

"Another proposed regulation should take effect in January 2006 that introduces a \$10 per tonne tax on wastes sent to landfill."



Quebec's Slow March Forward

In 2000 the Quebec government obligated regional municipalities to undertake waste management plans. The objective was to attain, by 2008, a 60 per cent waste diversion rate, including putrescible organic wastes (food and leaf-and-yard waste) of which only seven per cent are currently composted.

While most of the plans have been written, the means of achieving them are generally not in place. One major plan from the Montreal Metropolitan Community (MMC) — an amalgam of 63 municipalities that represents 45 per cent of Quebec's population — was completed in 2004 but isn't yet in effect. According to this plan, collection of source-separated organics will take place by 2007 (except for multi-family dwellings), but the MMC's financial demands must be accepted by the government. This may be problematic as one demand is for 100 per cent funding of recyclables collection (currently paid by municipalities) by companies whose materials are recycled via curbside programs. The government recently adopted a regulation that requires companies to pay only 50 per cent of those costs, effective in 2005.

Most regional municipalities plan to implement three-stream col-

lection systems before 2008, while more rural areas will rely on home composting and "grasscycling." Many municipalities recognize the need for new regional composting facilities to convert the source-separated organics collected in three-stream systems into high quality compost. Given the current low composting rate, significant infrastructure needs to be built.

Françoise Forcier is a project manager with SOLINOV inc. a Quebec consulting firm that specializes in composting and organic residue management.

"There is definitely a challenge here," she states, "because of the delays needed to implement new facilities to achieve the objectives in 2008 and the changes and involvement required at the municipal level." She says municipalities are still waiting for the money that will come from the newly adopted recycling funding legislation. In Québec, composting is mainly done by the private sector and, with the 2008 deadline looming, much remains to be done.

Another proposed regulation that may help in this regard is proposed that should take effect in January 2006. It introduces a \$10 per

Overview of Municipalities Composting Organic Waste in Quebec¹

Municipality	Households Served	Method of Collection	Method of Composting	Recovery Rate of Organic Waste (%)	Overall Diversion Rate (%)
Ville de Laval (Champfleury 2002)	2,740	Source Separated Collection in a Cart	Outdoor Windrow	59	38
Ville de Laval (Chomeday 2002-2003)	944	Source Separated Collection in a Cart	Outdoor Windrow	51	32
Les Îles-de-la Madeleine	4,750	Source Separated	Outdoor Windrow	—	—
Ville de Sherbrooke (1 area)	857	Source Separated	Outdoor Windrow	75	52
Ville de Victoriaville	16,974	Source Separated Collection in a Cart	Outdoor Windrow	37	53
Saint-Donat (MRC Matawinie)	3,944	Source Separated Collection in a Cart	Outdoor Windrow	45	48
Rawdon (MRC Matawinie)	4,467	Source Separated Collection in a Cart	Outdoor Windrow	64	49
Lachute (MRC Matawinie)	5,313	Source Separated Collection in a Cart	Outdoor Windrow	44	31
Saint-Placide (MRC Argenteuil)	680	Source Separated Collection in a Cart	Outdoor Windrow	41	24
Sorel-Tracey	17,024	Mixed Waste Collection in a Bag	In-Vessel	100	66
57,693					

COMPOSTING MATTERS

Since 1993, Ferti-Val of Bromptonville has composted a wide array of organic waste.

tonne tax on wastes sent to landfill. This money will be directed back to municipalities to help them implement their waste management plans and to compensate communities affected by landfill sites.

Diversion details

At present, about 865,000 tonnes of wastes are composted at 38 composting facilities in Quebec each year. Almost 60 per cent of these wastes are related to the forestry sector, including wood residuals and paper-mill biosolids. This is followed by manures. Approximately 9.7 per cent consists of putrescible organic wastes from the municipal sector.



A multi-stakeholder committee (Filière sur les matières résiduelles compostables) of Recyc-Québec is working to help municipalities and the IC&I sector meet the government's organic waste diversion target. In September 2004, Ms. Forcier — a co-chair of the committee — prepared and released (in collaboration with Recyc-Québec) a strategic plan.

The plan notes that in 2002, 1.27 million tonnes of putrescible organic wastes were produced from the municipal sector in Quebec. Of this, 84,000 tonnes (or 7 per cent) is composted. An additional 678,000 tonnes needs to be collected for composting annually.

Most of what is collected and composted is leaf-and-yard waste (63,000 tonnes in 2002), while approximately 10,000 tonnes is source-separated organics ("SSO," i.e., food and yard waste) from three-stream collection in carts. Some additional municipal solid waste is also composted in Comporec's Sorel-Tracy facility.

Table 1 depicts municipalities currently composting putrescible organic wastes in Quebec. At present it's estimated that approximately 51,000 households have access to organic waste collection and composting. Most programs involve SSO composted outdoors in open windrows.

Composting programs and technologies

The largest three-stream collection programs to divert putrescible organic waste are in Victoriaville (between Quebec City and Montreal), a municipality with close to 10,000 households.

An automated three-stream cart based collection is undertaken by Recuperation Gaudreau Inc. (Gaudreau), a private sector recycling company. Gaudreau also services two other communities with close to 12,000 households.


Gaudreau owns a landfill site, windrow composting facility, materials recovery facility (MRF) and a compost and horticultural products distribution center in Victoriaville. The compost facility has an annual capacity of 20,000 tonnes. The site receives various organic wastes from municipal and IC&I sources. (*See photo.*)

Groupe Comporec Inc. of Tracy has owned and operated a fully-enclosed composting facility for over 10 years. The facility serves a population of about 50,000 and presently handles about 21,000 tonnes of residential waste. It receives organic wastes from Sorel-Tracy; mixed wastes are received in an enclosed building and directed through a bioreactor for initial composting. After this, the material is refined (i.e., through screens, magnets, manual sorting, etc.) to remove non-compostable items. The compostable material is taken to a maturation building for further composting and processing in windrows. The final material is screened and marketed.

Since 1993, Ferti-Val of Bromptonville has composted a wide array of organic waste including municipal and IC&I wastes, manures, forestry waste and other industrial wastes. The company composts almost 100,000 tonnes of wastes annually. In 2003 it sold almost 40,000 cubic metres of compost and compost-containing products.

Late in 2004, Ferti-Val announced the development of a new composting system

called "System CIS 100." The system relies on an outdoor aerated static pile as its base technology. Wastes are received indoors and, after initial preparation, are directed by fixed conveyor to a radial and telescopic stacking conveyor. This stacking conveyor facilitates the construction of a composting bed. A composting bed has an approximate dimension that is 30m long by 30m wide and 4.5m high, with an approximate volume of 3,000 m³. The stack-

ing conveyor can be moved to build a number of composting beds. The system can be built to accommodate up to 100,000 tonnes of organic waste per year. (See photo.) 

Paul van der Werf is president of composting and waste management consultancy 2cg based in London, Ontario. To contact Paul, visit www.2cg.ca

