

Brief presented to the Transport and Environment Commission
of the National Assembly of Quebec studying ecological waste
management issues

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I. Introduction

The City of Côte Saint-Luc welcomes the opportunity to discuss its organic waste collection program with members of the Transport and Environment Commission of the National Assembly of Quebec.

This brief will provide background information about how the City of Côte Saint-Luc implemented its organic waste collection program, and provide recommendations for the Government of Quebec. We hope that our waste diversion program can become a model for cities throughout Quebec.

About Côte Saint-Luc

The City of Côte Saint-Luc is the third largest municipality on the island of Montreal. Its sports and recreation programs, 28 parks, and modern library make it an attractive residential community in the west end.

Côte Saint-Luc has been a leader in health and safety issues, becoming the first municipality in Canada to require bicycle helmets and one of the first municipalities in Quebec to ban pesticides. It is one of the only municipalities in Quebec to have a volunteer first responder service, which was formed almost 30 years ago. In 2006, it became the first city in the province to introduce a Citizens on Patrol program. Côte Saint-Luc is a bilingual municipality with a diverse, predominantly English-speaking population and has been a leader on human rights issues.

Here are some facts and figures to help understand the population of Côte Saint-Luc:

- Population: 31,395
- Number of households: 13,535
- Median age: 49
- Registered electors: 22,000
- City area: 6.95 km²
- Percentage of rented dwellings: 50.6

- Percentage of owned dwellings: 49.4

Côte Saint-Luc and the environment (2004)

- Côte Saint-Luc recycling rate: 27%
- Montreal recycling rate: 34%
- Côte Saint-Luc organic waste recycling rate: 16%
- Montreal organic waste recycling rate: 10%

Based on the data above from 2004, the City of Côte Saint-Luc is now focusing on improving our environmental performance by prioritizing waste diversion programs, including a new blue bin recycling program for apartments and condominiums and the Côte Saint-Luc organic waste collection program for single-family homes and duplexes.

In September 2007, Côte Saint-Luc became the only city on the island of Montreal and one of the only cities in Quebec with a three-stream collection program.

We hope to be one of the first cities in Quebec to achieve the goal of diverting 60 percent of our waste, set out in *La politique québécoise de gestion des matières résiduelles 1998-2008*.

II. Early planning

To help prepare a plan for implementing organic waste collection, the City of Côte Saint-Luc studied the programs of cities in Ontario, Quebec, the Atlantic provinces, the United States, Europe and Australia. On August 28, 2006, the Côte Saint-Luc city council unanimously approved in principle a three-phase plan for organic waste collection.

- Phase 1: Launch an organic waste collection pilot project with a few hundred homes in one or two districts
- Phase 2: Expand organic waste collection to all single-family homes and duplexes
- Phase 3: Expand organic waste collection to all multi-family dwellings

Key questions

- Who will collect the organic waste?
- On what day will the collection take place?
- Which staff will be responsible for the program?
- When should we launch the pilot project?
- What types of bins should we use?
- What colour should the bin be?
- Where do we send the organic waste?
- What items will we accept?
- What types of bags will we accept?
- How many homes and which homes will participate in the pilot project?
- How will we publicize the program to residents?
- What instructional material will we use?
- How much will the program cost?

Collection

The first logistical question was how would the city collect the organic waste from its residents and transport it to the treatment site, which was different from the land-fill site.

Until the end of 2006, Côte Saint-Luc garbage was collected by a private contractor. To ask the contractor to dedicate a truck to collect only organic waste and bring it to a special site would have been difficult, though not impossible. Around this time, Côte Saint-Luc and many of its neighbours went to tender for the waste collection and transport for a new contract, which was scheduled to begin in January 2007. The lowest price was almost \$1 million for 2007, which was more than double the approximate rate of \$450,000 in 2006.

Côte Saint-Luc did a return-on-investment analysis and determined it was more cost effective to buy garbage trucks and hire workers to collect and transport the waste ourselves. Part of the savings generated by this plan would be used to fund expanding recycling to all multi-family dwellings and to fund the organic waste collection pilot project.

Collection day

Until the pilot project started, Côte Saint-Luc collected garbage twice a week and recycling once a week. The city decided to substitute one of the two garbage days with an organic waste collection day for homes in the organic waste collection pilot project group.

Therefore these residents still had three collections every week—only each was specialized. The city collected blue bin recycling and brown bin organic waste on Tuesdays. It collected regular garbage on Fridays.

Staffing

Côte Saint-Luc hired an environmental waste technician to coordinate the expansion of recycling to all apartments and condominiums and for implementing the organic waste collection pilot project (see **Annex A** for the job description).

Timeline

The city decided to start the organic waste collection pilot project in late summer / early fall 2007 to give it sufficient time to prepare. Also, we didn't want to start the pilot project in the middle of the summer for fear that residents would complain about the

potential smells produced and not participate. The brown bin kits were distributed to homes during the week of September 17, 2007 and the first collection was held on Tuesday, September 25, 2007.

III. Implementation

Bins

After reviewing different sizes of bins, Côte Saint-Luc decided to use a 7.5L kitchen collector and a 46.5L brown bin. The kitchen collector could be placed on or underneath the kitchen counter. The brown bin could be placed outside or in the garage—wherever residents normally keep their regular garbage. There is a space on the brown bin for residents to write their address. The 46.5L brown bin comes with a metal latch, which is virtually impossible for wild animals to open.

Since Côte Saint-Luc has the highest percentage of senior citizens in Quebec and most residents have relatively small garages without space for a large bin, the (smaller) 46.5L bin was the logical default size and the same size used in the Greater Toronto Area.

The city also acquired 100 larger brown bins (120L and 240L) for residents that find the 46.5L brown bin is too small. Residents can bring their brown bin to the public works office during operating hours and exchange it for a larger bin. Although Côte Saint-Luc garbage trucks do not have a mechanical arm to easily grab and dump these larger brown bins, our crews can manually attach the bin to a winch for dumping into the truck.

Bin colour

Most other provinces use green bins for organic waste collection. Originally Côte Saint-Luc was going to use green bins to be consistent with neighbouring provinces. However, we changed our mind and opted for brown bins for two reasons: (1) Our neighbouring municipalities use green for their recycling boxes and (2) The Quebec government's recycling body, Recyc-Quebec, decided it would recommend brown bins for municipalities in Quebec.

Waste treatment

Our original choice for the treatment of organic waste was the St. Michel Environmental Complex (Miron Quarry) on the island of Montreal. However, that facility takes only compostable leaves during seasonal collection.

We chose as the treatment site operator GSI Environment, which treats the organic waste for many cities in Ontario and the small organic waste pilot project in the City of Pointe-

Claire. Our organic waste is brought to a special site in St-Basile-Le-Grand where it is transformed into compost.

Compostable items

After consulting with GSI Environment, we decided to accept virtually all organic matter, with some exceptions such as diapers because they contain some organic material and some plastic (an information card of materials accepted is in **Annex B**).

The following is a list of what organic material is acceptable in the Côte Saint-Luc organic waste collection program.

- Fruit and vegetables
- Pasta, bread and grains
- Meat and fish
- Dairy and egg shells
- Coffee grounds, filters and tea bags
- Cookies, cake and candy
- Soiled paper towels and tissues
- Soiled or greasy paper food packaging
- Houseplants, including soil
- Pet waste, including kitty litter and cage bedding
- Grass clippings
- Weeds and dead plants
- Fallen leaves
- Bark, wood chips and sawdust
- Small branches (less than 30 cm long)

Bags

Côte Saint-Luc reviewed four options for the kinds of bags participants could use to store their organic waste:

1. Line bin in newspaper
2. Use paper bags
3. Use (biodegradable) compostable bags
4. Use grocery store plastic bags

We decided to accept the first three options but not grocery store plastic bags. Though they are readily available, grocery bags take hundreds of years to decompose, therefore they would have to be removed from the organic waste at the composting facility, which would increase costs.

If residents have too much organic waste, they can use paper or compostable bags, which they can put beside their brown bin on collection day.

Côte Saint-Luc is currently paying \$59 per tonne for treatment of the organic waste. If we accepted plastic bags, then the estimated price would increase to between \$100 to \$130 per tonne. The options that Côte Saint-Luc has chosen—newspaper, paper bags and compostable bags—all decompose within a few months under composting conditions.

Every home participating in the organic waste collection pilot project received some sample compostable bags, which are also for sale in local stores and in city hall (list of locations where bags are available is in **Annex C**). The compostable bags are made of corn or potato starch and are 100 percent biodegradable. They must be certified as compostable and have either the US or European certification (details on the certification and companies is also in **Annex C**). At this time, there is no Quebec or Canadian certification.

The biggest obstacle to full compliance in the organic waste collection pilot project is encouraging residents to buy the compostable bags once they run out of sample bags.

Note: We also reviewed many cities in Quebec that don't allow their residents to use any bags at all. We decided to ask residents to wrap their organic waste in a bag or newspaper for hygienic reasons and to reduce possible negative perception of separating organic waste. Also, the trucks Côte Saint-Luc acquired don't have an outlet to drain the leachate liquid that is produced when no bags are used.

Pilot project area

A Côte Saint-Luc garbage truck has enough room to collect garbage from about 500 homes. For this practical reason, we decided to launch the organic waste collection pilot project with 500 homes. The chosen homes in districts 4 and 5 of Côte Saint-Luc all had the same garbage collection days, which facilitated organizing the pilot project (a map of the pilot area in the west part of Côte Saint-Luc is available in Annex D).

Communication

The organic waste collection pilot project plan was originally presented at the Côte Saint-Luc District 4 Advisory Meeting on October 22, 2006, where the response was generally very positive. In order to fully publicize the pilot project, elected official, staff and volunteers visited all the 500 homes to explain the changes.

The environment committee (CSL EcoAction), Green Patrollers hired as summer students, and councillors Allan Levine, Dida Berku and Steven Erdelyi visited homes. The feedback was extremely positive from residents who were generally excited about being part of the pilot project. Many residents were already familiar with organic waste collection from relatives who live in the Greater Toronto Area or from reading articles in the local newspaper (sample media coverage is available in Annex E). An organic waste collection orientation session was held on the evening of Thursday, August 23, 2007.

Each resident received an introductory letter, a laminated instruction card, a pamphlet with frequently asked questions, and an 8 minute DVD video explaining the process (see Annex B). We are also prepared a sticker to go on the lid of the kitchen collector with the key points listed.

Cost

The cost for the brown bin, kitchen collector and DVD video purchased from Nova Envirocom was \$22.66 plus tax per household. The compostable bags distributed with the bins were supplied free of charge as samples by various companies. The other

instructional material was produced at a cost of a few dollars per household. The total cost was about \$25 per household kit (see **Annex F** for the budget).

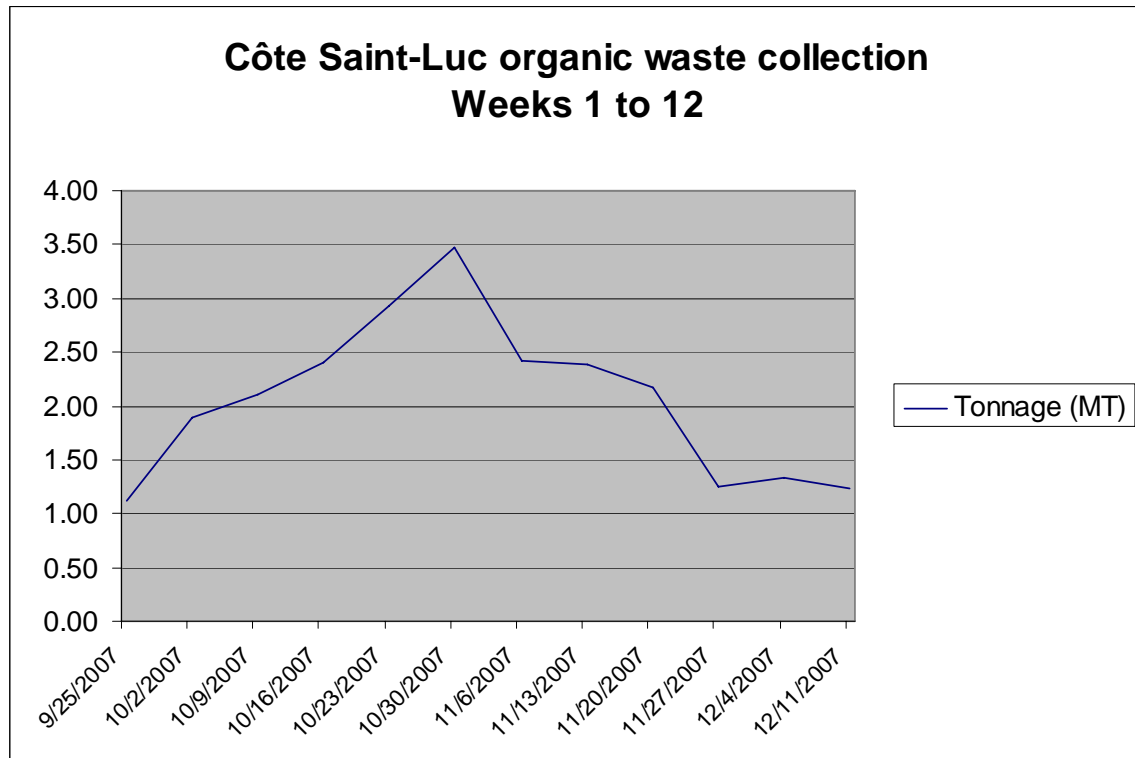
The cost of treatment is \$59 per tonne, which is slightly more than the cost of dumping in landfill, which is \$55 (\$45 plus the \$10 in royalties). There was no clear increase in labour or transport costs as the residual waste of Côte Saint-Luc was already being brought to the south shore of Montreal.

The total estimated cost of the Côte Saint-Luc organic waste collection pilot project for one year with 500 homes is less than \$20,000.

IV. Results

The Côte Saint-Luc organic waste collection pilot project achieved a participation rate of **85 percent** in the four weeks following the launch to 500 homes.

The following charts shows the first 12 weeks of organic waste collection. The spike in tonnage is the result of residents adding leaves to their brown bins.



To determine how much waste residents in the pilot project were diverting away from land-fill, we used the following methodology:

1. The total estimated residual waste produced by 490 homes each week is 8.68 tonnes
2. The estimated percentage of total residual waste that is organic waste is 40 percent
3. Therefore, the estimated organic waste produced by 490 homes each week is 3.47 tonnes

4. The average amount of organic waste collected in 490 brown bins (over 16 weeks) each week is 1.89 tonnes

To determine the diversion rate, we used the following calculation based on the data above:

$$\text{(Organic waste collected in brown bins (1.89 tonnes) / Estimate organic waste (3.47 tonnes) x 100 = 54.53 percent}$$

Therefore, based on the pilot project results so far, we estimate that residents are diverting **54.53 percent** of their organic waste away from landfills.

Media coverage

The organic waste collection pilot has been featured in *La Presse*, *The Gazette*, *TQS*, *CBC News*, *CTV News* and in local papers and radio. Representatives from the City of Côte Saint-Luc have been meeting with councillors and government officials from Montreal, and several reconstituted municipalities on the island of Montreal as well as many representatives of non-governmental organizations who are eager to copy our example.

Feedback from residents

In early 2008, we will be polling participants to get an exact satisfaction rate with the program, but so far the anecdotal feedback has been extremely positive. We have received many phone requests from residents outside the pilot project area who are looking forward to participating in the program. The plan is to implement brown bin organic waste collection in all single-family homes and duplexes in the Côte Saint-Luc in the fall of 2008.

V. Conclusion

The experience of the City of Côte Saint-Luc so far is that organic waste collection is relatively easy to start, less costly than many believe thanks to provincial funding, and popular with residents.

The cost of the brown bin kit including all the instructional materials was relatively low and should be covered by the funds from the royalties for the elimination of waste (*redevances pour l'élimination de matières résiduelles*) allocated by the Quebec government¹.

By introducing curbside organic waste collection, the City of Côte Saint-Luc hopes to become one of the first municipalities in Quebec to reach the goal of diverting 60 percent of its waste. Composting organic waste produces 25 times less harmful greenhouse gases than dumping it in landfill and allows for the waste to be turned into useful compost within a year.

As a suburban community of 31,395, the Côte Saint-Luc organic waste collection program can become a model for other cities on and off the island, large and small. We are ready and able to help other cities implement their program and hope we can be of assistance to the Quebec government as it prepares the *Politique québécoise de gestion des matières résiduelles 2009-2019*.

¹ Unfortunately, the funds from the Quebec government are being held by the island-wide Montreal agglomeration council—which is controlled by the City of Montreal—and Montreal has yet to distribute the more than **\$18 million** in available funds to the other 15 municipalities on the island. Assuming Montreal releases the funds, other innovative municipalities on the island can launch similar programs at relatively little cost to local taxpayers.

VI. Recommendations

1. Cities need to be supplied with a detailed template to facilitate implementation of an organic waste collection program.
2. Money from Quebec government programs needs to be earmarked specifically for environmental initiatives and the government must ensure it is spent for these purposes.
3. More education is needed for residents through a public information campaign on television, the Internet, and in newspapers.
4. Compostable certification is needed for paper food packaging (i.e., fast-food or take-out packaging).
5. The Quebec government needs to ensure that recyclable and compostable products are clearly marked and labeled.
6. The Quebec government should work with industry and business associations throughout the province to agree upon a timetable for all businesses within the province to transition from plastic bags to compostable or paper bags.
7. Grocery stores, food wholesalers and government facilities with industrial-size kitchens (i.e., hospitals and schools) should be obliged to send their organic waste for composting.

Annexes

Annex A: Job description for the Waste, Environment and Safety Technician position

Annex B: Instructional materials

- Photo of instructional material
- Introductory letter
- Plasticized information card
- Frequently asked questions pamphlet
- Sticker for kitchen collector
- DVD script (www.cotesaintluc.org/en/brownbin)
- Leaf collection flyer
- Brown Bin Zone newsletter
- Brown Bin Zone sign
- Compostable bags sold here sign

Annex C: Information on compostable bags

- Locations selling materials for the organic waste collection program
- Companies making compostable bags (partial list)
- Certifications of compostable bags

Annex D: Map of the pilot project area

Annex E: Sample of press clippings

Annex F: Budget projection