



COVER PAGE

PROJECT INFORMATION

Please complete the fields below with information regarding your project.

Project Title Hydroponic McGill

Brief Description Nutritowers are systems of hydroponic gardens that are able to self-water and grow. Requiring very little to almost no maintenance, they would be a great addition to McGill's campus as adding accessible green spaces on campus would be a great benefit to student wellness.

Total Estimated Project Budget \$ 4500 Amount Requested from SPF \$ 4500

Campus(es) Impacted Downtown Macdonald Gault Nature Reserve Other

CONTACT INFORMATION

Project Leader

This person must be a current McGill University student, administrative staff, or academic staff.

Name	Karine Talbot	Affiliation	
Phone	705-351-1723	Faculty/Unit/	Arts
Email	karine.talbot6@gmail.com	Campus	Downtown

Project Team Members

The SPF encourages you to be inclusive, collaborative (especially between staff and students), diverse, and interdisciplinary when possible. To list more members, please e-mail the list to [SPF Staff](#) to include with your application.

Name	Dasha Gousseva	Affiliation	
Email	d.gousseva@gmail.com	Faculty/Unit/	Science
Name	SSMU Environment Committee	Affiliation	SSMU
Email	sustainability.external@mcgill.ca	Faculty/Unit/	
Name		Affiliation	
Email		Faculty/Unit/	
Name		Affiliation	
Email		Faculty/Unit/	
Name		Affiliation	
Email		Faculty/Unit/	

SUBMISSION INFORMATION

In line with the [SPF Eligibility Criteria](#), our team certifies that this project takes place at [McGill University](#), is [sustainability focused](#), is requesting [seed funding](#), and is [action oriented](#). Yes No



Sustainability
Projects Fund

UNDER \$5,000 APPLICATION FORM

Our team has read the [SPF Terms & Conditions](#) and agrees to respect them.

Yes No

Our team understands that this application is not confidential and consents to have its contents shared with relevant stakeholders during the review process and, if approved, on the SPF website. Yes
No

Our team agrees to have [their contact information](#) included in the complete and shared application. Yes
No



PROJECT OVERVIEW + PLAN

Instructions: Please answer the questions as clearly and concisely as possible; then, submit your draft online. SPF Staff will respond with feedback on your application within 2 weeks. Once finalized, the application will be provided to the SPF Governance Council for their review and decision. As a reminder, all SPF applications are assessed using the [SPF Eligibility & Evaluation Criteria](#):

ELIGIBILITY CRITERIA		EVALUATION CRITERIA		
AT MCGILL	SUSTAINABILITY FOCUSED	ANALYSIS	IMPACT	FEASIBILITY
SEED FUNDING	ACTION ORIENTED	COLLABORATION	SUPPORT	CAPACITY BUILDING

Before starting, you may find it helpful to consult the [SPF Sustainability Brief](#) and [Vision 2020 Climate & Sustainability Action Plan](#).

CONTEXT

Criteria assessed in this section: **SUSTAINABILITY FOCUSED, ANALYSIS**

1. What specific sustainability-related need/issue have you identified at McGill and aim to address through your project? In your response, please describe clearly how the need/issue is related to sustainability and what research you have done on this issue, if any. Note: Please wait to detail your project idea in Question 2. Limit ~200 Words

Stepping inside one of McGill's academic, residential, or dining buildings, very little greenery can be seen. When indoors, greenery brightens spaces and highlights commitment to better sustainability-related causes. Past indoor gardening initiatives have not been placed in commonly accessible locations around the campus, limiting the number of students seeing such projects. Indoor green spaces are known to improve air quality and mental health and wellness of students. By having indoor gardens placed in commonly accessed areas, such as the residence cafeterias, more students would be able to enjoy its health benefits, as well as participate in an educational initiative by learning more about locally grown food.

PROJECT IDEA

Criteria assessed in this section: **ALL ELIGIBILITY & EVALUATION CRITERIA**

2. What is your project idea? Please describe the idea thoroughly and concisely. In your response, share how the project is new or how it complements, builds upon, or scales existing initiatives. Limit ~400 Words

The project idea is to place hydroponic gardening systems sold by Nutritower in three of McGill's busiest cafeterias (BMH, New Rez and RVC). By doing so, over a quarter of McGill's undergraduate student body would have access to them for their benefits of improved wellbeing. Not only is indoor gardening proven to provide mental health benefits, which is especially important in an academic setting, it would also promote accessible healthy eating option, as it can demonstrate how easy it is to grow plants indoors and eat green. While the three indoor gardens would not provide a significant amount of produce to be used by McGill's food and dining services (other than for special occasions such as using herbs on local food days), they would still be a great opportunity to simultaneously provide green spaces and to educate students on the ease of local, indoor gardening. Additionally, all produce grown will be donated to Midnight Kitchen, who will benefit from the tower's easy access and fast growing patterns.

3. Is your project related to the University's [Vision 2020 Sustainability Strategy](#)? Yes No Not sure

If yes, how does it relate? Please refer to the [strategy category or related action](#) from the [2017-2020 Climate & Sustainability Action Plan](#) in your response. Limit ~100 Words



Installing Nutritower's indoor gardens within the residence cafeterias would relate to the Education category of the Vision 2020 Sustainability Strategy. By having these towers installed in an accessible space, students' knowledge on sustainable activities would increase, as they could learn about how to manage sustainable food systems, as well as learn more about where their food comes from. This educational initiative can be further promoted by having signage accompanying the towers that detail which produce is currently growing and general facts about locally grown food, as well as workshops could be hosted by the SSMU Environment Committee to further engage in the conversation about local produce.

IMPLEMENTATION

Criteria assessed in this section: ACTION ORIENTED, FEASIBILITY, IMPACT

4. List the key **activities** for your project and indicate the timing for these on the right. Please be specific and realistic when formulating your activities, ensuring that they are achievable within the indicated timeframe.

Key Project Activities	Start Date (MM-DD-YY)	End Date
Purchase the towers and begin installation with 1 tower, continue with the addition of the other 2 if the project succeeds	03-09-19	30-04-20
Create easily accessible guidebook detailing maintenance of the towers	03-09-19	Continuous
Provide fresh produce to McGill cafeterias and Midnight Kitchen	03-09-19	Continuous
Educate students about indoor gardening and locally grown food through workshops hosted by the SSMU Environment committee once a semester, social media presence, and accompanying signage detailing the current produce growing and general facts about locally grown food	03-09-19	Continuous
Educate students on the mental health benefits related to plant growing through workshops hosted by the SSMU Environment Committee and accompanying signage detailing its benefits	03-09-19	Continuous

5. Please describe what will happen to your project after the SPF funding ends. Additionally, please share if anything will be produced or installed (e.g. a workshop guide, equipment, a toolkit, a network, website, etc) and indicate how this will be maintained. *Limit ~200 Words*

Oliver de Volpi, from McGill's Student Housing and Hospitality Services has confirmed that dining services will be able to cover the cost of purchasing new seeds and fertilizer for gardening systems. The SSMU Environment Committee will make an easily accessible guide on the towers' maintenance. Members of SSMU Environment Committee or SHHS will be involved in the implementation of the project; thus, future members could also be trained to do so. This is due to the fact that Nutritower's gardening systems are very low maintenance, as they only require a weekly addition of nutrients, as well as an infrequent addition of water. Additionally, in regards to the summer months when members of the SSMU Environment Committee are not present on campus, the towers could go dormant. It is easy to plan growing patterns, thus it is possible to plan accordingly so that no plants are growing during the summer



months and the tower can remain empty, with the plan to restart growing in the fall. The towers could potentially be stored in the SSMU building.

TRANSFORMING CAMPUS

Criteria assessed in this section: AT MCGILL, IMPACT

6. In the table below, describe the project's 1-3 main impacts on the McGill community or its main goals to accomplish. Please check the McGill stakeholders that will be impacted. Finally, please list at least one key success indicator for each impact (e.g. # people engaged, % waste diverted, # buildings certified, etc.)

Main Impacts/Goals		McGill Stakeholders Impacted (check all that apply)	Key Success Indicator(s)
R E Q U I R E D	1 Cultivate awareness on the farm to table food path of produce and ways in which urban footprints can be reduced.	Undergraduate Academic Staff Postgraduate Admin. Staff Alumni	Over a quarter of McGill's undergraduate student body would regularly be able to frequent the gardens as they would be placed in the residence cafeterias. Additionally, any other student would have the opportunity to see the towers if they so wished being that they would be placed in public spaces.
O P T I O N A L	2 Donating produce to Midnight Kitchen.	Undergraduate Academic Staff Postgraduate Admin. Staff Alumni	As a non-profit collective that aims to provide accessible food to students in need, these produce donations would be beneficiary to their program and would help supplement their food supplies.
	3 Provide mental health benefits to students.	Undergraduate Academic Staff Postgraduate Admin. Staff Alumni	Seeing as light therapy and plants, two components of the towers, are positively correlated to the release of chemicals in the brain that help ease symptoms of mental health disorders such as depression, this would be beneficial to students' mental health and wellness.

STAKEHOLDER ENGAGEMENT



Sustainability Projects Fund UNDER \$5,000 APPLICATION FORM

Criteria assessed in this section: **AT MCGILL, COLLABORATION, SUPPORT, CAPACITY BUILDING**

7. Please list 3-5 key stakeholders involved in your project, indicating their role and support. If the stakeholder has provided a support letter, please indicate so here and attach it as an appendix document. Note: Projects involving modifying a space on campus, making a permanent installation, hiring a full-time staff, or adding/modifying a garden, etc., must seek permission from the appropriate stakeholder(s) (e.g. building director, Campus Planning and Development office, staff supervisor, etc.). SPF Staff can help you assess if any key stakeholders need to be added to your list.

Stakeholder's Name(s)	Title	Role in the Project	Support/Permission	Support Letter
SSMU Environment Committee	Project Lead	Nutritower care/education	Yes	Yes
McGill SHHS	Support	Providing future funds for seeds	Yes	Yes
Midnight Kitchen	Beneficiary	Receive produce by donation	Yes	Yes
Nutritower	Equipment provider	Help install and provide guidance on Nutritower systems	Yes	No

8. How will you communicate about your project and share its impacts with the McGill community? Please describe your key tactics (e.g. social media, workshops, tabling, etc.). Limit ~200 Words

As the indoor gardens would be installed in frequently visited places, there will surely be many students wondering about them. The reason for their installation can be communicated mainly by social media, by promoting their existence on the facebook pages of involved stakeholders or by sending out listservs to those interested. There could also be signage accompanying the towers that could list our the produce currently growing on the tower, as well as general facts about local food growing. Another way that communication for the project can take place is through workshops. Members of the SSMU Environment Committee could host workshops once a semester for those interested in indoor gardening and its benefits. The workshops could have different themes that would touch on the towers' different benefits, such as the ease of indoor gardening, the environmental impact of growing and eating locally, as well as the health benefits it has on students' mental health and wellness.

9. If applicable, are there any training, volunteer opportunities, jobs, or complementary applied student research integrated in your project? Please describe. Limit ~100 Words

N/A



PROJECT BUDGET

*Criteria assessed in this section: **FEASIBILITY***

Revenues

Indicate any funding you will receive or may receive to complete your project, including funds from McGill Departments and Units.

Funding Source(s)	Amount	Request Status
Sustainability Projects Fund (SPF)	\$4500.00	Requested
	\$0.00	
	\$0.00	
	\$0.00	
REVENUES GRAND TOTAL <i>(must match Expenses Grand Total)</i>	\$ 4500.00	

Expenses

Indicate your project expenses below. In the Funding Sources column, use the reference number from the first column of the Revenues section, above. You may list more than one source if applicable (e.g. 1,3).

Salaries & Wages

If applicable, please indicate any paid positions needed for your project. Please note: if you complete this Salaries & Wages section, you must also complete the [Staff Position Information Appendix](#).

Position Title	~# Hours	~# Week	Hourly Wage	Subtotal	+ 20% Benefits	Total Cost	Funding Sources
			\$0.00	\$ 0.00	1.2	\$ 0.00	



\$0.00	\$ 0.00	1.2	\$ 0.00	
\$0.00	\$ 0.00	1.2	\$ 0.00	
\$0.00	\$ 0.00	1.2	\$ 0.00	
Salaries & Wages Subtotal			\$ 0.00	

EXPENSES GRAND TOTAL <i>(must match Revenues Grand Total)</i>	\$4500.0
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APPENDIX

Relevant Support Documents

List any appendix documents in order in the table, below.

Please keep the total number of pages as low as possible (recommended maximum is 5). Please include any relevant support letters.

Doc #	Appendix Document Title	# of Pages
1	Letter of support from the SSMU Environment Committee	1
2	Letter of support from SHHS	1
3	Letter of support from Midnight Kitchen	1
4	Nutritower specs	1
5	Nutritower product details	1
6	Approximate placement of towers in residential cafeterias	1
7	Staff Position Information Appendix, if applicable	

To the Sustainability Projects Fund Working Group:

On behalf of the SSMU Environment Committee, I am writing in support of the Nutritower Sustainability Projects Fund project proposal that has been led by Karine Talbot and Dasha Gousseva, who are the First Year Liaisons of the Committee.

The project applicants have thoroughly considered the steps involved in installing and maintaining the Nutritowers in McGill cafeterias, including the installation costs, space required, types of produce that could be grown, and upkeep plan (the required upkeep would be minimal, but volunteers from the SSMU Environment Committee could water the plants and monitor water pH levels).

This project would contribute to the sustainability of McGill, and so it aligns with the goals of the Sustainability Projects Fund. The presence of plants has been shown to improve mental health outcomes, and the proposal is to allow for produce from the Nutritowers to be used for the Midnight Kitchen Collective's projects, which would leave a meaningful and sustainable impact on the community. The Nutritowers will also promote gardening projects as well as local and homegrown produce, which play important roles in sustainable food systems.

I hope that this project proposal can be turned into reality through the Sustainability Projects Fund. Thank you so much for taking the time to read this letter. If you have any questions, I can be contacted at sustainability.internal@ssmu.ca or at 647-830-6266.

Best Regards,

Caroline Lou
SSMU Sustainability Commissioner



Food and Dining Services
Service de restauration
3425 University Street
Montreal, Quebec H3A 2A8



January 24th 2019

Attention SPF members:

Good morning,

On behalf of Student Housing and Hospitality Service, I am offering Karine and Dasha space in our 3 residence dining halls, Bishop Mountain Hall, New Residence Hall and Royal Victoria College, for the tower garden project. We hope that this project, like a few others, helps bridge the gaps between students and the food they are consuming. I realize that these towers will not be producing an impactful amount of produce but I do believe that they will help the conversations around food awareness and promote a culture of sustainability.

SHHS, food service will help service and sustain the project over the first few years of growing pains. I thank you for your time and remain available if you need any further information of SHHS support.

Regards,

A handwritten signature in blue ink, appearing to read "Ollie Devolpi".

Oliver DeVolpi
Executive Chef
Student housing and Hospitality Service

To the Sustainability Projects Fund Working Group:

We, the Midnight Kitchen Collective, are writing to provide support for the Nutritower project led by Karine Talbot and Dasha Gousseva. Our collective would be interested in using produce grown by the three hydroponic systems that are proposed to be set up in McGill's cafeterias. The produce would go towards our projects to distribute food to those in need around Montréal, which would promote sustainability within McGill and the greater community. Again, we are pleased to put foods grown by the Tower Gardens to meaningful use.

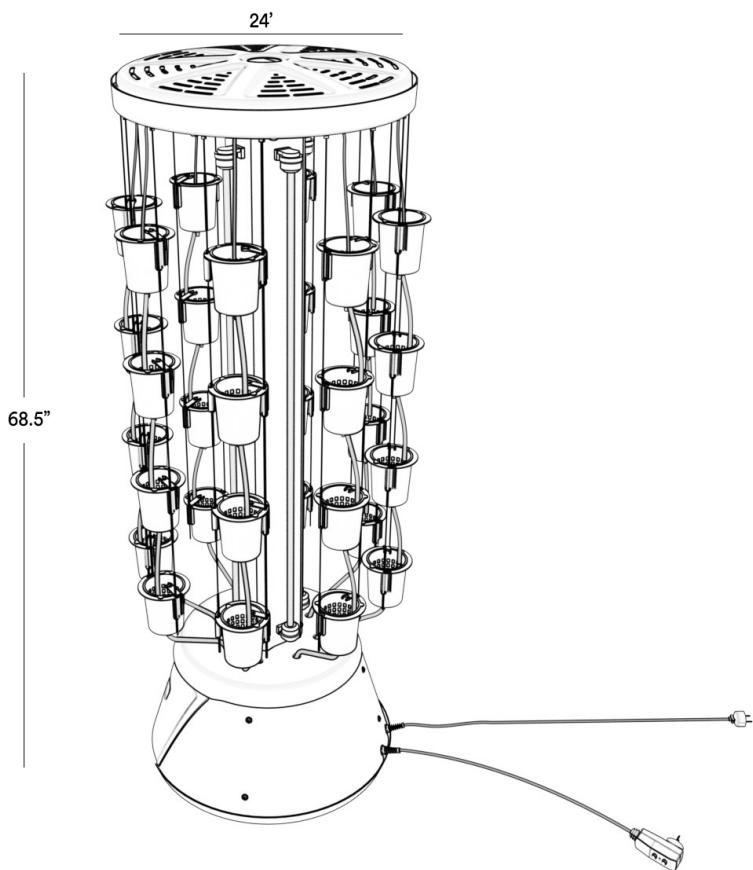
If you have any questions, please contact us at midnightkitchencollective@gmail.com.

Cheers,

The Midnight Kitchen Collective



Nutritower V2 Size and Proportions



SIZE

Height: 68.5 inches

Width: 24 inches

MATERIALS

Base: Steel internal structure

Column: Aluminum Extrusion

Outer/inner pots: Injection molded food grade HDPE

Top/base caps: Vacuum formed polypropylene

Door: Vacuum formed polypropylene

WEIGHT

Base: 45lbs

Column: 20lbs

Full unit: Approx. 70lbs

PLANTER POTS

The Nutritower comes with 32 pots Standard

Small Pot size 0.8L

POWER

Ballast: 1 × 4 lamps - 54 watts each

Power range 120 - 240 volts

Usage: 216 watts

LAMPS

4 × 54 watt T5HO fluorescent - 6400k

PUMP

120 -240 volts

Pump lift: 1.7m head min

Water storage: 3.5 gallons (13.2 L)

Nutritower Product Details

Nutritower's indoor garden:



Nutrients:



Planters:



Nutritower Placement

Royal Victoria College –

- 1) In the corner between the office and used dishware deposit:



- 2) On the right or left side of the entrance into the cafeteria:



New Residence Hall –

- 1) On the right just past entering the cafeteria space:



- 2) In the hallway on the way to the cafeteria (either by the O2GO machine or in the corner on the left when entering):



Bishop Mountain Hall –

- 1) At the top of the staircase (by the room with the used dishware depositing) when coming

into the cafeteria:



2) At the bottom of the staircase:



3) In the dining area, by one of the cubicles or one of the informational boards:

