



A FISHING EXPEDITION?

Toronto's Solid Waste Management Marketplace Engagement Program

by Clarissa Morawski

Like other Canadian cities that are exhausting their local capacity disposal, the City of Toronto (population 2.4 million) will soon close its largest landfill. When the Keele Valley landfill shuts down in 2002, about 30 million tonnes of municipal and commercial wastes and recyclables will be left without a home for the next twenty years.

Enter the Solid Waste Management Marketplace Engagement Program or SWM-MEP (pronounced *swim-mep*), Toronto's new process to identify long term disposal and diversion options. The city has looked at options since the failed Solid Waste

Environmental Assessment Plan (SWEAP) in 1986. Thirteen years and five attempts later (*see side bar, page 11*), time is running out and SWM-MEP is under pressure to produce results.

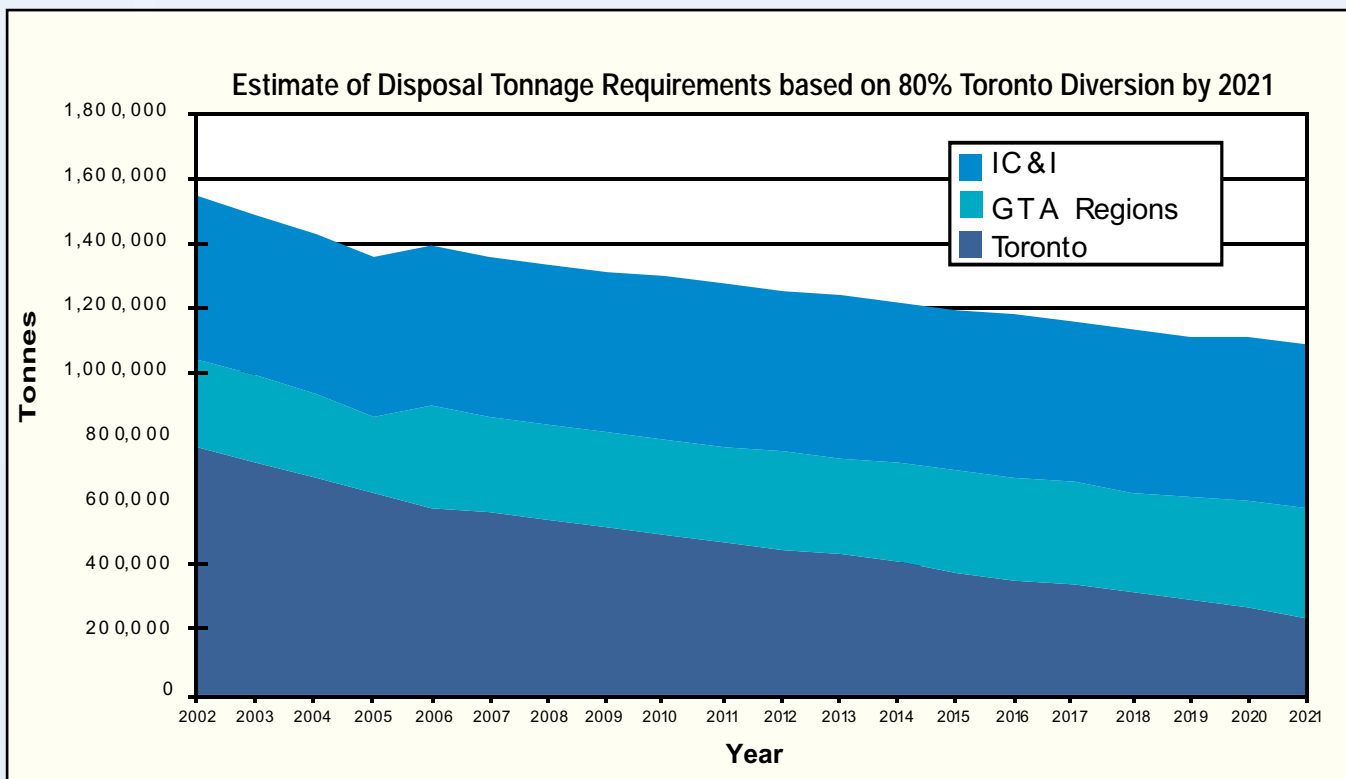
Though critics fear it may have become another failed exercise, this process is designed to unleash competitive market forces. The newly amalgamated Toronto City Council chose this as the preferred strategy and it may result in interesting partnerships.

Toronto is collaborating with the adjacent regions of York, Durham and Peel, which have joined the process

as "members." These regions have supplied Toronto with their waste projections. They will also provide input at the different stages, but are free to opt out of partnerships at the RFP or contract signing stage.

SWM-MEP will solicit proposals for diversion and disposal options as well as new and emerging technologies. However, long term disposal capacity must not compete with (or be a disincentive to) Toronto's aggressive waste diversion program. (City council is committed to divert 50 per cent of waste from disposal by 2006).

Stage one of SWM-MEP— "re-



quest for expressions of interest” —is sometimes referred to as Toronto’s “fishing expedition,” a derisive term that municipal staff have come to see as positive. Scheduled for the end of April, Toronto will cast its fishing line and see what bites. Large or small, long-term or short-term, city staff and council will have the luxury of choosing one or many options to satisfy both budgetary and environmental considerations.

Evaluation criteria

As per planning elements of the *Ontario Environmental Assessment Act*, staff will review expressions of interest and develop a short list of “top ranked” proposals. Short listed proponents will be invited to respond

to the RFP. Ranking criteria for proposals include human health and safety, the natural environment, and social and financial factors.

About 35 per cent of the score will be human health and safety and the natural environment. These include

macro-environmental impacts such as emissions (to air, land and water), traffic safety, and energy use.

Another priority (30 per cent of the score) will be social benefits (i.e., the →



Chronology of events

Date/Project	Proponent	Purpose	Results
1986-1992 Solid Waste Environmental Assessment Process	Former Metro Toronto (Project was initiated with the participation of the York and Durham as an inter-regional planning process.)	A multi-faceted planning exercise designed to establish 3Rs programs, recycling facilities, and required disposal facilities.	Many 3Rs programs established including Blue Box. Disposal siting process concluded following election of provincial NDP government. No disposal facilities sited.
1989-1990 Solid Waste Interim Steering Committee	Collaborative effort of five Greater Toronto Area (GTA) Regions.	To prepare a long-term solid waste management plan for the GTA. Engagement of private and public sectors to	Work was concluded following election of provincial NDP government. identify new disposal capacity.
1992-1995 Interim Waste Authority	NDP Provincial Government	To conduct a site search for new landfill disposal within the GTA. Three Region-specific site searches undertaken: Peel, Durham, and York-Metro Toronto.	Hearings initiated before the EA Board. Current Progressive Conservative provincial government concluded process.
1995- Present Adams Mine Site Assessment Process	Former Metro Toronto	In 1994, Metro Toronto initiated a willing host site search that led to identification of the former Adams Mine near Kirkland Lake, Ontario as a potential willing host site. Purpose was to gain approvals to establish a landfill at the former mine site.	Former Metro Toronto Council decided in December 1995 not to renew its option on the former Adams Mine Site. Metro's willing host EA planning process concluded. The private sector proponent, Notre Development, proceeded with the EA. (Approvals received in 1998)
1995-1996 Metro Toronto RFP	Concurrent with the EA investigation of the former Adams Mine site, Metro Toronto engaged the private sector to contract for new disposal capacity.	Purpose was to establish a 20 year contract for new - disposal capacity. Province amends Bill 76 (an Act to improve environmental protection, increase accountability, and enshrine public consultation in the <i>Environmental Assessment Act</i>) to potentially place Metro's "contracting-out" process under EA Act. Metro Toronto proceeds to contract with BFI for a 3- to 5-year term with a maximum limit of 500,000 tonnes per year.	New disposal capacity contracted from 1998 to 2002 with BFI (250,000 tonnes/year minimum; 500,000 tonnes/year maximum).
1996-1998 Solid Waste Environmental Assessment for long-term Disposal	Former Metro Toronto	To engage the marketplace in an EA planning process designed by new City of Toronto Council. order to acquire (through contractual means) long-term disposal capacity for Metro Toronto.	Project concluded in October 1998
1998-2000 Solid Waste Management Marketplace Engagement Process	City of Toronto	To engage the marketplace (public and private sectors) in the identification of disposal capacity options and to contract the successful proponent(s) for capacity ranging from 5 to 20 years. Goal is to have a contract(s) signed in September 2000. This is not a formal EA planning process, but is based on sound EA planning principles. Incorporates potential integration of other GTA waste streams, a 50 per cent diversion target by 2006, partnership options, and requests for diversion and new and emerging technologies.	As of March 1999, the project is proceeding with development of a Request for Expressions of Interest.

provides the best economics from the collection standpoint and will help us achieve our diversion targets.”

Not everyone agrees. Shelly Petrie of the Toronto Environmental Alliance (TEA) points out that “mixed waste processing is still end-of-pipe. It does nothing to stimulate source reduction, reuse and product take-back.” Councillor Bill Saundercook, who sits on the works and utilities committee agrees, “Pushing for source separation should be a priority.”

Innovative technologies that have not been demonstrated on a commercial scale, or technologies without a license, will be requested under “new and emerging technologies.” Respondents may propose capacity between 50,000 to 100,000 tonnes for mixed waste and/or source-separated organic waste. These technologies must be clearly proven at a pilot scale and been in operation for no less than 6 months. Subbor Inc., based in Toronto, has a mixed waste technology that anaerobically processes the

net number of new local jobs). The remaining 35 per cent of the score will be economic issues such as tip fees and hauling costs.

Once successful candidates are chosen, due diligence reviews, contract negotiations and awards will take place.

Details

Respondents will be asked to provide “proven diversion capacity,” meaning a minimum of five years mixed waste and/or source-separated organics diversion capacity for between 50,000 and 300,000 tonnes of garbage per year.

Councillor Betty Disero, chair of Toronto’s Works and Utilities Committee explains. “We could consider a source-separated organic stream alone,” she says, “but this is difficult in an ethnically diverse community with a high percentage of high-rises. Our planned MRF-based diversion is designed to utilize organics within a mixed-waste stream. This

organic component of the waste once metal, plastic and other non-organic material have been pulled out. All the methane gas will be recovered for electricity. Also eligible is Thermo Tech Technologies, a Brampton-

“A source-separated organic stream is difficult in an ethnically diverse community with a high percentage of high-rises. MRF-based diversion is designed to utilize organics within a mixed-waste stream.”

based company that processes food waste into animal feed and manure into fertilizer.

Other companies can bid to dispose of anywhere from 100,000 tonnes to as much as 1.5-million tonnes of waste annually. They may offer to handle set or variable quantities. Also, offers can be made for contacts lasting five, ten, fifteen or twenty years. Options such as export to the

Toronto’s 5-year Plan for 50 per cent Diversion

The City of Toronto has a goal to divert 50 per cent of its residential waste from landfill by 2006. In addition to Blue Box Program expansion, improving the capture rate of recyclables and yard waste, and expanding the backyard composting program’s outreach, a combination of mixed waste processing and centralized composting will play a key role in achieving the goal.

In July 1998, a contract to design, construct, and operate a small-scale mixed waste recycling and organics processing facility at the Dufferin Transfer Station was awarded to a joint venture of Stone & Webster Canada Ltd. and Canada Composting Inc. It’s estimated that construction and initial operation will take place between March 1999 and May 2000 at a total capital cost of \$10.4-million. Full operation of the new facility will occur immediately thereafter.

The facility will give the city an opportunity to test various two- and three-stream approaches to increased waste diversion. These include: processing mixed waste from apartment buildings and commercial locations; separate collection and processing of food and yard waste generated by single family households and commercial locations; and, the separate collection and processing of wet waste (including kitchen scraps, napkins, dirt, and diapers) from a residential wet/dry collection system.

The first year of operation will be a trial period to allow the city to make decisions on the future role of mixed waste processing and source separated organics composting. The small-scale facility will be capable of processing up to 15,000 tonnes of mixed waste per year, or up to 25,000 tonnes of organic material per year.

If the project is a success, the facility may be expanded to accommodate up to 100,000 tonnes per year of mixed waste or up to 165,000 tonnes per year of organic material. Depending on the outcome of the trial period, additional facilities may be built to meet additional diversion requirements.

The key feature of the proposed facility is the patented BTA-Process, a German technology that separates waste and uses anaerobic digestion to create compost in an odour-controlled facility. The facility captures recyclable container material and converts organic material into high quality compost and biogas. The biogas can be used to produce electrical power for the facility itself and can be sold to other users.

In addition to the mixed waste recycling and organics processing facility, the city is contracting Miller Waste Systems to construct a Blue Box MRF at the Dufferin Transfer Station. Currently, the city operates only one Blue Box MRF at 400 Commissioners Street, which performs above its intended design capacity. As more materials are added to the Blue Box program and capture rates increase, additional processing capacity will be required. The Dufferin MRF—which should be completed by late 1999—will have the capacity to process up to 25,000 tonnes annually and will be owned by the City of Toronto and operated by Miller Waste under a four-year agreement.

Written by Renee Dello, coordinator of waste diversion planning for the City of Toronto, Ontario.

New York Faces Similar Crisis

New York City, N.Y. offers an interesting comparison with Toronto. Every day in New York, 7.3 million people generate about 13,000 tons of municipal solid waste (4.7 million tons per year). For more than ten years, most of New York's garbage was sent to the infamous Fresh Kills landfill on Staten Island. This mega landfill will close in 2002 and officials realize that finding a new home for the waste isn't going to be easy.

After reviewing responses to a disposal RFP issued in 1998, the city decided to export its garbage via train, truck (and eventually by water) to landfills and incinerators around the United States. Paul Berizzi, executive director of New York's Environmental Action Coalition describes how neighbouring states recently "went nuts" when Mayor Rudolph Giuliani announced plans to ship garbage to Virginia via New Jersey.

Virginia and Pennsylvania are exploring legislation to limit or ban the import of solid waste. But standing in their way is a Supreme Court decision that restrictions on waste importation are unconstitutional because they violate the interstate commerce clause.

The city currently pays \$40 to \$50 per tonne for disposal and experts predict that waste export will drive up the price to anywhere from \$60 to \$150. Says Berizzi, "Nationally, the tip fees at US landfills have been increasing at a rate of 7 per cent annually, more than twice the rate of inflation."

United States, and energy-from-waste will be considered. Toronto also wants preferred customer status. "We're basically asking the marketplace for a volume discount," says SWM-MEP Project Manager Lawson Oates, "Preferred customer clauses are used in many large contracts."

Diversification targets

The city projects declining solid waste generation and increasing diversion over the next twenty years. Starting with approximately 800,000 tonnes of municipal solid waste per year in 2002, the city estimates a decline to about 600,000 tonnes per year by 2006 and about 250,000 tonnes per year by 2022. (See graph on page 10.)

Toronto currently diverts only 25 per cent of its waste. Toronto's high diversion targets—50 per cent by 2006 and 80 per cent by 2022—are considered by some to be "totally unrealistic." (See sidebar, page 16.)

"The city is looking for a 'flexible' or 'multi-market' solution that places their 'eggs in more than one basket'."

Councillor Tom Jakobek, the city's budget chief, warns, "There is no new money in the budget for new diversion programs, outside of the \$20-million allocated for the mixed processing pilot project." Councillor Ila Bossons adds, "It wouldn't surprise me if the city starts back-sliding on diversion as the money dries up."

Referring to the Ontario government's rejection of a proposed deposit-

return system for wine and liquor bottles, Councillor Bill Saundercrook states, "We can only achieve our target if the provincial and federal governments start working with us and stop preventing us from implementing effective stewardship programs to maximize diversion."

Flexible disposal options

One might have expected the city to lock into a single long-term disposal contract to maximize economies of scale and reduce costs. Scott Wolfe, general manager for Miller Waste Systems (a member of the Rail Cycle North consortium) says, "The city is looking for partnerships, low prices and long term disposal security. History shows that all three are normally best achieved through long term contracts. As long as the request for proposals is not prescriptive and everyone keeps an open mind, we think our proposal will be the one that best addresses Toronto's needs."

But the direction from Council has stated otherwise. The city is looking for a "flexible" or "multi-market" solution that places their "eggs in more than one basket," documents state.

Lawson Oates notes, "That's why we're calling for re-negotiation of tonnages every five years." Councillor Jack Layton also sits on the works and utilities committee. He says the small multi-market approach is the only way to go. "Current targets are minimums that we can and must exceed. Diversion won't be maximized if a big incinerator or mega landfill is contracted, because such a business would depend on the failure of diversion targets." Adds Layton,

"Relying on one disposal option is risky because any disruption in that market's ability to take waste would leave Toronto stranded."

But do enough small or medium disposal options exist? John Bray, executive director of the Ontario Waste Management Association says, "In addition to capacity in Northern Ontario, there exists disposal capacity for Toronto's IC&I and municipal solid waste in Southern Ontario." For example, Green Lane Environmental's landfill near London, Ontario can take up to 250,000 tonnes of the municipal solid waste per year for the next twenty years. "We're very interested in partnering with the city for a modest share of Toronto's waste," says Bob McCaig, president of Green Lane.

Even municipalities are showing interest in Toronto's garbage. Todd Pepper, manager of solid waste for the Essex-Windsor Solid Waste Authority, says, "Essex-Windsor is prepared to take 100,000 tonnes of Toronto's garbage for the next twenty years at very competitive rates." The City of London and County of Middlesex recently released its draft EA terms of reference for their long-term waste disposal strategy. One of four alternatives identified for evaluation is to expand the City's landfill capacity, rate of fill and the service area.

So where does incineration fit in? In a recent letter from an energy-from-waste (EFW) proponent to city staff, the company states, "We believe that the process, as described in the planning document, is unworkable for a proposed EFW project. Successful financing of a new EFW project greatly depends upon the long-term

A Sample from the Marketplace of Interest in Toronto's Waste

Disposal = ♦ Diversion = ♦♦ New & Emerging Technologies = ♦♦♦

Proponent		Type of Proponent	Interest
American Ref-fuel	♦	U.S. company with a "mass burn" waste-to-energy technology.	Build an EFW facility in or near Toronto for up to one million tonnes MSW/yr.
Browning Ferris Industries	♦	U.S. company owns landfills in southern Ontario and across the U.S., including Michigan.	Provide landfill capacity for MSW in southern Ontario and/or Michigan, U.S.
Essex-Windsor Solid Waste Authority	♦	Ontario municipality owns a landfill in Essex County, southern Ontario.	Provide landfill capacity in southern Ontario for 100,000 tonnes of MSW/yr.
Green Lane Environmental Group Ltd.	♦	Canadian company that owns a composting facility, MRF and landfill in southern Ontario.	Provide landfill capacity in southern Ontario for up to 250,000 tonnes of MSW/yr.
Niagara Waste Systems Ltd.	♦	Canadian company owns a landfill in southern Ontario.	Provide landfill capacity in southern Ontario for IC&I waste.
Ogden Waste-to-Energy, Inc.	♦	U.S. company with a waste-to-energy technology.	Provide waste-to-energy capacity for MSW.
Republic Services Inc.	♦	U.S. company owns landfills across the U.S. including four subtitle D standard landfills in Michigan.	Provide landfill capacity in Michigan for over 2 million tonnes of MSW/yr.
Rail Cycle North	♦	A consortium made up of Canadian-based Miller Waste Systems, Notre Development, CN Rail, Ontario Northland Railways (Crown Corp.) and U.S.-based Canadian Waste Services.	Rail haul and landfill capacity at the Adams Mine near Kirkland Lake, Northern Ontario for up to 1.3 million tonnes of MSW/yr.
Global Recycling Industries Inc.	♦♦	Canadian company that processes mixed waste and/or source-separated organics by pulling out recyclables and composting organics. (The residue is landfilled.)	Provide capacity for mixed waste and/or source separated organics for up to 300,000 tonnes of MSW/yr.
TCR Environmental Corp.	♦♦	Canadian company that processes mixed waste by pulling out recyclables, composting organics and landfilling residual using the wet/dry two bag process.	Provide capacity for mixed waste and/or source separated organics for up to 300,000 tonnes of MSW/yr.
Toronto Environmental Alliance	♦♦	Not-for-profit environmental organization that works to promote waste reduction in Toronto.	Provide solutions to achieve diversion targets through community partnerships.
Total Recovery Systems International	♦♦	U.S. company with a technology that pulls out recyclable material and converts residue into a re-engineered fuel for sale to Ontario energy markets.	Build multiple mixed waste facilities in or around Toronto for up to 2 million tonnes of MSW/yr.
Wright Environmental Management Inc.	♦♦	Canadian company with a cost-effective in-vessel composting technology with automatic continuous loading and unloading with internal mixing.	Provide capacity for mixed waste and/or source separated organics for up to 300,000 tonnes of MSW/yr.
Plasma Environmental Technologies Inc. & Ontario Hydro Technologies	♦♦♦	Canadian consortium has a thermal treatment or plasma assisted technology with co-generation capabilities.	Provide capacity for mixed waste for up to 100,000 tonnes of MSW/yr.
Subbor Inc.	♦♦♦	Canadian company that recycles waste through a multi-step anaerobic digestion technology.	Provide capacity for mixed waste for at least 100,000 tonnes of MSW/yr.
Thermo Tech Technologies	♦♦♦	Canadian company converts organic waste into animal feed and fertilizer.	Provide capacity for source separated organic waste for at least 100,000 tonnes/yr.

commitment of a known quantity of municipal solid waste at a fixed price. Toronto's requirements will make financing of a new EFW project extremely difficult."


IC&I waste

IC&I waste collected by the city makes up approximately one quarter (and will eventually be more than half) of the disposal capacity required for the next twenty years. The amount is estimated to be 500,000 tonnes per year. "Continuing to accept IC&I waste will provide revenue to help pay for our diversion programs and residential waste disposal. It will pro-


vide business with an alternative to private disposal services," says Councillor Disero.

But Councillor Ila Bossons says Toronto should not compete with the private sector. "Garbage is a free flowing commodity. To continue taking IC&I waste when we don't own a landfill anymore is risky in a competitive marketplace," she says. "Toronto should get out of the garbage business."

With or without the IC&I tonnage, SWM-MEP will create over one billion dollars in waste business over the next two decades. Over seventy stakeholders have attended meetings

so far and have submitted written comments to city staff. "This is a complex process," says Lawson Oates, "but that's the nature of solid waste management at the end of the 20th century. SWM-MEP will succeed." 

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