

# Sustainability Project Fund Application

**Applicant/Project Leader: David Morris on behalf of Gorilla Composting**

**Contact Information:**

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**Project Title: In-vessel Composter**

**Budget Requested: \$103,992**

**Project Group**

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Mathieu Laperle – Food & Dining Services - [mathieu.laperle@mcgill.ca](mailto:mathieu.laperle@mcgill.ca) - 514 398-2641

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## I. Project Overview

Project summary:

- This project will separate an organic waste stream from McGill Food & Dining Services (FDS) which will then be processed and used as compost at McGill University's downtown campus. Many urban organic waste treatment systems have a single, distant, processing facility. By eliminating the need to truck water-rich waste to far-off facilities, the system will reduce greenhouse and noxious gas emissions. Collection, processing, and use all take place within a radius of half a kilometre in downtown Montreal. Furthermore, the system involves minimal motorized transportation, continuous odour control measures, and produces a valuable product for immediate use in the community. This student initiated and coordinated project offers practical learning opportunities for McGill students and the urban community. The project will serve as a pilot for an innovative approach to effective organic waste utilization in dense urban areas.

Project eligibility:

- As of the end of the 2010 Winter term at McGill only a miniscule percentage of food-waste generated on campus entered a stream separate from that of normal garbage. The drop-off service operated by Gorilla Composting affords concerned students the opportunity to compost but the service is too small and restricted to be a major presence on campus. The average student or staff member at McGill is not aware of this service and they continue to live in a culture where food-waste is simply worthless matter to be sent to a landfill. The purchase, installation, operation, integration and publicizing of an in-vessel composting system on campus can revise the way the community looks at waste. The project will begin with residence dining halls and so students entering McGill, as well as staff who have been here for years, will be exposed to the new paradigm of organic waste treatment.
- A waste audit undertaken by Gorilla Composting in November 2008 showed that New Res and RVC dining halls combined produced approximately 200 kg of preparation food-waste per day, all of which went to landfill, contributing around 20 tonnes of CO<sub>2</sub>e per year. This includes only two of

five large residence dining halls on campus. The need for processing this waste is apparent, but the means are not yet in place.

#### Timeframe/Milestones:

- May 2010: full approval of the site given by McGill and Quebec ministries (done)
- Beginning of June 2010: Big Hanna T240 in-vessel composting equipment fully installed at approved location and operational, first load of food-waste enters (done)
- June – August 2010: normal summer operations ongoing with detailed notes being made by the coordinator. Examples of notes include: operational parameters such as the four temperature readings from along the axis of the cylinder, fan speed, rotation time and period; amount and composition of both food waste and carbon aggregate being added to the cylinder; amount, composition and quality of product; presence of odours; and other general comments related to the composter.
- September 2010: large event held during first week of school to make the community aware of the project. Students will be encouraged to pass by and members of similar projects from other universities will be invited to attend. Some collaboration with frosh week activities\*\* may be coordinated. \* Rez life relay
- September – November 2010: Normal fall operations ongoing with detailed notes being made by coordinator (see above bullet) and continuous publicity activities aimed at the community. A public relations coordinator (Emily Kogan-Young) has been hired for the upcoming academic year. Responsibilities for the position include engagement with the McGill community concerning promotion of composting, especially at McGill University. Students will be encouraged to help volunteer with the operations and publicity of the project to learn about composting, McGill University, and the impact of waste management on urban sustainability.
- December 2010 – April 2011: Normal winter-time operations ongoing with detailed notes taken. The effects of winter on the whole system will have to be well recorded and any adjustments to be made shall be made accordingly
- May 2011-August 2011: Ongoing summer operations. The coordinator of the project will need to work to find an individual or a group at McGill to take over responsibility for the machine. It is too early to say who the coordinator will be, but the operation of the machine will reside permanently with Aramark staff. A student coordinator will play a supervisory role.
- The easiest indicator is to continually measure how much food waste is being collected and how much compost is being expelled from the machine. This will give an indication of food-waste diverted from landfill and of fertilizer produced. This information will be made available on the Office of Sustainability and Gorilla Composting websites. Signs will be up at many FDS locations to inform the community as to what is going on and news may be diffused through student newspapers or directly through FDS news informative materials.

#### Stakeholders:

- *McGill Grounds – Marc Dozois (Director) and Eric Champagne (Horticulturalist)*
  - *Willing to use the compost product if it is of acceptable quality*
- *McGill Food and Dining Service – Mathieu Laperle (Director)*
  - *Have made a commitment to be part of the composting system demonstration with an ultimate objective of determining logistics and cost of handling food waste in this manner.*
  - *Aramark – as a contractor to MFDS have made a commitment to be part of the demonstration and during the demonstration provide staff to transport food waste to the composter as part of the service agreement with McGill.*
- *McGill office of Sustainability – Dennis Fortune (Director)*

- *Will facilitate the integration of this equipment into the operations of McGill and ensure that various stakeholders are kept informed.*
- *Ensure any operational concerns are addressed during the demonstration phase.*
- *Student’s Society of McGill University (SSMU) – President Zach Newburgh*
  - *Provided initial funding and expect some service for food waste generated in the University Centre*
- *Environment Canada – Jerome Desrosiers – EcoAction Project Officer*
  - *Funding body providing a portion of the equipment purchase cost and funding for raising the awareness of large scale composting.*
- *Generations Pact of the Quebec Government –Pascale Geoffroy (Pact Coordinator)*
  - *Funding body providing a portion of the equipment purchase cost and funding for In-vessel Composter coordinators position.*
- *TD Friends of the Environment Fund – Lori Carbone National Coordinator for Community Giving*
  - *Funding body not requiring project reporting*

## **II. Project Implementation**

Tasks and Responsibilities:

- *Indicate clearly all activities associated with the proposed project, the person responsible and the length of time each task is expected to take. Use the table below (expanded as required) to summarize this information.*

<b>Type of Activity – Task</b>	<b>Estimated Time Required</b>	<b>Group Member in Charge</b>
Acquire all necessary permits and approvals for the site and equipment installation	Completed May 2010	Dennis Fortune and David Gray-Donald
Installation of Big Hanna T240 at Wong Building location	2 days -June 2010	Dennis Fortune
Start-up and monitoring of operations	3 months - June to August 2010	David Morris
Installation of Maturation Bays	2 days- August 2010	Dennis Fortune
Signage posted around campus	1 week in August	David Morris
Supervision of food waste additions to composter and site clean-up.	September 2010 to June 2011	Ana Vadeanu

### III. Financials

#### Detailed expenses:

Expense Description	Estimated Cost
Big Hanna T240 in-vessel composter (including shipping, delivery, storage and taxes)	\$73,234
Maturation Bays	\$16,700
*Asphalting of approved site	\$8,000
*Electrical connection for Big Hanna T240	\$5,300
*Project management for site preparation and installation of equipment	\$2,000
Professional fees for External consultants (Architectural, Mechanical, Structural)	\$6,000
*Construction permit and work-orders	\$1,407
Architectural screen in front of composter (hedge)	\$7,800
Parking and security guard charges	\$1,500
Site preparation project contingency	\$5,091
Taxes on site preparation work (those with asterisks)	\$2,201
Composter Coordinator wage until May 2011	\$8,500
Composter Volunteer Coordinator stipend	\$1,800
Vehicle rental through May 2011	\$1,000
Food & Dining Services contractor until May 2011 (\$16/hr@20 hrs/wk for 48 weeks)	\$15,500
Start-up equipment (kitchen bins and rack, clean-up tools)	\$1,000
Wood pellets	\$1,875
Signage and communication materials for locations around campus	\$400
September opening ceremony	\$200
<b>Total</b>	<b>\$159,508</b>

#### Detailed revenues:

Revenue Source	Amount Requested	Confirmed?
Sustainability Projects Fund	\$104,192	No
Generations Pact	\$25,000	Yes.
Environment Canada	\$8,466	Yes
SSMU	\$17,050	Yes
TD Friends of the Environment Fund	\$5,000	Yes
<b>Total</b>	<b>\$159,508</b>	

### IV. Additional information: