



# THE CONSERVER



Dec 08/Jan/Feb 2009

WINTER EDITION

A 2008-2010 Water/Energy Connections Project Quarterly Newsletter published by:  
The NCWC Education Fund & The National Council of Women of Canada with funding from:  
The Walter & Duncan Gordon Foundation

## LETTER FROM THE EDITOR

### Dear National Council of Women of Canada and National Council of Women of Canada Education Fund Members and Supporters,

I'm pleased to report that our Water/Energy Connections Project is well under way, with 500 copies of the Fall and Winter CONSERVER and over 1700 Water /Energy Surveys distributed to our members from coast to coast and posted on our NCWC web site. (Read the news and try the survey at [www.ncwc.ca](http://www.ncwc.ca))

Also on the web site are the speaking notes of our AGM 08 speakers Ralph Pentland, author of the 1987 Federal Water Policy; John Jackson, Director of Clean Production for Great Lakes United; and (visually in slides) Tony Maas, World Wildlife Canada. I am most grateful to Mary Scott for ensuring our project's web information is updated quickly (What's New) and for ensuring the web survey is easy to complete. Thanks also to former NCWC and NCWEF President Catherine Laidlaw, former NCWC President and current Newsletter Editor Elizabeth Hutchinson and NCWC VP Muriel Smith, for their generous donations which allowed us to post the web survey in both English and French and assisted with other NCWCEF educational work.

Survey returns have been steady, with close to 100 of the hoped for 500 responses received to date. If you need more newsletters or surveys please contact the office at [ncwc@magma.ca](mailto:ncwc@magma.ca), or myself at [gracia.janes@bellnet.ca](mailto:gracia.janes@bellnet.ca)

My thanks to those of you from both urban and rural, and large and small communities in Ontario, British Columbia, Newfoundland, Saskatchewan, Nova Scotia, New Brunswick, Quebec and Manitoba, who have mailed in your surveys so far- and to those who are technically inclined who completed theirs on - line! If you have made written comments on the survey, your reward may well be a quote in our newsletter "Bits and Bytes" column.

On Council 'home-fronts', Local and Provincial Councils of Women in Manitoba (PCWM and Winnipeg) and Ontario (PCWO, St. Catharines, and Climate Action Now St. Catharines) have held programs on water/energy related topics, such as 'soft' energy paths, transportation impacts on water, nuclear risks to the Great Lakes, food security and schoolyard greening. Elsewhere, in Windsor, New Westminster, Toronto and Montreal other affiliates are busy planning programs. If your group has held a meeting/forum/event send me a report regarding the speaker, topic, attendance, main facts and message and any media coverage, so I can send you the allotted \$200 to cover a portion of your costs. If it is a joint program we can provide \$200 per Council.

For our NCWC and NCWEF program at the 2009 AGM in lovely Prince Albert, Saskatchewan I have arranged for Andrew Nikiforuk - renowned reporter and author of TAR SANDS, Dirty Oil and the Future of the Continent, to speak on the environmental impacts of the Tar Sands at 1:30 p.m. on June 6<sup>th</sup>. Knowing the location may be too remote for many to attend, I take some comfort in the fact that Mr. Nikiforuk's notes will be available on the web shortly after the event, along with a report of our questions and his answers on this crucial topic.

I hope you enjoy this edition of the CONSERVER, which features the issue of WASTE. Make sure you read the editorial -The Impact of Our Wasteful Habits on Water, by John of Jackson, Director of the Clean Product program for Great Lakes United and a waste expert of long standing.

Gracia Janes, Water/Energy Connections Project Coordinator & President NCWCEF

P.S. If you would like to help us with our work, donations are tax-receiptable and will be issued promptly. Just make out your cheque to The National Council of Women Education Fund and send to 251 Bank Street, Suite 506, Ottawa, ON K2P 1X3.

# Quotables



## The Impacts of our Waste on Water

by John Jackson, Great Lakes United-Panelist at our 2008 NCWC&NCWCEF AGM

Every time we throw something into the garbage, we add to the water crises that our country faces.

When we hear that statement, our thoughts probably first turn to the contamination of groundwater from leaking landfills or the fallout from polluting incinerators onto the land and water. These certainly are serious and have destroyed the water sources for some communities. So we strive to build "better" landfills and incinerators to avoid this pollution and undertake futile efforts to clean-up contaminated sites.

But contamination from waste disposal is only a tiny part of the negative impacts on our water supplies from our foolishly throwing out wastes. The dramatically greater negative impact is from the mining, forestry and manufacturing that would not have to occur if we were not throwing out so much "used materials" - commonly mis-called "waste".

It is sobering to realize that the impact on the environment is substantially greater at the production end than at the disposal end in the lifecycle of a product. Ninety-four percent of the materials extracted for production processes are turned into waste before we even see the product. Every time we throw something from our household into the garbage, we are increasing the demand for raw materials. Dr Jeffrey Morris, an economist with Sound Resource Management in Seattle, summarizes the situation well: "*Disposal by whatever method or name still stinks of wasted resources.*"

The more that we make products by manufacturing from raw materials, the more that we use up and pollute the waters of Canada. For instance:

- **Increased Water Contamination:** Making products from raw materials instead of recycled materials directly creates much more water contamination because of the extraction and manufacturing processes. For example, making cardboard from trees instead of recycled cardboard discharges 70 times more phosphorus contamination into our waterways. Steel made from scrap iron instead of ore results in 80 times less water pollution.

- **Increased Water Use:** It usually takes more water to make an item from raw materials than from recycled materials or to reuse products. For example, it requires 60% less water to make paper from recycled fibers than from trees.
- **Increased Energy Use:** Making products from raw materials takes much more energy than making them from recycled used materials. For example, to make an aluminum can from raw materials takes 150 times more energy than to make that same can from recycled cans. In the case of plastics, it takes 50 times more energy when using raw materials such as oil than when made from recycled plastics. We would save even more energy if products lasted longer or were reused so that we didn't have to make new ones so frequently. As we well know, energy production by the methods most commonly in use in Canada has very negative impacts on water flows and water quality.

## Waste Status in Canada today:

Over twenty years ago most government jurisdictions in Canada set targets for 50% diversion of garbage and/or reduction of garbage disposal by the year 2000. The most recent Statistics Canada data for 2006 show what utter failures we have been at meeting those targets.

Waste diversion rates (primarily recycling and composting) have grown dramatically over the past twenty years, but in 2006 we were still only at a 22% diversion rate Canada-wide, less than half way to the 50% goal - a goal that is far from strong enough. Waste experts tell us that 80% and higher diversion rates are totally feasible using existing technologies and methods.

Diversion rates vary dramatically across the country. Those of you living in Nova Scotia, Prince Edward Island and New Brunswick should be proud of doing considerably better than the Canada-wide average. Nova Scotia had 41 percent diversion; PEI, 38%, and New Brunswick, 36%. There is no doubt that the leading-edge waste diversion programs are in these provinces, but still over half of the wastes in these provinces end up in landfills and incinerators. At the other end of the spectrum are Newfoundland and Labrador (6.9% diversion rate), Saskatchewan (11.4%), Manitoba (13%), Alberta (14.6%) and the three territories (15.9%).

# Quotables



The data show that in terms of waste disposed of, it isn't simply a problem of not improving enough, but one of actually continuing to move in the wrong direction. Waste disposed of continues to grow; for example, between 2004 and 2006 alone, waste disposed of grew by 8%. Again this varied according to where you live in the country. Alberta's waste disposal grew by 24% in those two years, while P.E.I.'s waste disposal actually decreased by 13%.

This means that we are wasting huge quantities of valuable used materials every year. According to Statistics Canada, this was 27 million tonnes in 2006. Eighteen million of these tonnes were from the non-residential sector and 9 million tonnes from the residential sector. This incredible waste of resources increases the demand for extraction and manufacturing processes that increase water contamination and use across Canada.

## A Path Forward:

Two fundamental changes are essential to address the waste problem in Canada. The first is to use different criteria when designing products. The second is to view so-called "wastes" as valuable used resources.

Criteria for designing products should include: longevity of product, repairability of product, upgradeability of product, reusability of product, ease of recycling or composting, use of recycled materials in the product, and avoidance of toxic materials in products. Before a product is introduced onto the market, the manufacturer should have to show the government that they have adequately complied with these criteria.

At the waste end, we should aim for a zero waste society, one that views all used materials as valuable resources. This means requiring the manufacturer of the product to assume responsibility for taking back, without charge, the products that they sell us. They should be required by government to ensure that the value of these used products is maximized by reuse, remanufacturing, recycling and composting programs. Before manufacturers and sellers are allowed to put products onto the market, they should have to show that they have programs in place to deal with the products after they have been used.

Every step we take towards a zero waste society will contribute towards healthier water systems across Canada.

## Resources

- Association of Municipal Recycling Co-ordinators (AMRC) [www.amrc.ca](http://www.amrc.ca)
- California Integrated Waste diversion Board, promotes "Zero Waste California" [www.ciwmb.ca.gov/](http://www.ciwmb.ca.gov/)
- Compost Council of Canada [www.compost.org](http://www.compost.org)
- Environment Canada [www.ec.gc.ca/index.html](http://www.ec.gc.ca/index.html)
- John Jackson, Great Lakes United, Director of Clean Production [jjackson@web.ca](mailto:jjackson@web.ca)
- On the Road to Zero Waste, Video re Halifax [www.greenyes.grrn.org/](http://www.greenyes.grrn.org/)
- Quinte Waste Solutions [info@quinterecycling.org](mailto:info@quinterecycling.org) and [www.quinterecycling.org/](http://www.quinterecycling.org/)
- Waste Diversion Ontario [www.wdo.ca](http://www.wdo.ca)
- Waste Reduction Week [www.wrw.com](http://www.wrw.com)

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## Rays of Light Across the Country

Dr. John Bacher, Project Researcher

### Markham Leads the Way in Zero Waste

The City of Markham is Ontario's leading municipality in waste reduction achieving a remarkable 70% rate of diversion from landfill. It is one of the few municipalities in the province advocating a zero waste approach. This was sparked by Claudia Marselles, Manager of Waste Management for the City of Markham, who was spurred to action after seeing the waste lying around in meetings organized by consultants who were attempting to promote their plans for incinerators and new landfills in that municipality.

Markham took the lead in waste reduction by dramatically showing how waste can be cut down in its own municipal offices. They replaced trash containers with recycling and composting containers in all offices, and when some attempted to get around this ban by purchasing waste containers these were promptly removed by cleaners.

Anyone wanting to dispose of waste that cannot be composted or recycled in Markham's headquarters must approach a security guard, who, after seeing it is legitimate waste, ensures it is locked away under proper supervision and dealt with appropriately.

Markham has also developed policies to force waste reduction by others and to increase markets for products that use waste content. The municipality was shocked when a keen critic of the council was able to point out that a budget that the Mayor was very proud of was not printed on recycled paper. It is now a municipal requirement that *"paper products such as coffee cups and plates shall contain post consumer fibre and be recyclable. Town approved recycling and composting containers will be placed in visible locations and kept clean at all times."*

### Farewell to Waste in Nova Scotia

#### Nova Scotia as a Leader

It is astonishing how since 1975, when the first pollution control standards in waste management were introduced, Nova Scotia, with a waste diversion rate of 42%, has gone from being one of the most

retrograde provinces in Canada in the management of waste to becoming the world leader in environmentally responsible methods. Nova Scotia is the only place in North America which matches the standards of the European Union which do not allow compostable material into its landfills. As in Europe, collected compost is dried at its twenty one compost facilities before being stored prior to sale for the landscaping business - which appears to be the sector that offers municipalities in the province the best price. In 2000, Nova Scotians threw away half as much waste as they did in 1980.

Unlike Europe, which has similar high standards for landfills, Nova Scotia has become an incineration - free zone. This happy event took place with the closure of Sydney's incinerator in December 2005. Long before this, open burning sites were shut down following a provincial ban in 1996, although as late as 1994, Nova Scotia had 36 dump, 20 open burning sites and six incinerators.

Given its status as a world leader in waste management, visitors have come from such countries as Ireland, Trinidad & Tobago, other Caribbean island states, the United Arab Emirates and Japan to see firsthand how Nova Scotians manage their waste.

#### The Clear Bag Lesson

Critical to Nova Scotia's dramatic success in waste reduction has been the combined impact of the clear bag and composting programs. While most Canadian cities have combinations of encouraging home composting, vermiculture (worms in boxes in apartments), and green bins for organic wastes, most compostable waste still ends up in garbage- hidden away in dark garbage bags. This highlights the importance of clear bags, combined with garbage delivery only every two weeks. In such situations the stink of compostables usually provides an incentive to either home compost or use green bins weekly.

Clear bags have clear results. Now 30 of Nova Scotia's 55 municipalities require residents and businesses to place their garbage in clear bags. As a result, recycling and composting rates have increased dramatically in these municipalities, with a corresponding drop in the amount of waste going to landfill.

Using data taken from eight municipalities quantities of waste dropped by forty percent since 2004 where clear bags are in use. Organics and recyclables have increased by 35% and 38% respectively. Nova



Scotia's composting rate is 69%, compared to the dismal 25% rate for Canadians on average. Return rates for beverage containers have also jumped

Given Nova Scotia's success with clear bags, it is apparent a simple provincial regulation requiring municipalities to have clear bag programs would be one of the most effective means to reduce waste in Canada. This might take place in Nova Scotia after its next round of public consultations for waste management.

### **Other Waste Challenges and Solutions**

In addition to being effective in diverting compost, Nova Scotia has succeeded in trickier waste management challenges. The clear bag has helped in making effective the province's ban on the disposal of corrugated cardboard, newsprint, lead acid (automotive batteries), used oil, leaf and yard waste, waste paint, antifreeze, selected plastics, steel/tin food containers, glass food containers and compostable organics. Some banned items such as beverage containers, used tires, waste paint and electronic products are managed through provincially regulated product stewardship programs. Some 80 Enviro-Depots are established around the province, and all these depots accept beverage containers and waste paint, while many collect additional materials including cardboard, newsprint and car batteries.

As part of a stewardship agreement with the province, milk producers in Nova Scotia pay municipalities the full cost to collect, process and recycle retail packaging. Milk producers also provide free advertising on milk cartons to promote municipal curb side recycling. Another forward thinking government plan is to require refillable or recyclable containers for all beverages sold in Nova Scotia, excluding milk. This will expand the current deposit-refund system that covers liquor, wine and beer containers, to other beverage containers. A resource recovery fund for the beverage container deposit-refund will be established, to help identify local end markets for recovered containers and materials collected through a province-wide network of recycling depots. Retailers will be required to show the amount of a beverage deposit on sales receipts and to post the location of recycling depots. The deposit refund system has dramatically reduced litter in the streets.

After banning paint from landfills, the Nova Scotia government passed regulations requiring the Nova Scotia recovery board to set up a recycling program

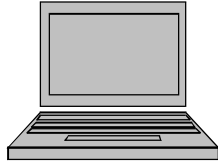
for paint on behalf of "brand owners." Paint collected under the program is sent to the Paint Recycling Company in Springhill Nova Scotia for preliminary processing and then to Quebec to be manufactured into "Boomerang", a 100 percent recycled paint product.

In a similar fashion to paint, Nova Scotia has established "brand owners" to set up a collection, transportation, reuse and recycling program for electronic products. Nova Scotia has also established a fund to assist companies using waste as a resource. One of the most successful efforts has been with cardboard. The Minas Basin Pulp and Power in Hantsport manufactures liner board from corrugated cardboard, which is used to manufacture new boxes by the Maritime Paper Company.

Like Marham, Nova Scotia is using its purchasing power to encourage markets for greener products. Office paper purchased by some departments is certified as containing a minimum 30 per cent recycled content. Plastic bags purchased by the Nova Scotia Liquor Control Board contain 40 per cent recycled content. Centrally purchased desktop and laptop computers meet the minimum sliver environmental standard.

Rather than new technological innovations it has been combinations of sensible regulations and good design that has made Nova Scotia a world leader in waste reduction. One of the examples of good design was a waste separation container developed by the students of the Nova Scotia College of Art and Design. It contains separation areas for organics, paper and recyclables and garbage. To prevent the common problem of waste mixing and contamination, the garbage container is placed in front, on the understanding that it will be used by people with less concern for the environment. Other innovations in design include having containers decorated with sculptures of wildlife such as frogs. This is intended to strengthen the message that improperly disposed of waste does damage to the life forms of the natural world.

***Nova Scotia's evolving and increasingly more effective system of waste management is an inspiring example of how government can still work effectively to protect jobs and protect the environment in innovative ways, one that the other provinces should emulate.***



# Bits and Bytes

## Water/Energy Connections Survey Questions Regarding Waste

### #5. When shopping, I

- 5) refuse to buy products that are over-packaged.
- 3) sometimes refuse to buy products that are over-packaged.
- 0) pay no attention to over-packaging.

### When shopping, I

- 5) take cloth bags to carry my purchases.
- 3) take plastic bags but reuse them as many times as possible.
- 0) always use new plastic bags from the store.

### #7. When disposing of recyclable & compostable (non-dairy/meat) household waste, I

- 5) use recycle depots & a composter, or put out recyclables & compostables for municipal collection .
- 3) recycle as much as possible but don't use a composter or set compost out for collection.
- 0) toss everything together with non recyclable and compostable garbage.

### #8. If an article stops working, I

- 5) think of how it could be repaired , or how the parts could be reused.
- 3) attempt to have it repaired and if it still doesn't work throw it out.
- 0) throw it out.

### #9. When packing a lunch, I

- 5) use reusable containers.
- 3) try to use reusable containers as much as possible.
- 0) wrap everything in disposables.

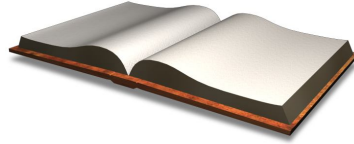
### Some Comments from Survey Respondents :

- *Reuse, reduce and recycle is our motto! We all need to think of all 3, especially Reduce! Create incentives for stores to sell refillables;*
- *Pay for garbage bags at the curb."*
- *Make recycling easy....Create incentives for stores to sell the refillables ...Get a program going to engender national pride (for keeping refuse out of parks, off the streets, and off public transit).*
- *Use washable cloths rather than paper towels for cleaning up spills.*

### HELPFUL HINTS ON WASTE DISPOSAL

- *Put organic waste in the green bin or consider composting yourself. Don't use sink garbage disposal units as they waste hundreds of litres per household per year. They also increase the load on water treatment plants.*
- *Items like used dental floss belong in the waste basket, not the toilet. They may well cause costly plumbing problems and are not easily processed in water treatment facilities.*
- *Household hazardous waste such as cleaning products, paint, grease and oil should not be put down the drain or in the garbage, as municipal wastewater treatment systems are limited in what they can remove from water as it is treated.*
- *Water Smart Niagara -Tip calendar 2007-2008, Regional Municipality of Niagara Public works Department*

# From the Pages of



## **Stewardship Ontario: The Use of Clear Bags for Garbage as a Waste Diversion Strategy: The Clear Bag Report, Allison Ross, Quinte Waste Solutions Fall 2008**

*Review by: Dr. John Bacher, Project Researcher*

### **Clear Bag Key Vehicle For Waste Reduction in North America**

Increasingly, throughout North America a simple step is proving to be the most dramatic booster of waste reduction, diverting huge amounts of potential garbage from landfills. Is this some new dramatic space age invention? A technological revolution? A new stroke of genius by some masterful inventor?

The answer to the above questions is no. The key to waste reduction does not involve high tech, new discoveries or inventions. It does however, have something in common with what good governance groups have termed “*transparency*.”

There is an organization that fights global corruption of government called Transparency International. It calls for clearer mechanisms to ensure that government decision making is more transparent and accountable. This is the same approach that the clear bag for garbage takes for waste management. What a household decides is garbage can no longer be concealed in secret, but is in full view of both neighbours and enforcement officers.

The benefits of clear bags were recently detailed in the study prepared by Allison Ross, Special Project Coordinator of Quinte Waste Solutions. It found that 22 jurisdictions across Canada and the United States require residential households to dispose of their garbage in a clear bag. Through such transparency, compostable materials which are responsible for both the stink of garbage and the leachate that flows from dumps onto land and into ground water can no longer be hidden away. It is also impossible to hide

recyclable materials, and dangerous stuff which is banned from garbage bags because it is hazardous waste (eg. chemicals, gasoline), or dangerous to workers. (eg. sharp objects, broken glass.)

The Clear Bag Report notes that a surprising variety of jurisdictions require households to dispose of their garbage in clear bags. One of the most stern regulatory measures has been taken by the Province of Prince Edward Island, which has imposed a requirement for clear bags on every municipality in the province. This has helped ensure that its provincial laws concerning mandatory source separation for recycling and organics are actually respected. Clear bags caused the recycling tonnage of Prince Edward Island to double, since existing recycling laws became more easily enforceable. The Clear Bag Report author Ross, concludes that the system works well since “*collection drivers are able to see inside the containers to ensure that recyclables/organic materials are not being disposed in the garbage.*”

While not compulsory in Nova Scotia, clear bags are used by the majority of their municipal governments for garbage collection. (13 jurisdictions) Where it is in use the results were quite dramatic over two years of implementation from April 2005 to April 2007 where there was a 41 per cent reduction of residential waste. Residential recycling rose by 35%, and the collection of residential organics skyrocketed upwards by 38%. Here clear bags were imposed using a minimum of six months notice to help the public, retailers and municipalities make the transition.

# From the Pages of

Guelph, Ontario has required clear bags for garbage since 2003. Here the use of clear bags has raised people's awareness of what is going into landfills, which leads to less waste being generated.

In the USA, Hamburg, New York successfully maintained its course for clear bags despite law suits that used arguments about privacy. It was one of the first jurisdictions in North America to mandate the use of clear bags, taking this pioneering step in the early 1980s. It now has one of the continents' highest recycling rate of 70%. According to Anne Alessi, Assistant to the Superintendent of Public Works, *"The clear bag took tons and tons of recyclable materials out of the waste stream and therefore cut our landfill costs drastically."*

Hamburg defied legal challenges to keep its clear bag law. Two residents of Hamburg attempted to derail clear bags over privacy issues. The result was a two year court battle. Ross notes that, *"According to the court ruling, once residents place garbage at the curbside (area between sidewalk and curb), it is considered public property. The outcome of the clear bag program was certainly worth the challenges faced by the municipality. Any time you can cut costs in any way for a municipality is a plus for its residents and its tax base."*

Ross summarizes well the reasons that clear bag mandates work. She notes that, *"First people are motivated to recycle due to social pressure. They want to avoid public scrutiny such as neighbours taking notice if they do not recycle. Secondly, clear bags serve as a prompt. If people forget to separate recyclable from the garbage, they are constantly reminded by the clear bag because of its contents. Clear bags also prompt people to reflect on their waste disposal habits and encourage them to consider waste diversion options. Lastly, using clear bags helps waste*

*collectors monitor for compliance with existing waste management regulations."*

The spirit of missionary promotion for clear bags that is needed for those concerned for the protection of the environment can be seen by the successful launch of the program in Fulton County, New York. Ross notes that here, *"The County implemented a "No Black Bag" campaign, which includes advertisements, press releases, and visits by the recycling coordinator at schools, public venues, and municipal meetings. "No Black Bag" stickers and fliers were given out to garbage crews and private haulers to use. Promotional work continues today and the recycling staff participate in a "ride-along", where they ride with waste collectors for each garbage route. Education is provided on the clear bag program, including what constitutes an unacceptable level of contamination. "*

The virtues of the clear bag approach are more appreciated when put in the context of how Nova Scotia has been able to both end garbage incineration and prohibit the burying of garbage below ground - a tougher environmental standard than has been achieved anywhere else in the world and which has made the province a source of study by international experts involved in building environmentally sustainable waste systems.

**The most obvious way it has helped is by keeping compostables out of the regular garbage stream and therefore, much easier to sort out, dry out and use without fear of contamination of land or water resources. For this reason, one of the most effective ways you can improve the environment in your community is to persuade your municipal council to have a CLEAR BAGS NOW approach!**

**This newsletter was printed  
on recycled paper.**

