal records because of this concern – 2005 Benchmark Study, Enhancing Recycling, Stewardship Ontario's E&E Fund.

Compostable tissues and personal hygiene products pose a separating challenge for many residents. The only suggested solution is to keep this stream of bathroom items separate by using two waste bins. Most householders have not taken this step yet.

Good Idea or Bad Idea?

In the final analysis, the majority (12 out of 19 participants) concluded that requiring residents to use transparent bags for garbage was either a “good idea” or “neither good nor bad”. About one third rejected this option – it was a “bad idea”.

Question:	Good idea	Bad idea	Neither good nor bad
Do you think that Town of Markham should require residents to place their garbage in transparent bags	5	7	7

Proponents - Those who endorsed the concept felt that it was justified in order to ensure that all households recycled. They would comply if Markham introduced this stipulation.

Opponents – These people rejected transparent bags mainly due to its perceived Draconian tone; it was an invasion of privacy.

Neutral Reactions – About one third were neutral – transparent bags were neither “good” nor “bad”. This measure must be necessary, however they hoped that the Town would be flexible and not penalize the occasional blunder.

Launching Transparent Bags

If the Town decided to ban opaque bags, respondents suggested that it should be accompanied by education and gentle enforcement. It would be counterproductive to slap fines on opaque bags or those who placed a few recyclables in transparent bags. Rather, they hoped that the collectors would use their discretion and be patient as residents adapted to the new measure. However, they did support pursuing the minority who are chronic garbage generators who do not use their blue box or green bin.

Men's Comments	Good Idea	Bad Idea	Neither Good nor Bad idea	Statement Female	Good Idea	Bad Idea	Neither Good nor Bad idea
I don't need to be governed for everything I do! Big brother-garbage police		•		maybe set up a snitch line so we can report our neighbors who don't do their part	•		
it does not really matter. The garbage being properly recycled is all that matters			•	however I am required to dispose of my waste I would comply	•		
Good-people will be more diligent about garbage. Bad- people will object because they don't want others looking at their garbage.		•		depends upon consequences for those who never do vs. those who sometimes/ always try to do			•
it would help to ensure recyclables don't go as garbage	•			it might be the necessary step necessary to ensure compliance from people.	•		
yes if it prevents misuse of proper recycling	•			it is again we are talking about plastic			•
gradual changeover may be needed			•	it takes away from our privacy-what would the consequences be if the wrong materials got in the clear bags-too much of a threat		•	
privacy issue for residents		•		doesn't really make a difference to the way I already government my waste			•
privacy-people are not willing to disclose personal information		•		my garbage can does not waste plastic-too big brother a concept		•	
invades privacy		•		we have to buy additional clear bags and what do we do with the green bags-privacy matter too		•	

REACTIONS TO THE BLUE BOX 'EXPANDER'

Most respondents reacted favourably to the 'expander', although it seemed that women deliberate more about its potential strengths and weaknesses than their male counterparts.

Now, that's a smart idea.

It's called keeping recycles off my lawn, that's what it's called

I'd pay an extra five bucks for that.

That's a great idea.

I like it.

Excellent

Litter Reduction - The big plus for many respondents was that this device would help reduce litter. On windy days paper and light plastic items get scattered around the neighbourhood, despite the best attempts to weigh the materials down.

If it was like that, the retrofit, with a retrofitting type- I'd pay five or ten bucks. I don't know how many other people on the street would, but I would because it-on trash day it's terrible (litter).

But you'd have to pile it high to be equivalent to an extra box. And to pile it high and not have it fall all over the place is—is a challenge for my husband. He's—he's the one who takes it out. And, you know, to stack it nice and, ah, because these things all—some of it is round because of the bottles or whatever.

Like, we try to crush the pop cans and whatnot, but some things are not possible and it's hard to sort them in the way of, you know, putting those neater ones at the bottom and the lighter things on the top. And you just sort of throw them in as—as you get them, so it might not be as easy to pile it high.

Because when you go to add the recycling you're going to pop it off and it's all going to fall out, so I'm not sure—I think it looks great. It's nice and neat, but I'm not exactly 100% clear really how—really how much more I'm going to be able to shove in there.

What about the issue though—and somebody talked earlier about the litter, the stuff that gets blown around on a windy day. All this—and papers, etc., even pop cans could ...

So not even only worried about stacking high, just whatever's in there, just closing it off so it's not blowing around.

Collection and Collectors - Women were concerned about the impact it would have on collectors, much more than men. The latter group, women, wondered if it would slow down collectors or make their job more cumbersome? Would the net get caught in the materials and result in more litter or that more things were left behind in the bin?

I wouldn't think it would last very long because if they have to take it off, they're in a hurry. You know, they don't have a lot of time. If they have to take it off, it's going to get...

...for the collectors and it slows them. And it means it's less efficient, so they'll take longer or whatever (inaudible) collections done. So whereas if I had another blue box, it's—they do their job. It's already what—that step that they do.

I think the collectors when they take off the one end, because I 'm assuming the other end, it's screwed on, it's affixed to it...

And then they have to dump the thing over. It's going to get caught up in that thing because it's not that...

I can see it getting caught

Take a little more time and it'll fall to the ground and I'll have to come back out and put them all back into my recyclable bin and put it back out next week.

Increased Capacity - Some women weren't convinced that the expander would add substantially to the amount of materials that could be loaded into the blue box. The preferred option would be to purchase an additional blue box. However, adding another collection container to their existing array (at least two blue boxes, a green cart, and garbage bags) posed a storage problem. In this case, increasing capacity by adapting bins with an 'expander' made good sense.

I think you can actually get a little bit more in there because you can kind of expand it.

Fit more in and keep it in.

Cost – Price was one of the major considerations. Would it be wiser to spend the money on another blue box or to buy an 'expander'? The proposed \$5 cost was seen to be reasonable by most men but some women questioned the actual benefit of it. It should be noted that although the cost of a blue box was almost the same at \$6, some respondents seemed to be under the impression that it was costlier, in the \$10 range.

What costs more – that thing or another blue box?

I wouldn't want to pay the five bucks

I think not everyone will buy that

Durability and Theft - Would it break or get torn? How durable was this net? Or might it get stolen by people who will not pay \$5 for their own? Some women imagined that this would happen, given that their blue box or green bin had been stolen.

Handle Feature – The handle feature enhanced the perceived functionality of the 'expander' so that two blue boxes could be carried out to the curb instead of one at a time. This reduced steps

and saved time.

Men appeared to be mainly responsible for taking out materials for collection and for cleaning up the remains and litter afterwards. Hence, they were the prime market for this new item. Several of them imagined that the 'expander' would substantially reduce the amount of litter that blew on to their property and created blight in their neighbourhood. This would make their job much easier and contribute to the appearance of their property.

Mission Green Newsletter and Topics of Interest

As noted earlier, Mission Green's newsletter was familiar and reader friendly. Residents reported that this was one of the direct mail items that got their attention because it provided useful information, organized in an accessible way.



Two Markham Families Take The Zero Waste Challenge

Two Markham families have volunteered to take the Zero Waste Challenge. The challenge asked families to try to produce zero waste (or darn near) for a month. Participants are encouraged to use all of Markham's waste reduction programs, such as the Blue Box, Green Bin, backyard composting, Household Hazardous Waste & Electronics Recycling Depot, Recycling Depots and Charity Donation Centres.

The Zero Waste Challenge took place in September and October, and included audits of the family's household garbage to determine successes and improvements. The results will be published in the next edition of this newsletter.

The Millar Family ▶
Brian, Ashley (with Oliver the cat), Heather & Shannon.
"We are very eager to achieve zero waste."

The Chun Family ▶
James, Kandy, Helen & Hunter.
"Our family strives toward Zero Waste so our kids can enjoy a greener tomorrow."

Zero Waste has become a world-wide movement. Organizations with this mandate are active in the USA, New Zealand, Australia, Scandinavia and now Canada.

Local Zero Waste Governments:

- Del Norte County, California
- Australian Capital Territory (Canberra)
- Santa Cruz County, California
- City of Seattle, Washington
- Over 40 Municipal Councils in New Zealand
- Town of Carrboro, North Carolina
- City of Toronto, Ontario
- Halifax, Nova Scotia
- 7 Municipalities in British Columbia

No Such Thing as a Free Bag

Each year Canadians use 10 to 15 billion plastic shopping bags, the environmental impact of which is staggering. Plastic bags are a serious threat to our environment and natural resources (plastic bags are made from oil) – not only do they spoil our parks and waterways – but they can also take up to 1000 years to break down.

We urge Markham residents to bring your own re-usable bags next time you go shopping and proudly say "no bag please!"

TIP – Try keeping a stash of reusable bags in the trunk of your car – that way they are handy when they are needed.

Recycle Junk Mail at Super Mail Boxes in Markham!

This fall, Markham will embark on an exciting new pilot project that will reduce the amount of litter found around super mail boxes in Markham neighbourhoods.

The pilot project includes the installation of 35 recycling units placed beside selected super mail boxes for the collection of recyclables. Mission Green will be collecting the recyclables from the bins each week. Residents are encouraged to send their feedback to wastemgt@markham.ca or call 905-415-7335.

Questions? We'd love to hear from you!
Phone: 905-415-7335
E-mail: wastemgt@markham.ca
Website: www.markham.ca

MISSION Green **MARKHAM**



A Guide to Waste Reduction and Recycling in Markham

MISSION Green

ISSUE 5 • OCTOBER 2006

ZERO WASTE ...or darn near A New Target for Markham?

REDUCTION SPECIAL EDITION

Fact: Canadians produce more garbage per person than any other country in the world. Fact: We will need to dig deeper, travel further, and spend more just to get at the resources needed to fuel our cars and heat our homes.

We know that our wasteful consumption habits are not sustainable because there is a link to the earth's natural resources and the amount of waste and pollution the earth can absorb or contain. As we become increasingly concerned about our dwindling resources, support is growing for a new target: Zero Waste.

'Zero Waste' is a new way of thinking about 'waste'. It is part of a worldwide movement that recognizes the need for change in managing our resources – from green purchasing decisions to changes in manufacturing and processing, from re-designing products to recycling them.

Yes, it's ambitious, and it won't be easy. But imagine a world where there is no need for landfills or incinerators. Where used oil is re-refined for reuse instead of incinerated. That's very appealing. It means looking at how things are made, what we do with them when we're finished, and whether we need them in the first place.

Markham residents are the best recyclers in North America. Markham has set an aggressive 70% diversion target and we are almost there. While we recycle an amazing 68% of our waste, there is still more to do.

If we are serious about reduction, reuse, and recycling, we have to take a hard look at the way we live and the disposable, single use things we buy – from razors to diapers. The convenience we enjoy as consumers quickly becomes an inconvenience for us as taxpayers. We are picking up the tab for collecting and disposing of our one-time-used materials.

This Mission Green Newsletter is dedicated to actions beyond blue box and green bin recycling. It is about embracing change and finding better ways to do things in order to meet the challenges confronting us as a community.

What's in Our Garbage Bags?

The good news is – a sticky hands-on, deep-down, truck taking waste audit revealed Markham is doing a great job at reducing the amount of garbage that ends up in Richigan landfills. The bad news is – we can still do better.

- 27% of what we throw out could have been donated to charity for reuse.
- Tissues and personal care products were found in garbage bags instead of the Green Bin. **Tip: Put an organics collection container in your bathroom.**
- Most of the paper found in the trash was mail and confidential files. **Note:** Shredded paper can be placed beside your Green Bin in a clear plastic bag for composting.
- Recyclable plastics such as polystyrene and plastic bags were found in the garbage. These recyclables can be taken to any of Markham's four Community Recycling Depots.
- If we recycled everything we possible can, we could potentially divert 93% of our waste!

WHAT'S IN OUR GARBAGE BAGS? (BY WEIGHT)

Item	Percentage
REAL GARBAGE	17%
ITEMS THAT COULD HAVE BEEN DONATED TO CHARITY	27%
ORGANICS (kitchen, personal care products)	31%
RECYCLABLE PAPER (printed paper, confidential forms, junk mail)	19%
RECYCLABLE GLASS	2%
RECYCLABLE METALS (tin, aluminum, toys & tin pots, empty aerosol cans)	3%
RECYCLABLE PLASTIC (polystyrene, PE, plastic bags)	1%

"Believe it or not, reducing really does work. But it's going to take some serious effort to have people turn their backs on decades of conditioning that said a disposable culture is the height of civilization. It's going to be tough to have people stop thinking about burning our garbage or burying our trash in abandoned mine shafts. Maybe it's time for another leap ahead. Maybe it's time again for a bold move to tackle our trash."

– Roger Lillian, News Editor, Guelph Mercury

This newsletter is printed environmentally friendly! (Please use back.)



Markham's Goodwill Community Donation Centres

Thornhill Recycling Depot (southeast corner of Bayview Avenue and Green Lane)
Open 8 a.m. – 8 p.m. – 7 days a week, 364 days a year.

Yonge Market Place (Pharmacy Food & Drug) at 7171 Yonge Street
Open 8 a.m. – 6 p.m. – 7 days a week, 364 days a year.

GOODWILL ACCEPTS:

- ✓ Clothing, shoes, boots, belts & purses
- ✓ Hats, gloves & scarves
- ✓ Books, records, CDs, DVDs, videotapes
- ✓ Games, toys & sporting equipment
- ✓ Housewares: Dishes, glassware, kitchen utensils & lamps
- ✓ Hand tools & small power tools
- ✓ Linens, curtains, blankets, area rugs & towels
- ✓ Computers (Pentium 3's and up, with all parts intact)
- ✓ TVs, stereos, radios, VCRs & DVD players

*Please note that goods cannot be purchased at these locations.

Goodwill diverts millions of pounds of goods from landfill each year and creates jobs in our community.

Packaging Peeves

While a certain amount of packaging is needed to contain and protect the products we buy, many items are overpackaged. Great waste reduction is possible in this area with very little effort. Non recyclable packaging is a major part of our municipal solid waste.

What can we do?

- ▶ When shopping, try to choose the product with little or no packaging
- ▶ Complain to the store or company
- ▶ Avoid individually wrapped products
- ▶ Buy in bulk when practical



Food for Thought...

Global Warming... Climate Change...
Fact or Fiction? Agree or Disagree?
But... on which side should we err?

10 EASY STEPS TO A ZERO WASTE HOME (...or darn near)

1 Make it a Family Event

Make sure everyone in your household knows how and what to recycle and compost. Keep a list of acceptable recyclables and organics handy for everyone's reference.

2 Use your Green Bin to the Max

Use your Green Bin for all your organic material. Don't forget to include personal waste from bathrooms such as tissues, sanitary products, diapers and pet waste.

3 Use Clear Bags

Use clear garbage bags for organic overflow that won't fit in your Green Bin. Place the organics-filled clear bag beside your Green Bin for compost collection.

4 Use Charity Collections

There are many charities that will accept your unwanted items. Check the yellow pages for a local charity donation centre or drop off your gently used items to Markham's Goodwill donation centres in Thornhill. Goodwill accepts used clothing and household items. There are Salvation Army clothing donation bins located at all Markham Fire Stations.

5 Use Markham's Recycling, Electronics and Household Hazardous Waste Depots

Markham operates four recycling depots that accept all blue box materials, scrap metal items, tires, polystyrene, plastic bags, oversized cardboard and used clothing. Electronics and any hazardous materials can be brought to the Household Hazardous Waste depot for recycling.

6 Compost in Your Backyard

Yard waste such as leaves, grass clippings and food scraps like coffee grinds and tea bags decompose into outstanding topsoil in a backyard composter.

7 Grasscycle

Mow without a bag and leave your grass clippings on the lawn to provide mulch and nutrients, save water, and time.

8 Reduce Household Waste

Try to cut your trash in half. Find a home for unneeded items. Buy in bulk and use reusable containers to store leftovers. Use a refillable coffee mug or water bottle. Avoid over-packaged products. Bring a litter-less lunch to work or school.

9 Join the Paperless Society

Use e-mail. Send electronic greetings for special events. Use cloth napkins and towels instead of paper to save natural resources, reduce waste, and save money!

10 Wrap Gifts in Reusable Towels or Use Gift Bags

Try avoiding the gift wrap trap – especially during the holiday season. Some great ideas for wrapping alternatives are using a bandana or a scarf, old posters or maps, old sheet music, or a home sewn cloth bag. Or simply use a gift bag. Gift bags can be used over and over.

Garbage – it's yours to reduce!

Tip – SHREDDED PAPER CAN BE PLACED IN YOUR

"Reuseful" A Virtual Trading Post

Reuseful is a free online trading post of previously enjoyed items that still remain 'useful'. The website gives opportunities to find gently used items rather than buying new. The site also gives residents a place to donate usable items instead of sending them to landfill. It's a win-win!

Check out *Reuseful* at
<http://www.myyorkregion.com/reuseful/index.php>

Habitat For Humanity ReStore

Habitat for Humanity *ReStores* are building supply stores that accept and resell quality new and used building materials. They generate funds to support Habitat's building programs, while reducing the amount of used materials that go to landfills! It's an environmentally friendly store that makes sense!

Habitat for Humanity accepts building material donations at their *ReStore* location in Newmarket. Markham residents can donate the following reusable materials:

- Used Working Appliances
- Doors
- Lumber
- Electrical Fixtures
- Hardware
- Tiles
- Paving Stones
- Kitchen/Bathroom Cabinets
- Flooring Materials
- Plumbing Fixtures
- Windows
- Quality Renovation Materials
- Countertops
- Roofing

Last year Habitat *ReStores* received seven tonnes of reusable building materials that would have otherwise ended up in landfill.

York Region ReStore
575 Penrose Street
Newmarket, ON L3Y 5L5

For more information call 905-868-8723 or visit www.habitat.ca



GREEN BIN FOR COMPOSTING!

Holiday Waste Collection REMINDER!

There will be **NO** garbage, Blue Box or Green Bin collection on **CHRISTMAS DAY, Monday, December 25th** and **NEW YEAR'S DAY, Monday, January 1st**. Collection services will move ahead by one day for all areas for two weeks.

Please note that we will be collecting materials on BOXING DAY.

If your regular collection day is: Your materials will be collected on:

MONDAY (AREAS 3 & 4)	–	TUESDAY, December 26, 2006 BOXING DAY
	–	TUESDAY, January 2, 2007
TUESDAY (AREAS 5 & 6)	–	WEDNESDAY, December 27, 2006
	–	WEDNESDAY, January 3, 2007
WEDNESDAY (AREAS 7 & 8)	–	THURSDAY, December 28, 2006
	–	THURSDAY, January 4, 2007
THURSDAY (AREAS 9 & 10)	–	FRIDAY, December 29, 2006
	–	FRIDAY, January 5, 2007
FRIDAY (AREAS 1 & 2)	–	SATURDAY, December 30, 2006
	–	SATURDAY, January 6, 2007

Christmas trees will be collected the week of **January 8 - 12, 2007**.

Please follow your 2007 Waste Collection Schedule. The Waste Management Department wishes you and your family a safe and happy holiday season.

The Waste Hierarchy

The waste hierarchy is an internationally accepted guide for prioritizing waste management practices.



It's a Hard Day's Work for Our Waste Collectors

A waste collector was splashed with acid when his garbage truck crushed a bag of garbage that contained a jar of acid. The dangerous liquid burned the collector's skin. Please be careful what you put out for collection. Dangerous materials such as batteries, cleaning products, needles, broken glass and pool chemicals should never be placed in your garbage bags. They are hazardous to the environment and our collectors. Hazardous materials that are poisonous, explosive, corrosive, or flammable should be taken to the Household Hazardous Waste Depot in Markham. Broken glass should be wrapped in newspaper and placed in a closed cardboard box labelled "broken glass". Remember there is a person who must handle your garbage once you no longer need to!

Listed below are written suggestions of topics that could be addressed in future issues of the Mission Green newsletter:

Items of Interest Waste- Male Group	Items of Interest Waste-Female Group
better education	educate recycling ideas to communities in languages common to that specific community
blue box with containment	statistics-tell us how we're doing
different types of waste to be recycled	clear bags
shocked about the amount of garbage that is not really garbage	creating more aware and knowledgeable public through seminars and meetings
types on what are garbage and what are recyclables	recycling actually works-prove our efforts are worth it
expander seems like a good idea	stats on recycling vs. garbage
Newsletter	ways to reduce
new developments	incentives-freebies
trash days	how to recycle more accurately
Recycling	why garden waste not collected on specific days even when in kraft bags

APPENDIX

DISCUSSION GUIDE

MARKHAM – WATER AND WASTE RESIDENT FEEDBACK

April 12, 2007

This Guide lists the topics that will be covered during the course of each two hour session. The actual wording of the moderator's statements and questions will be modified to suit the particular session's participants.

The session will be divided into two sections, waste and water and the order in which they are discussed will be rotated from group to group.

Moderator's introductory comments

Participants are informed that the purpose of this session is to gather feedback for Town of Markham's waste and water divisions. The discussion is focused on hearing from residents about their experiences with these two services and also for introducing some ideas for their consideration.

They are informed that proceedings are being recorded (respondents have already agreed that they can be video and audio-taped) and the sessions are being watched by Town representatives.

The moderator's role is to introduce topics and to help ensure that everyone has a chance to express their thoughts. Also, the moderator will prepare a report that will include a range of remarks and quotations. The identity of participants will not be revealed in any of the research documents. All comments are confidential. There will be no follow-up with participants unless they choose to be contacted, for instance to address a service problem.

The session will be divided into two sections, waste and water. Just prior to completing the session a short questionnaire will be circulated for their completion. Also, participants will be invited to add their name to the list of e-newsletter subscribers.

Opening Discussion and Warm-up

Participants are invited to introduce themselves.

TOWN OF MARKHAM WASTE

- Feedback on current waste collection service, with no particular reference initially to any of the waste streams – blue box, organics and yard waste.

Focus Clear Waste Bags

Introduce the concept of introducing clear plastic bags for waste collection.

What is their initial reaction? What is the perceived reason for this measure? Is the waste reduction goal evident? Are residents interested in knowing more about the types and volumes of recyclables and organics that are being put out with the garbage? Reaction to some of these facts, i.e. 66% of garbage bags still contains green bags and blue box items.

- Cooperation - Would residents be willing to comply with this new approach?
- Introduction approaches – should it be phased in? Would a partial step be required, for example, one or two clear bags and one opaque bag (three bag limit per collection) with the aim of moving towards exclusively clear bags?
- Impacts - What are the perceived benefits and drawbacks of requiring clear garbage bags? Is this seen as sufficient rationale for the loss of privacy inherent in using see-through garbage bags?
- Privacy – if it emerges as an important factor, invite suggestions. Test reaction to two possible solutions: opaque grocery sacks or permit one opaque bag out of the total of three allowable garbage bags.

Focus on Bin Maximizer (More is Less)

Introduce the blue bin expander in action

Show two options (net and rigid). Note immediate reactions – is this a viable solution for a problem that they are experiencing (insufficient capacity)? Why not buy another blue box? Or is the expander unnecessary (sufficient capacity)? Does the expander seem like a practical solution? Is one better than the other – if so, which one do they prefer? How much would they pay for it? Any major barriers?

- Waste Department Tasks - What enforcement methods would be expected and acceptable, i.e. warning stickers, collection refusal, fines, etc.?
- Reaching residents with waste reduction message – aware of current options and ideal ways of getting messages out. Print and electronic options. Awareness of Markham's new Mission Green e-newsletter and desired content.

TOWN OF MARKHAM WATERWORKS

- Town of Markham's Waterworks – what do residents associate with Waterworks? Have they had any direct experiences with the department and its services
- Awareness and level of interest in Waterworks functions, including repairs due to water main breaks. Indeed, do they know what the department does and have any interest in learning more about it?
- Example of when they might have had contact with Waterworks – when work is being conducted in their area they might have been given a reply paid service rating card to complete. Have they ever participated in this option?
- Reliability – any cause for concern? Have they ever experienced water quality problems or a disruption in the service?
- Price awareness and sensitivity to increases - Awareness of cost as part of overall fixed household operating expenses. Is it seen as a small fraction of the total cost? (Worth comparing water costs to energy costs?) As far as they can recall, when did the price last increase? By how much?
- Presenting water charges – what is most meaningful: % of total average household cost, \$X per week, \$X per year?
- Perceived quality of Markham water and related water consumption preferences (tap, filtered and bottled). Do they regularly buy bottled water to consume at home? If so, why bottled instead of tap water? (Is it a quality or 'lifestyle' issue?)
- Desired facts and preferred sources – what do they want to know about the service and the product?
- Awareness of and interest in print Water Watch and Annual Water Quality Customer Report. Recall receiving it?
- Reaction to sample copies of Water Watch, and Annual Water Quality Customer Report format and content. Other topics that they would like to have featured.
- Interest in website details and current available content (what information do residents want to see? – why do they go to the website?)

- Ideal way of reaching customers with messages – current avenues sufficient or do they need to be enhanced?
- Water Conservation – awareness and perceived impact on their community. Have they taken any steps to reduce the volume of water that they use? If so, what have they done? Low flow showerheads and faucets? Impact of statement: the average Canadian uses 343 litres of water daily in their homes (Environment Canada).
- Awareness and behaviour related to summer water use By law.

Prior to the end of each session, a short structured questionnaire will be circulated for respondents to complete. It will consist of a series of closed and open ended questions summarizing basic attitudinal and behavioral elements related to waste and water. Draft copy to be provided for client review next Monday.

Thank respondents for their participation!

STIMULUS MATERIALS (to be provided by Waste and Water divisions)

Waste:

Blue bin expander, blue bin, large opaque and regular garbage bags

List - what's in Markham's residential garbage after blue and green stream diversion

Samples of current most recent newsletter (total 20)

Water

Sample copy of bill

Copy of Annual Water Quality Customer Report

Samples of current most recent newsletter, Water Watch (total 20)