

Chapter 4 Section 4.09

Ministry of the Environment

Non-hazardous Waste Disposal and Diversion

Follow-up to VFM Section 3.09, *2010 Annual Report*

Background

Non-hazardous waste includes non-recyclable and recyclable materials generated by households and by businesses and organizations in the industrial, commercial and institutional (IC&I) sector. At the time of our 2010 audit, approximately 12.5 million tonnes of non-hazardous waste were being generated in Ontario annually. The IC&I sector generated about 60% of this waste, and households—the residential sector—generated 40%. Non-hazardous waste is managed in two main ways: by disposal (usually in a landfill or incineration) or by diversion (for example, recycling). About two-thirds of the province’s disposed waste is deposited in landfills in Ontario, with the rest shipped to landfills in the United States.

Municipal governments are generally responsible for managing waste generated by the residential sector. The IC&I sector and most multi-unit residential buildings are responsible for managing the waste they produce and typically use private-sector companies to transport the waste to landfills or recycling facilities.

The Ontario government, primarily through the Ministry of the Environment (Ministry), is responsible for setting standards for the management of non-hazardous waste through legislation

and regulations and for enforcing compliance with these legislative requirements. The Ministry is also responsible for approving new municipal and private-sector waste management sites and facilities and for ensuring that these operations comply with legislative requirements. In Ontario, the management of non-hazardous waste is governed primarily by the *Environmental Protection Act* (EPA), the *Environmental Assessment Act* (EAA), and the *Waste Diversion Act, 2002* (WDA).

Under the WDA, the provincial government has established an arm’s-length organization, governed by a board of directors, called Waste Diversion Ontario (WDO). The key responsibility of WDO is to develop, implement and operate diversion programs for certain wastes, as designated by the Minister of the Environment, and to monitor the effectiveness and efficiency of those programs. It does this in conjunction with an Industry Funding Organization (IFO) consisting of industry “stewards”—brand owners and first importers of products that generate the waste. At the time of our 2010 audit, three IFOs had also been established: Stewardship Ontario, for blue box waste and municipal hazardous or special waste; Ontario Electronic Stewardship, for waste electrical and electronic equipment; and Ontario Tire Stewardship, for used tires.

In 2004, the government set a goal of diverting 60% of Ontario’s waste from being disposed in

landfills by the end of 2008. At the time of our 2010 audit, the combined diversion rate of waste generated by the residential and IC&I sectors was about 24%. This diversion rate ranked Ontario as sixth among the provinces. Waste diversion in the residential sector, at about 40%, had increased fairly substantially since 2002, but this increase had been offset by a drop in the IC&I sector's diversion rate.

We noted that many of the issues that the government identified in 2004 as keys to achieving 60% waste diversion by the end of 2008 had yet to be successfully addressed. Our specific observations were as follows:

- Municipalities (generally responsible for managing residential waste) and households were making progress in diverting waste away from landfills. However, although their overall diversion rate for residential waste was about 40%, we found that individual municipalities' diversion rates reported to us varied significantly, from about 20% to more than 60%. This was mainly due to differences in the frequency and quantity of disposable waste collection, differences in the blue box recyclable materials that were collected and the fact that only some municipalities had implemented organic-waste composting programs. Other differences in municipalities' waste management practices included the following:
 - *Whether a municipality can market its blue box and organic recyclable waste.* Municipalities compete with each other and with the private sector for markets for recyclable waste. The larger municipalities, which can generate significant volumes, are more successful at securing markets than the smaller municipalities and therefore can encourage greater recycling.
 - *Cost.* On average, municipalities reported that the cost of diverting a tonne of blue box recyclable materials was about 40% higher than the cost of disposing of a tonne of waste in a landfill. More than half of the municipalities that responded to our survey indicated that the funding they received under the cost-sharing formula from industry "stewards" to offset some of the costs they incurred for running the blue box program was not sufficient.
- *Landfill capacity that is available to a municipality.* When waste is collected less often and bag limits are imposed, residents typically divert more waste. For example, one municipality indicated that by collecting recyclable materials weekly and disposable waste every two weeks while imposing a bag limit, it was able to increase its diversion rate by about 20%. But the responses to our survey indicated that municipalities that have sufficient landfill capacity are less likely to limit the frequency of waste collection and impose a bag limit on residents.
- *Residents' preferences.* Municipal councils are well aware that their constituents want a higher level of waste pickup service and no bag limits regardless of the impact on waste diversion.
- The IC&I sector generated approximately 60% of the waste in Ontario, but managed to divert only about 12% of its waste. Regulations under the *Environmental Protection Act* require large generators to conduct a Waste Audit, prepare a Waste Reduction Work Plan, and implement programs to source-separate waste for reuse or recycling. However, the Ministry had little assurance that the regulations were being complied with for the following reasons:
 - The Ministry did not have adequate information on either the number of businesses or organizations to which the regulation applied or which segments of the IC&I sector generated the largest amounts of waste so that it might target them for inspection.
 - In half of the inspection files we reviewed, there was no evidence that the ministry inspector had reviewed either the Waste Audit or the Waste Reduction Work Plan.

- The inspections did not assess the extent to which the IC&I-sector businesses were separating recyclable waste or whether the waste that had been source-separated was actually being processed for recycling.
- Organic waste generated by both the residential and IC&I sectors represented almost one-third of the total waste generated in Ontario, but there was no province-wide organic waste diversion program or target, despite the Ministry's having considered establishing a program as early as 2002.
- One in five municipalities that responded to our survey felt that they had insufficient landfill disposal capacity for their residential waste. As well, the existing capacity was expected to be filled more quickly once export of residential waste to Michigan largely ended after 2010 and an additional 1 million tonnes of this waste previously shipped to that state began being deposited in Ontario landfills annually. Opening new landfills within municipalities is not always a viable option, both because they are costly and because residents do not support new landfills.
- The Ministry inspected landfills and non-hazardous waste management sites, facilities and systems against the conditions of their certificates of approval. But we noted that many of these certificates did not reflect changes in standards. Also, in our review of inspection files, we found that numerous examples of non-compliance with the certificates' conditions had been noted, but many of these were not being followed up on a timely basis to ensure that the required changes were made.

We made a number of recommendations for improvement and received commitments from the Ministry that it would take action to address our concerns.

STANDING COMMITTEE ON PUBLIC ACCOUNTS

The Standing Committee on Public Accounts held a hearing on this audit in February 2011. In May 2011, the Committee tabled a report in the Legislature resulting from this hearing. The report contained nine recommendations, requesting that the Ministry report back to the Committee with respect to the following:

- when the Ministry estimates it will reach its goal of 60% diversion of Ontario's waste from landfills and whether any additional tools are required for this;
- the Ministry's strategy for increasing the rate of waste diversion in the IC&I sector, including a diversion target and timeline for the sector, ways that the Ministry will motivate businesses and organizations that are not regulated under the *Environmental Protection Act* to improve their diversion rates, and how the Ministry will monitor the businesses and organizations;
- the Ministry's plans for obtaining adequate information on the number of businesses and organizations to which the waste diversion regulations apply and on which of these are the largest waste generators;
- the Ministry's 2011 protocols for field inspectors, including whether inspections are risk-based and target the largest waste generators, how the Ministry tracks whether businesses and organizations have implemented their Waste Audits and Waste Reduction Work Plans, and how the Ministry determines whether businesses and organizations are source-separating waste and whether the source-separated waste is being recycled;
- how the Ministry's new guidelines will increase the diversion of organic waste;
- the Ministry's public consultations on and review of the *Waste Diversion Act, 2002*;
- how the Ministry will improve its oversight of Waste Diversion Ontario (WDO) and whether

it will consider having a senior ministry representative sit on WDO's board of directors; and

- the average time the Ministry takes to approve a certificate-of-approval application under its new approvals system and whether it has a standard for how long it takes to review an application.

The Committee also requested that WDO report back on how it monitors whether its diversion programs are meeting targets, what steps it takes to address setbacks in meeting targets, and how it assesses the waste-diversion information it receives from municipalities and Industry Funding Organizations.

The Ministry formally responded to the Committee in October 2012. A number of issues raised by the Committee were similar to our observations. Where the Committee's recommendations were similar to ours, this follow-up includes the recent actions reported by the Ministry to address the concerns raised by both the Committee and our 2010 audit.

Status of Action Taken on Recommendations

According to information provided to us by the Ministry, some progress has been made in addressing many of the recommendations we made in our *2010 Annual Report*. For example, governance at Waste Diversion Ontario has been strengthened and Ontario's compost framework has been updated to encourage more composting. However, several recommendations will require more time to be addressed fully. In particular, our concerns with regard to diversion of waste in the IC&I sector have yet to be substantially addressed. In this regard, we note that according to Statistics Canada, the waste diversion rate in the IC&I sector in 2008 (the latest year for which information was available) was 12.7%, up only slightly from 12% in 2006.

This and recent ministry inspection results suggest that much remains to be done to increase the waste diversion rate in the IC&I sector. The status of actions taken on each of our recommendations at the time of our follow-up was as follows.

WASTE DIVERSION

Residential-sector Waste

Recommendation 1

To further increase diversion of waste in the residential sector, and as part of its current review of the Waste Diversion Act, 2002, the Ministry of the Environment should work with municipalities, industry "stewards," and other stakeholders to:

- *increase the availability of reliable and sustainable markets for recyclable and organic waste;*
- *increase capacity within the province to process recyclable materials and organic waste; and*
- *review the current funding formula for the blue box program to ensure that it achieves its objective of municipalities and "stewards" equally sharing costs.*

Status

At the time of our follow-up, the Ministry indicated that in 2011, Stewardship Ontario had undertaken a market development program that identified new opportunities to improve the recycling chain and extract more value from recyclable materials in Ontario. Specifically, the Ministry informed us of the following:

- In spring 2011, Stewardship Ontario issued a Request for Expressions of Interest (RFEI) aimed at identifying new companies with innovative approaches to recycling. More than 60 submissions were received from companies interested in forming commercial relationships with Stewardship Ontario. As part of this initiative, Stewardship Ontario invested \$500,000 in a company with a view toward commercializing new plastics recycling technology and, according to the Ministry,

was in active discussions with more than 15 other companies.

- Stewardship Ontario provided a loan to an existing plastics recycling company to enable it to relocate and further expand its facility.
- Stewardship Ontario initiated a review of recycling of fibre packaging and the potential to expand collection and recycling of these materials.

As prescribed in the WDA, the blue box funding formula requires industry to fund 50% of the net cost of the municipal blue box program. As noted earlier, more than half of the municipalities that responded to the survey we conducted as part of our 2010 audit indicated that the funding they received under the cost-sharing formula to offset some of the cost they incurred for running the blue box program was not sufficient. At the time of our follow-up, the Ministry indicated to us that any changes to the funding allocation model are proposed through WDO's Municipal Industry Program Committee, on which municipalities and Stewardship Ontario are equally represented, and that a review of the funding formula was under way.

Industrial, Commercial, and Institutional (IC&I) Sector Waste

Recommendation 2

In order to increase waste diversion in the IC&I sector, the Ministry of the Environment should:

- *gather information on the amount and type of waste generated by small and medium-sized businesses and organizations that are not regulated under the Environmental Protection Act (EPA) and consider what actions could be taken to reduce the amount of waste that is currently going to landfills;*
- *require those large entities that are regulated under the EPA to publicly report their waste diversion rates. The Ministry should then, as part of its inspection work, assess the accuracy of the rates reported; and*

- *conduct research into successful practices used in other provinces and European countries to divert IC&I-sector waste from landfills. In assessing which practices might be transferable to Ontario, the Ministry will need to balance the environmental benefits with the economic challenges currently being faced by the business community.*

Status

At the time of our follow-up, the Ministry indicated that it was continuing to consider ways of obtaining appropriate information necessary to support diversion policies and programs in this sector, and conducting further jurisdictional research as part of its ongoing policy development work.

The Ministry had also supported the October 2011 launch of the 3RCertified Waste Diversion Certification Program by the Recycling Council of Ontario (RCO), a not-for-profit organization involved in policy, education and work surrounding waste generation and diversion. This program gives businesses and institutions the opportunity to become accredited with the 3RCertified standard by demonstrating conformance to a set of criteria, verified by an onsite evaluation by the RCO. Compliance with the Ministry's regulations for the management of non-hazardous waste is also one of the requirements to achieve base certification under the program.

At the time our report was being finalized, the RCO announced that four organizations in the province had achieved 3RCertification.

Compliance in the IC&I Sector, Scope of Inspections in the IC&I Sector and Enforcement of Other EPA Regulations

Recommendation 3

To improve waste diversion in the IC&I sector, the Ministry of the Environment should:

- *gather data on the number of businesses to which the waste diversion regulations apply and on which of these are the largest waste generators*

to assist both its inspection activities and policy decisions, and ensure that businesses are aware of the requirements of the regulations;

- *increase the scope of its inspections to include an assessment of the extent to which businesses have implemented their Waste Audits and Waste Reduction Work Plans and whether there has been any increase in the amount of waste diverted; and*
- *verify during inspections and document whether waste management companies are operating under a valid certificate of approval.*

If the Ministry plans to continue not to enforce its regulation that requires large manufacturers, packagers, and importers to implement a packaging reduction plan and its regulation that requires all carbonated soft drinks to be sold in refillable containers, it should consider revoking these regulations.

Status

At the time of our follow-up, the Ministry indicated that, as an overall measure aimed at increasing waste diversion, it was continuing to work with all its partners, including businesses and organizations and the Canadian Council of Ministers of the Environment, to reduce the amount of packaging created.

In our *2010 Annual Report*, we noted that the Ministry did not have adequate information on the number of businesses and organizations to which the EPA's waste diversion regulations applied. This observation prompted us to recommend to the Ministry to gather such information and to ensure that businesses and organizations are aware of the regulatory requirements. At the time of our follow-up the Ministry provided us with the sources of information it uses to identify businesses and organizations covered by the EPA regulations. The Ministry indicated that, based on these sources, it now had an estimate of the number of facilities to which the waste diversion regulations apply. The Ministry also informed us that over the last two years it had begun working with 14 businesses (with a combined total of more than 550 retail locations) to develop company-wide waste diversion programs.

The Ministry also indicated that, in the last two years, it had conducted outreach efforts tailored to individual sub-sectors. For instance, the Ministry had worked with 11 school boards and with the Ontario Hospital Association to customize Waste Audit and Waste Reduction Work Plan guides to help the multiple facilities in each sub-sector meet their regulatory requirements.

In the 2011/12 fiscal year, the Ministry conducted a "re-sweep" of a select number of previously inspected facilities to assess the impact of inspection efforts on, for example, the extent to which the facilities were preparing Waste Audits and Waste Reduction Plans and source-separating required wastes. Out of 104 selected sites, 17 had changed operations or ownership or had closed. Of the remaining 87, only 21 passed the re-inspection. The Ministry informed us that as of August 2012, 65 of the 66 sites that had failed the re-inspection had been brought into compliance. There was an Order issued against the remaining site with a compliance date of August 31, 2012. The Ministry also indicated that based on the results of the re-inspections, recommendations for program improvements would be made.

A number of the inspection files of waste management companies that we reviewed as part of our 2010 audit did not contain evidence that the inspector had checked that the company was operating under a valid Ministry-issued certificate of approval. The Ministry informed us that changes implemented to its inspection tracking and reporting system now ensure that whether waste management companies are operating under a valid certificate of approval is consistently documented within the system.

Lastly, the Ministry indicated to us that, as part of its initiative to reduce unnecessary or obsolete regulatory requirements, it was still considering whether the regulation that requires large manufacturers, packagers and importers to implement a packaging reduction plan and the regulation that requires all carbonated soft drinks to be sold in refillable containers should be revoked.

Organic Waste

Recommendation 4

To increase overall waste diversion in Ontario, the Ministry of the Environment should work with municipalities, businesses and organizations, and private-sector waste management companies to phase in over time a province-wide organic waste diversion program for both the residential and IC&I sectors. As part of implementing the program, the Ministry, in conjunction with these stakeholders, will need to ensure that there is sufficient capacity to process the additional organic waste and that a sustainable market exists for the processed waste.

Status

The Ministry indicated that it had completed consultations with the public and industry on a proposed update to Ontario's compost framework, including appropriate standards for compost, environmental protection measures and other tools to support a sustainable market and processing capacity for organic waste. At the time of our follow-up, the Ministry had released an update to the framework that included changes to compost quality categories and standards, and best practices for the siting, design, operation and maintenance of composting facilities. These changes were to take effect January 1, 2013.

Waste Diversion Ontario

Recommendation 5

To enhance accountability for the achievement of diversion targets for wastes specifically designated under the Waste Diversion Act, 2002, and to ensure that the reporting of the diversion results against the targets to the Minister is complete and reasonably accurate, the Ministry of the Environment should:

- review the operating agreement to ensure that it contains sufficient accountability provisions to require Waste Diversion Ontario to provide an action plan when waste diversion targets are not being met;

- ensure that the waste diversion information submitted by municipalities and the Industry Funding Organizations (IFOs) is objectively assessed, including the impact on this information of unregistered collectors that do not submit waste diversion data; and
- reconsider its policy of allowing collectors of designated wastes the option of whether or not to register with an IFO.

Where retailers are charging a specific "eco fee," the Ministry should also reconsider whether they should be required to disclose the amount of the fee on the customer receipt.

Status

On October 25, 2010, after the completion of our 2010 audit, the Minister of the Environment advised WDO of the need to amend its board structure so that it:

- reflected the knowledge and expertise required to oversee waste diversion programs under the *Waste Diversion Act, 2002* (WDA);
- avoided real, potential or apparent conflicts of interest between WDO board members and the programs they oversee; and
- included at least one board member selected from a consumer-focused organization to ensure that a consumer perspective would be brought to the WDO board.

In a letter dated February 9, 2012, the Minister stated that he had accepted in principle the proposal submitted by WDO's board on May 27, 2011, with regard to a new governance structure. WDO transitioned to the new board in April 2012.

In the February 9 letter, the Minister also directed WDO to undertake a detailed review of all diversion program budgets and to regularly monitor expenditures to ensure that there are realistic and cost-effective plans to achieve IFO performance targets. In this regard, WDO is required to report quarterly to the Ministry. The Minister also required WDO to implement an effective monitoring program to review IFOs' annual program performance and the achievement of plan targets, to promptly

take corrective action on performance issues and to report quarterly on these matters to the Ministry. At the time of our follow-up, the Ministry informed us that, in addition to the existing requirement for audited financial statements, WDO had begun to implement independent third-party verification of environmental performance and standardized reporting for all waste diversion programs. However, the Ministry also informed us that since the WDA doesn't compel individuals or companies who collect waste to share information on their activities, the third-party verification is limited to those companies that participate in the diversion programs. The audits of the programs for blue box and municipal hazardous or special waste and for waste electrical and electronic equipment had been completed and were being reviewed by WDO before being made public. The audit of the used-tires program had been deferred by WDO pending an evaluation of the performance audits undertaken for the other waste diversion programs.

At the time of our follow-up, no action had been taken on our recommendation to the Ministry to reconsider its practice of allowing collectors of designated wastes the option of whether or not to register with an IFO. The Ministry informed us that it would consider this recommendation as it works toward making the province's waste diversion framework more effective.

The Ministry also informed us at the time of our follow-up that, to investigate whether retailers are charging incorrect or misleading eco fees, environmental compliance officers have been conducting site visits since November 2010 as a follow-up to consumer hotline calls and undertaking mystery shopping activities. The Ministry indicated that it had conducted 1,303 mystery shopping activities as of early January 2012 and that 252 (19%) of the sites involved had been referred to the Ministry's Investigation and Enforcement Branch to assess whether there was evidence of a violation that needed to be referred to the Ministry of Consumer Services for prosecution under the *Consumer Protection Act, 2002*.

WASTE DISPOSAL

Recommendation 6

To increase Ontario's capacity to dispose waste, the Ministry of the Environment should take a leadership role in working with municipalities and other stakeholders to research and adopt alternative waste disposal technologies such as the thermal treatment facilities that are in use in other jurisdictions.

Status

At the time of our follow-up, the Ministry indicated that the province's priority was still to divert as much waste as possible from disposal through the 3Rs (reduce, reuse and recycle). Generating energy from waste is an option that can be considered to help manage the residual waste that remains after diversion. In this regard, the Ministry informed us that regulations that came into effect in 2007 had streamlined the approvals process for pilot and demonstration energy-from-waste facilities. The Ministry indicated that it had approved under these regulations a number of pilot and demonstration facilities incorporating energy-from-waste technologies. For example, in July 2011, a certificate of approval was issued for the York and Durham Regions' energy-from-waste facility. This facility is to have the capacity to receive 140,000 tonnes of residual waste annually and the ability to generate up to 20 megawatts of energy. Also, an approval was issued in October 2011 for the permanent operation of a demonstration energy-from-waste facility in Ottawa.

Monitoring of Waste Disposal Sites and Waste Management Systems

Certificates of Approval

Recommendation 7

To better facilitate compliance with certificates of approval for non-hazardous waste management sites, facilities, and systems, the Ministry of the Environment should:

- *review its existing certificates, especially for the larger or more environmentally risky*

operations, to ensure that they reflect current standards and operations and revise those that need updating;

- *in cases where numerous amendments have been issued to an existing certificate, consolidate the amendments into one, new certificate;*
- *develop a standard for the time it should take to review certificate-of-approval applications for non-hazardous waste operations and review the outdated application fee it charges to ensure that it reflects the cost of processing the applications; and*
- *collect, follow up on, and review the re-valuation of the required financial assurance, especially for the larger operators, on a timely basis.*

Status

At the time of our follow-up, the Ministry indicated that it had completed a review of the Environmental Compliance Approvals (ECAs, formerly certificates of approval) for 32 larger landfill sites that together received more than 85% of the waste destined for landfill in Ontario. The review, according to the Ministry, concluded that most approvals were current and that only one site required a minor update, which was later issued.

Also, the Ministry informed us, as it did in 2010, that it had revised the practice of amending ECAs. A single ECA is now to be issued and is to include the original as well as any subsequent notices of amendment.

The Ministry also informed us that its Environmental Approvals Access and Service Integration Branch had begun providing monthly reports to regional directors on outstanding financial assurance matters to ensure that field staff were following up with ECA holders.

Over the next two years, the Ministry indicated that it planned to continue modernizing the approvals program in ways that would address our other recommendations aimed at developing a standard for the time it should take to review ECA applications for non-hazardous waste operations

and reviewing the application fee to ensure that it reflects the cost of processing the applications.

Inspections

Recommendation 8

To improve its monitoring of non-hazardous waste management operations for compliance with legislative requirements, the Ministry of the Environment should:

- *impose time frames for corrective action where inspections detect cases of non-compliance, and follow up to ensure that the required remedial action has been taken within the required timelines; and*
- *ensure that time-sensitive materials such as annual reports from non-hazardous waste management operations are submitted and reviewed on a timely basis.*

Status

At the time of our follow-up, the Ministry had implemented updated monitoring procedures, including a time frame for finalizing actions of 45 to 60 days from sign-off of inspections that detect cases of non-compliance. The updated procedures were communicated to staff in February 2011. Training sessions for environmental officers on the updated monitoring procedures were held during spring 2011. The Ministry indicated that the training also covered the Ministry's data system functionalities that track and provide automated alerts on the status of abatement actions. According to the Ministry, through the combination of training and better tracking of the status of abatement actions, it had improved the documentation and follow-up of remedial actions where inspections detect non-compliance.

The Ministry had also developed a risk-based approach to address the submission and review of annual reports from waste disposal sites. Environmental officers were trained in March and April 2011 on the new procedures for annual report assessment. According to the Ministry, the training provided to environmental officers, together with guidance material developed for the stakeholder

community to improve the quality of submissions, had led to a more effective review process.

MEASURING PROGRESS IN WASTE DIVERSION

Recommendation 9

The Ministry of the Environment should assess the benefits of adopting an alternative performance indicator, such as the per capita waste disposal rate, because it is more straightforward to calculate and is likely a more accurate and reliable measure of waste diversion in Ontario that will facilitate benchmarking progress relative to other jurisdictions.

Status

At the time of our follow-up, the Ministry indicated that it was using a variety of waste diversion data sources to assist in evaluating waste diversion progress, including data from Waste Diversion Ontario, Statistics Canada, municipalities and waste management companies, as well as information from the Ministry of Finance on the Ontario Deposit Return Program. The Ministry informed us that it was continuing to assess the benefits of a range of performance indicators related to waste diversion, including the use of a per capita waste disposal rate.