

Sustainability Project Fund Application Instructions

Applicant/Project Leader: Eric Champagne

Faculty: McGill Grounds Department

Contact Information:

Name: Eric Champagne

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Daytime Phone: 514-398-5895

Project Title: Purchase of Leaf/ Branch Shredder

Budget Requested: \$9,798

Project Group – Eric Champagne, Angelo Tambasco Michal Bonar-David Morris from Gorilla Composting

I. Project Overview

Project summary:

- With the help of the Sustainability Projects Fund we would like to purchase a Leaves/branches shredder to recycle them for campus usage (Leaves and Branches).
- We would redirect the shredded materials for campus use to become part of the inputs for compost production in Big Hanna.
- Compost needs a carbon source which is currently purchased but could be partially replaced with this shredded material.
- Less organic materials would leave Campus Grounds for a dump site and/or recycling facility.
- Shredded material could also serve as mulch for the many gardens the University has.
- Michal Bonar and David Morris from Gorilla Composting would find it useful to get shredded material as a carbon source.

Project eligibility:

- Shredded material would be made available to the Big Hanna composter.
- Dead Trees and broken branches are presently sent to a dump site, they would become part of the input for compost .
- An average of 10 trees of different sizes is removed per year.

- Communication and education about the shredder and its impacts would be provided by the Gorilla composting team, integrating it into their information tours, workshops, and website (see attached letter of commitment).

Timeframe/Milestones:

- Project could start as soon as the piece of equipment is purchased.
- No end date, it would be an ongoing process linked to what is composted presently on campus.
- Ongoing repairs and preventive maintenance costs would be covered by Grounds.
- Performance could be monitored; volume of shredded material would be evaluated using the bucket of a tractor as a unit of measure. This will be done as soon as the shredded material is brought to the composting site. The wood pellets needed for Big Hanna’s carbon input will be replaced with the wood chips.
- Compost would be used in flower borders, gardens and landscaped sites located all over campus.

Stakeholders:

- Gorilla composting, Campus Crops, Santropol Roulant, and Grounds Department.

II. Project Implementation

Tasks and Responsibilities:

Type of Activity – Task	Estimated Time Required	Group Member in Charge
To shred Leaves and Branches	Variable	Grounds dept. McGill
Bring Shredded material to composter	Variable	Grounds dept. McGill
Incorporate materials in compost	Material added to compost should be the same as wood pellets	Gorilla composting Team
Communication and education	Variable	Gorilla composting Team

III. Financials

- If project is accepted and funds provided, we could order the equipment. At this point the equipment could be readily used for all fallen and cut branches on campus.

Detailed expenses:

Expense Description	Estimated Cost
Purchase leaf/branches shredder	\$8,599.95 + TX

Detailed revenues:

Revenue Source	Amount Requested	Confirmed?
Sustainability Projects Fund	\$9,798	No

IV. Additional information:

Evaluation of cost for the purchase of wood Pellets for compost production:

- 8 tons (400 bags of 40kg each) presently cost \$ 200.00 per ton
- Plus an additional \$ 400.00 for delivery.
- **Total cost for the material including taxes \$ 2299.50**
- Time require by McGill Grounds to unloaded pallets using a tractor is **2 hours. \$ 108.27**
- **Grounds person** to secure area for pedestrians while unloading the material 2 hours. **\$ 102.05**

Composter requires a minimum of 5.5 bags per week, with a possibility of reaching 11 bags per week if there is an increase in food waste.

Total cost for material and labour (Wood Pellets) :\$ 2509.82
Total cost per bag (Wood Pellets) :\$ 6.27
Cost for one week of (Wood Pellets) :\$34.49 to \$ 68.98
Cost per Year (52 weeks) OPTIMAL compost production : \$1793.48 to \$ 3586.96
Cost for the shredder (good for minimum 10 years) :\$ 979.75 per year

Cost to make our own wood chips with branch /Leaves shredder:

1. Fuel for Motor, (minimal) part of operations
2. Workers time: included in routine of tree trimming, part of clean-up operations.
3. No more dumping fees for tree trimmings. (Would be given to compost team once shredded).

Cost **per container \$ 114.00** on which we add **\$80.00 per ton** of waste we dump inside.

We send an average of four, 40 yards of container filled with dead leaves in the fall.

There are a lot of tree branches that are picked up campus wide and are also sent each year to the dump.

A good portion of this material, which includes branches up to **5 inches** in diameter, could be recycled with the Shredder. Doing this will greatly diminish the quantity of organic materials being sent to the dump.

CHIPPER/SHREDDER/BLOWER



Add a Blower to Increase Speed

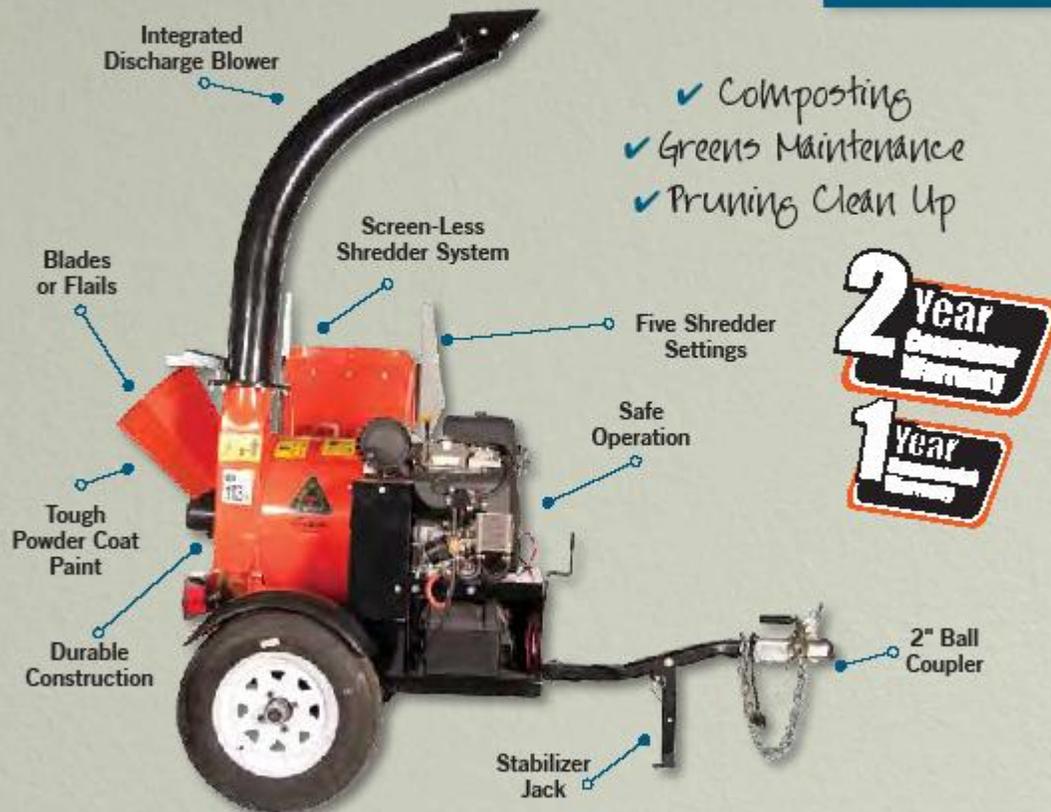
ECHO Bear Cat Chipper/Shredder/Blowers are manufactured with the same components as the Chippers and Chipper/Shredders. Adding a blower speeds up debris discharge for better placement and reduces clogging.

Accessories

Chipper Blade Kit
Part #72493

Leaf Tamper
Part #70649

Hammer Flail Kit
Part #77025-00



- ✓ Composting
- ✓ Greens Maintenance
- ✓ Pruning Clean Up



Chipper Capacity (in)	Model No	Engine	Size (in) (LxWxH)	Feed System	Blades/Knives	Shredder Feed Opening (in)	Starter Type	Weight (lb)	Tires	Wheel Base (in)	Chipper Disc (in-DxW)/lbs
5"	SC5720B	720cc Subaru	92x52x92	Gravity/Self-feed	4 Reversible Chipper Blades 12 Hammer Flails	18 x 14		900	5.3" x 12" Pneumatic	51	18x.75/125



www.bearcatproducts.com

January 6, 2011

Sustainability Project Fund Committee
Office of Sustainability
McGill University

RE: SPF Application for Wood Shredder

Dear SPF Committee:

The wood shredder that McGill Facilities Operations and Development is considering to purchase would be an excellent asset towards advancing the sustainability their operations. By incorporating the shredder into operations, they can significantly reduce the amount of wood waste that would normally be sent to landfill and repurpose it sustainably. The wood waste to be processed by the shredder would include trimmings and branches from trees across the downtown campus of McGill University. The shredded material can be used in the Big Hanna composter as carbonaceous material. The carbonaceous material serves to absorb moisture and balance the carbon-nitrogen (C:N) ratio of the organic waste inside the composter vessel. Using the shredded material would also offset purchasing of wood pellets from a third party.

As a partner in the project, Gorilla Composting would assist in promotion of the wood shredder project to the McGill community and to the wider public. Potential venues for promotion of the project include the tours, workshops and information sessions held by Gorilla Composting throughout the year. Further, information about the project will be available on the Gorilla Composting website, <http://gorilla.mcgill.ca>.

I, on behalf of Gorilla Composting, support the SPF application for the wood shredder by Eric Champagne on behalf of Facilities Operations and Development.

Sincerely,

David Morris
Coordinator, Gorilla Composting
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gorilla.compost@gmail.com