

## SPF Application Form

### Section A - Cover Page

Fill out this Cover Page and save it to your files for future reference before uploading it on the SPF website.

**Project Title** Biomedical Waste Sterilization project

**In one to three sentence(s), explain what your project is about:**

On average, McGill's research operations are generating 50 000 kg of non-anatomical biomedical waste annually. The waste is transported weekly at a disposal site, located 600km west of Montreal in Brampton (ON), where it will be sterilized in an autoclave. We would like to get our own autoclave to sterilize and shred the waste on site.

**Indicate the McGill campus(es) where your project will be implemented:**

Macdonald  Downtown  Gault Reserve  Bellairs Research Institute  Other (Specify): \_\_\_\_\_

**Approximate Budget Requested to the SPF (\$):** 294,000

**Approximate Total Project Budget (incl. other sources of funding if applicable) (\$):** 594,346

**List 1 to 3 main item(s)/expense(s) for your project that SPF money will be used for (incl. approx. % of total budget):**

Autoclave (90%), Supplies (6%), Salaries (4%)

**Indicate which of the following team members...**

**... will be in charge of monitoring the project's budget (maximum 1 person):** Christian Bouchard

**... will be the Project Lead (Project Lead will be the contact person for the SPF Staff):** Christian Bouchard

**The Project Lead stays for the entire duration of the project:**  Y  N

**If no, explain in a few sentences your leadership transition plan for one or both of the Project Lead for sustainable continuation of the project:**

**PROJECT TEAM MEMBERS** (read details about [SPF Evaluation Criteria #5](#) for more information)

*The SPF encourages your team to be inclusive of individuals who voluntarily self-identify as members of marginalized communities (e.g. women, Indigenous people, people of colour, LGBTTQI, student parents, members of ethnic minorities, immigrants, people with disabilities).*

#### 1. Project Team Member

**First Name & Last Name** Christian Bouchard **Affiliation (select one)** Administrative Staff (ST)  
**Phone (daytime; only put #)** +1 (514) 398-5534 **Specify if Other** \_\_\_\_\_  
**Email** christian.bouchard@mcgill.ca **Faculty/Unit/Organization** Hazardous Waste Mgmt FMAS

#### 2. Additional Project Team Member

**First Name & Last Name** Isabelle Harvey **Affiliation (select one)** Other (specify)  
**Phone (daytime; only put #s)** +1 (514) 398-7277 **Specify if Other** Research (Dr. Sonenberg)  
**Email** isabelle.harvey@mcgill.ca **Faculty/Unit/Organization** Biochemistry, Faculty of Science

#### 3. Additional Project Team Member

**First Name & Last Name** Ruth Blanchette **Affiliation (select one)** Administrative Staff (ST)  
**Phone (daytime; only put #s)** +1 (514) 398-8173 **Specify if Other** \_\_\_\_\_  
**Email** ruth.blanchette@mcgill.ca **Faculty/Unit/Organization** Environmental Health Safety FMAS

#### 4. Additional Project Team Member

**First Name & Last Name** Jerome Conraud **Affiliation (select one)** Administrative Staff (ST)  
**Phone (daytime; only put #s)** +1 (514) 398-5870 **Specify if Other** \_\_\_\_\_  
**Email** jerome.conraud@mcgill.ca **Faculty/Unit/Organization** \_\_\_\_\_



**SPF Application Form**  
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**PROJECT TEAM MEMBERS (CONT'D)**

**5. Additional Project Team Member**

<b>First Name &amp; Last Name</b> _____	<b>Affiliation</b> ( <i>select one</i> ) _____	<b>Other</b> (specify) _____
<b>Phone</b> ( <i>daytime; only put #s</i> ) _____	<b>Specify if Other</b> _____	_____
<b>Email</b> _____	<b>Faculty/Unit/Organization</b> _____	_____

**6. Additional Project Team Member**

<b>First Name &amp; Last Name</b> _____	<b>Affiliation</b> ( <i>select one</i> ) _____	_____
<b>Phone</b> ( <i>daytime; only put #s</i> ) _____	<b>Specify if Other</b> _____	_____
<b>Email</b> _____	<b>Faculty/Unit/Organization</b> _____	_____

**7. Additional Project Team Member**

<b>First Name &amp; Last Name</b> _____	<b>Affiliation</b> ( <i>select one</i> ) _____	_____
<b>Phone</b> ( <i>daytime; only put #s</i> ) _____	<b>Specify if Other</b> _____	_____
<b>Email</b> _____	<b>Faculty/Unit/Organization</b> _____	_____

**8. Additional Project Team Member**

<b>First Name &amp; Last Name</b> _____	<b>Affiliation</b> ( <i>select one</i> ) _____	_____
<b>Phone</b> ( <i>daytime; only put #s</i> ) _____	<b>Specify if Other</b> _____	_____
<b>Email</b> _____	<b>Faculty/Unit/Organization</b> _____	_____

To list more members, fill a 2nd Cover Page form and save it separately. You may then e-mail it to [SPF Staff](#) directly, also specifying your project title.

**OPTIONAL:**

If applicable, total number of team members voluntarily self-identifying as members of marginalized communities: \_\_\_\_\_

Represented marginalized communities: \_\_\_\_\_

Specify if Other(s) and/or add more: \_\_\_\_\_

Relevant link(s): (*to website(s) or social media*)

How did you learn about the SPF? (*select one*)  SPF Staff  Specify if Other \_\_\_\_\_

Have you already been part of an SPF project in the past?  Y  N If yes, specify project(s): SP24, SP25, SP32

**Please check the boxes to confirm that you have read and agree to the following information:**

All of our project team members understand that the SPF is publicly funded and therefore, by default SPF projects are not confidential. We agree that if needed, the SPF Steward, the SPF Administrator and/or the SPF Working Group members read and/or share the application and/or communicate part of its content in the case where they would need to (e.g. to receive professional advice, connect our team to stakeholders, etc.).

If our project is approved, all our project team members agree that their name, email, and phone number as well as their participation to the project be disclosed (e.g. for contact information or through our application and progress/final reports published on the SPF website).  
**If you do not check this box, the SPF staff will communicate with you to know whose information to remove before sharing your project online.**

All our project team members have read and understood the [SPF Terms & Conditions](#), and we confirm that we agree to respect them.  
**If any aspect of the [SPF Terms & Conditions](#) are unclear to you, contact the [SPF Staff](#) before you submit your application so that you can check this box in confidence. Also note that, if your project is approved, the Project Lead and the person monitoring the project's budget will have to confirm in writing (through email or signing the document) that they agree to the [SPF Terms & Conditions](#) before officially starting the project.**



## SPF Application Form

### Section B - Project Overview

Answer the following questions and save this form to your files for future reference before uploading it on the SPF website with Section A - Cover Page.

**Project Title** Biomedical Waste Sterilization project

**Project Lead** Christian Bouchard **Phone** +1 (514) 398-5534 **Email** christian.bouchard@mcgill.ca  
**First & Last Name** Christian Bouchard **(daytime)**

*Before you fill out this Project Overview, make sure you have consulted all related application documents online, including the [SPF Evaluation Criteria](#), the [SPF Glossary](#), the [SPF Project Flow Diagram](#), and the [SPF Sustainability Brief](#). Read all questions first before starting answering them. Answer **exactly** what is being asked: go straight to the point and stay clear and succinct. If need be, you will have a chance to include additional information in appendices at a later stage of the application process. The characters' limit (including spaces) is indicated for each question so that you can draft your answers in Word first if you want to (you will have to remove all formatting in Word before pasting here). Note that any skipped line will make you lose the line's characters (approx. 140 characters). Once you successfully pass this first stage of the application process, the SPF Staff will ask you to fill a Project Plan, in which you will specify your expected impacts, S.M.A.R.T. objectives and main activities, outputs, success indicators, stakeholders, main risks and mitigation measures, preliminary timeline, and costs. Although it is OK for you not to have all these details ready at this stage, having thought about them in advance will help you succeed in responding to the following questions.*

**Project Vision** For McGill to manage all hazardous wastes from cradle to grave

*A vision depicts the ideal future that someone is hoping for. Thus, a vision is a dreamed aspiration that someone intends to lead or contribute to, and it does not necessarily need to currently seem realistic. As such, tell us how you see McGill campuses in an ideal world once your project is completed successfully. The vision does not need to be completed within the timeline of the SPF funding.*

**Project Goal** For McGill to manage all non-anatomical biomedical waste from cradle to grave

*A goal is the overarching desired tangible realization (and thus change) to be achieved within the project's lifespan. The goal contributes to the project's vision in a palpable and realistic manner. The project's goal may last longer than the SPF funding lifespan. In line with the SPF mandate, when achieved, your project's goal should result in a culture shift (e.g. change in ideas, habits, behavior).*

**1. What is the specific sustainability-related issue/challenge that you see on McGill campus(es) that you want to address?**  
(530 char. max. ~80 words)

Work toward McGill's carbon neutrality: the waste sterilizing site is a 1200 km round-trip from Montreal, done on a weekly basis  
Environmental responsibility: 1) Frequency of trips to the sterilizing site increase the chances of an accident involving hazardous material. 2) Unshredded waste has a large landfill impact  
Liability: Improperly sterilized waste could result in landfill contamination

**2. What is your project idea and how will it help address the above issue/challenge?** (2000 char. max. ~300 words)

The proposal under consideration is to install a shredding sterilizer (also known as an autoclave) for use by Hazardous Waste Management (HWM) to treat non-anatomical biomedical waste locally, which represents roughly 65% of total biomedical waste volume generated on campus.  
This new autoclave would mainly be for the sterilization of the wastes collected by HWM, however it can also be made available to the departments who autoclave their own wastes and could result in the elimination of some of the local autoclaves.  
A switch to a centralized autoclave would result in a 65% immediate reduction in the number of boxes trucked to Brampton, ON each week, an 80% volume reduction in waste sent to landfill, and a decrease in the carbon footprint associated with this operation. Our preliminary study shows that GHG emissions will go down by 34%.  
The centralized autoclave which is being considered is designed to facilitate spore tests and will better insure that loads sent to landfill are indeed sterilized properly and in full compliance with waste disposal regulations.  
A centralized autoclave stands to reduce energy consumption in the form of steam, electricity and ventilation demands, provided that departments take advantage of the new system by decommissioning their local units.  
Finally, the number of biohazard certificates, required for a researcher to work with infectious material, is on the rise, which suggests that the volumes of biomedical waste generated by McGill research is going to increase in the short to medium term. Savings made by autoclaving that waste locally would potentially be substantial.

**3. What impacts do you want your project to have on McGill structures, processes and/or systems? Also specify how this should positively transform peoples' behaviors/perspectives/habits on McGill campus(es).** (935 char. max. ~135 words)

Mainly lower our environmental impact. In terms of cost, there is a potential decrease in the \$65,000 annual fees paid by HWM per year. The amount will depend on the strategy adopted for this project. Autoclaving waste ourselves will improve the control we have over the entire biomedical waste disposal process, by allowing us to oversee the final disposal phase. It also hedges McGill against the inevitable price increase for biomedical waste disposal. We presently do not open waste containers at HWM for obvious contamination issues. With the autoclave, we will be able to see the waste after being sterilized, allowing us to identify users who do not comply with our disposal guidelines. We will be in a better position to correct their disposal behaviors and optimize proper waste streaming. We are also expecting better segregation of the waste, which will reduce the volumes of waste to be treated as hazardous.

## SPF Application Form

### Section B - Project Overview

**4. What institutional and financial arrangements will make these impacts continue after SPF funding? (530 char.max.~80 words)**

By taking the autoclave purchase out of the equation, the savings we will make by autoclaving waste ourselves versus using a contractor will allow us to hire additional staff to operate the autoclave. The biomedical waste collection and disposal procedure will change, freeing some time for the Waste Disposal Technician (actual permanent position at HWM) to help operate the autoclave.

#### - ABOUT SUSTAINABILITY -

**5. How do you intend to address social, environmental, and/or economic dimensions of sustainability in your project's objectives? (1350 char. max. ~200 words)**

Social: HWM'S mandatory training for laboratory personnel will be adapted to explain the new biomedical waste disposal process, increasing awareness of waste generators towards proper waste segregation. The HWM website will reflect the training's content and provide additional information, including : waste minimization statistics, GHG emission reduction, and so on. We intend to use the work study program to include students in the process, as we believe it is important to provide not only financial support, but a very unique chance to get experience in a state-of-the-art hazardous waste transfer centre, which will broaden their horizon for their future career.  
Economic: Autoclaving waste locally will lower disposal costs by rendering biomedical waste non-hazardous. It will also strengthen our mechanism to protect McGill against potential liability issues, as we will do sterilization validation ourselves.  
Environmental: autoclaving waste locally will eliminate the need to truck 50 tons of waste to Brampton, Ontario, on a weekly basis. Shredding the waste will minimize the volumes going to landfill by 80%.

**6. In addition to having sustainability-related objectives (Q5), how will you ensure that your project is also executed/ managed sustainably (e.g. material local sourcing; accessibility - see the [SPF Sustainability Brief](#))? (530 char.max. ~80 words)**

Our project will provide long-term learning opportunities to students by using the Work Study program to staff the autoclave. We will switch from single-use cardboard boxes to reusable plastic bins for waste collection on campus. We will also evaluate the possibility of using the shredded sterilized waste as fuel.

Beside appear the five categories in which the McGill students, faculty, and staff think the University can make a positive difference within society. The [McGill Sustainability Strategy. Vision 2020](#), describes a specific vision and goals for each of these categories, as they were defined by the McGill direct stakeholders through a comprehensive consultation process.

**7a. In the figure, check all the categories under which your project falls (you can select only one if no others apply to your project).**

**7b. Among the categories that you checked, select the one that you think is most relevant to your project:**

**Dominant Category:** Research

**7c. How does your project concretely contribute to advancing the vision and goals described under the [Vision 2020](#) category that is most relevant to your project? (800 char. max. ~115 words)**

Waste is generated by research laboratories; this project therefore aligns with Action 3 "Sustainable labs" of the University's Priority Actions for the Vision 2020 Sustainability Strategy. It will institutionalize best practices for biomedical waste disposal by centralizing sterilization operations. It also aligns with Action 10 "Waste Management" by reducing hazardous waste disposal.

#### Vision 2020 Categories

- Finance & Investment
- Diversity & Equity
- Transparency
- Inclusiveness
- Accessibility
- Experimentation
- Accountability
- Leadership
- Human Resources

- Materials
- Energy
- Food
- Water
- Transportation
- Land
- Living Lab



- Exploring Sustainability
- Collaborative
- Community-Engaged
- Social-Ecological Footprint
- Interdisciplinary
- Applied Student Research

- Citizenship
- Leadership
- Lifelong Learning
- Experiential Learning
- Sustainability Knowledge & Skills

- Wellness & Health
- Community Engagement
- Sense of Belonging
- Accessibility
- Community Spaces
- Knowledge Sharing



## SPF Application Form

### Section B - Project Overview

**8. How does your project relate to any current/past initiative(s) on McGill campus(es) (e.g. other SPF projects)? If applicable, also indicate: 1) how your project complements the initiative(s), and 2) how you will partner with them in implementing your project (e.g. working together on some activities, sharing material/resources/costs). (2000 char. max. ~300 words)**

This project is a continuity of SPF "Hazardous Waste Minimization" (SPF25), which was completed three years ago. In the report's conclusion, there is a recommendation for all waste that could potentially be sterilized to be autoclaved on-site by Hazardous Waste Management. The purchase and installation of a central autoclave would complement the SPF25 initiative. The report also mentions the benefits of implementing a new biomedical waste management framework, which will be used by the project team as a starting point.

This proposal also relates to the Sustainable Laboratory Working Group (SLWG). This multi-stakeholder group, which brings together students, staff and faculty members, was formed in 2014 with a mandate to include sustainability considerations in lab processes. As stated in the SLWG vision : "(...) Promote and recognize efforts to reduce material, water and energy consumption while maximizing cost savings (...)". As chair of the committee, it will be easy for me to work in sync with the SLWG.

**9. List the other stakeholders on/off of McGill campus(es) that you will partner with for your project. (530 char. max. ~80 words)**

*Note: Under Stage 2 of the SPF application process, in the Project Plan, you will be asked to indicate your final key partners and specify how they will participate in your project. You will also be able to submit any documents that you want in appendices to demonstrate your communications and agreements with these key partners (e.g. support letters, emails).*

Project Management department, Environmental Health and Safety department, University Laboratory Safety Committee, Utilities and Energy Management, Sustainable Lab Working Group.

**10. What key recommendations and/or lessons learned from current or past initiative(s) do you plan to build your project upon? (800 char. max. ~115 words)**

We already submitted a Business Plan to McGill Project Management, which was accepted. A Project Manager was assigned to the Business Plan (Amanda Ceccarelli, then Andrea Gore), and a pre-design phase was completed in 2015. We are now at the design phase, which was recently approved by AVP FMAS Robert Couvrette. We are planning on using the design documents, as well as the "waste minimization project" report, to go ahead with the project.

#### - ABOUT SPF FUNDING -

**11. Why do you think that your project should be funded by the SPF rather than by, or in addition to, another source of funding - i.e. what aspects of your project make it specifically relevant to the SPF mandate? (530 char. max. ~80 words)**

The main benefits of autoclaving are environmental. We will treat 65% of McGill's biomedical waste, reducing volumes by 80%, lower our GHG by 34% and eliminate 4000 single-use boxes annually. Hazardous waste is hard to render more sustainable, and autoclaving it is one way to achieve this. By using Work Study students, we will enable students to be part of the solution, as they will be included in HWM operations. To change culture, you need training. Our mandatory training will be updated to reflect this new reality.

**12. What other sources of funding have you approached for your project? If applicable, also provide the relevant details on these sources (e.g. responses given, amounts already committed, what these amounts will pay). (530 char. max. ~80 words)**

The pre-design fees have been covered in 2014 by University Safety (11,340\$). We have requested funding from the "Safety Capital Alterations" Fund, and we have confirmation from AVP FMAS Robert Couvrette that FMAS will cover the design fees, building alterations, professional fees and autoclave installation fees (see support letter attached).

*Thank you! After you save it to your files, you can now upload this form and Section A - Cover Page on the SPF website to complete this first stage of the application process. The SPF staff will contact your team within two weeks to provide feedback and accompany you towards next stage - Project Plan. Congratulations for applying to the SPF!*



## SPF Application Form Section C - Project Plan

Answer the following questions and save this form to your files for future reference before uploading it on the SPF website.

**Project Title** Biomedical Waste Sterilization project

**Project Lead** Christian Bouchard **Phone** +1 (514) 398-5066 **Email** christian.bouchard@mcgill.ca  
**First & Last Name** Christian Bouchard **(daytime)**

Before you fill out this Project Plan, make sure you have consulted all related application documents online, including the [SPF Evaluation Criteria](#) and the [Project Plan Flowchart](#). Also make sure to consult the [SPF Glossary](#), as it clearly defines each term underlined in this form, as well as the [Sample Project Plan](#), which gives some concrete examples for each term. Last, also do not forget to refer back to your 'Section B - Project Overview' to make sure that all the details you specify here align with it. For more support, consult the SPF website and the SPF staff.

**Project Vision** For McGill to manage all hazardous wastes from cradle to grave

*As indicated in your Section B - Project Overview.*

**Project Goal** For McGill to manage all non-anatomical biomedical waste from cradle to grave

*As indicated in your Section B - Project Overview.*

**1. List 1 to 3 main impacts you expect/wish to have with your project - these must relate to the above Vision and Goal:**

*As per question #3 of your Project Overview. If you think of more than 3 impacts, only indicate the ones you think are the most relevant to sustainability at McGill.*

Expected/Desired Impact (200 char. max. ~30 words)	
<b>A</b>	Lower environmental impact
<b>B</b>	Lower operational costs
<b>C</b>	Improve controls over hazardous waste program

**2. List 4 to 7 of your objectives to reach the above impacts with your project. Make your objectives as S.M.A.R.T. as possible.**

**For each objective, indicate one key Success Indicator.** (see [SPF Glossary](#), [Sample Project Plan](#), and [Sample Indicators](#))

*Of your 4-7 objectives, you should have a minimum of one "monitoring" objective, one "outreach" objective, and two "other" objectives. A monitoring objective ensures or verifies the progress and effectiveness of your project, thus allowing you to learn from it. An outreach objective ensures that your project is adequately communicated to the McGill community to increase stakeholders' awareness of and/or participation in your initiative. These two types of objectives might lead to project monitoring and outreach activities (next question). The nature of the 2-5 other objectives is for you to decide and tailor to your project. If you have more than 7 objectives, only indicate the ones that relate best to the above impacts and thus to sustainability at McGill. For each objective, specify the key success indicator(s) that you think should be used to assess the objective's degree of achievement/completion. Your indicators can be qualitative or quantitative (e.g. number of participants, participant testimonials, website analytics, quantity of energy saved, etc.). See the document [Sample Indicators](#) for inspiration.*

#	Type of Objective	S.M.A.R.T. Objectives (125 char. max. ~20 words)	Related Impact(s) (A, B, C)	Related Key Success Indicator(s) - also indicate targeted numbers for each (85 char. max. ~15 words) (ignore the circles for now)	
1	Monitoring	Oversee autoclave installation and timeline	C	# days ahead/behind at the end of the project	<input type="radio"/>
2	Outreach	update mandatory training for laboratory personnel with new autoclaving procedure 1 month after project ending	C	# student trained	<input type="radio"/>
3	Other	Perform a GHG emissions analysis	A	numbers from energy management algorithm	<input type="radio"/>
4	Other	Determine the solid waste minimization rate associated with the autoclave operation	A	volume shredded/autoclaved	<input type="radio"/>
5	Other	Determine savings generated by autoclaving operations over a 12 month period	B	\$ for regular operations vs \$ with autoclave	<input type="radio"/>
6	Monitoring	Respect budget allocation over course of the project	B	\$ over or under at end of project	<input type="radio"/>
7	Other	Perform periodic validation tests to ensure proper load sterilization	C	Spore tests results	<input type="radio"/>

**3. List the 4 to 7 most important activities that you need to conduct to reach the objectives you listed before. Make these as S.M.A.R.T. as possible. Also indicate at least one output and a key success indicator per activity. ([Sample Project Plan](#))**

Your main activities should relate to the objectives you listed. As such, if you consider this crucial to your project, you may end up having an activity that relates to your monitoring objective(s) (e.g. developing a survey, any other activity that will help you and other stakeholders learn through your project) or to your outreach objective(s) (e.g. producing and promoting a video about the project). For each activity, indicate the output(s) that will be created as a result, such as a deliverable (e.g. video, report), training, website, network, design plan, or any other output adding value to the project and helping reach objectives/impacts.

S.M.A.R.T. Main Activities (125 char. max. ~20 words)	Related Objective #(s)	Resulting Output(s)	Related Key Success Indicator(s) - also indicate targeted numbers for each (85 char. max. ~15 words) (ignore the circles for now)	
Update timeline on a monthly basis	1	report	# updates per month	<input type="radio"/>
Add slides to mandatory training for laboratory personnel	2	.ppt presentation	# of slides added	<input type="radio"/>
Compile numbers required by Energy Management to calculate GHG emissions over a 12 month period	3	GHG report	# boxes, volumes of waste, distance travelled	<input type="radio"/>
Compile number of bags autoclaved over a 12 month period	4	stat report	# bags, # bins, weight	<input type="radio"/>
Compile numbers associated with autoclave operation vs old procedure	5	efficiency report	\$ technical labour, # boxes, # supplies, # weight	<input type="radio"/>
Update budget on a monthly basis	6	budget report	# updates per month	<input type="radio"/>
Perform spore tests every 2 weeks	7	validation data	# tests performed	<input type="radio"/>

**Provide any additional qualitative details that you would like to share with the SPF about your activities.** (800 char.max.~115 w.)

**4. Now, about the circles...: Select a total of 3 success indicators that you wish to track more seriously and report on during your project out of all those you indicated for your objectives and activities. These 3 indicators should be the most relevant to your goal and to creating a culture of sustainability at McGill and they should be relatively easy to monitor.**

When selecting your indicators, make sure that you will have/plan the time and resources you will need to allocate to monitor them throughout the course of your project. Before you start your project, the SPF may ask you to change a chosen indicator for another that seems more pertinent to the SPF or to the University sustainability reporting. Note that, in addition to these three indicators, you will be asked to track four other generic ones that will be specified in the Award Letter.

You will be required to indicate progress towards your final 7 indicators in your progress and final reports to the SPF. Because the SPF values the experiences and learning that occurs during your project (not only results), these reports will also gather related information through open-ended questions.

We have selected the 3 Success Indicators that we wish to monitor during the project:

**5. For all projects, there exist various risks, i.e. factors or preconditions whose probable presence or absence could negatively influence the successful achievement of the project's objectives. Please indicate 2 to 4 main risks for your project and the mitigation measures you intend to use/implement to reduce their likelihood. (advise if you have more to list)**

It is particularly important that you list all risks to health and safety of the project's team members, direct and indirect stakeholders, and/or the environment.

Main Risks (65 charac. max. ~9 words)	Preventative Measures (65 char. max. ~9 words)
technical issues during autoclave installation	meet all stakeholders for a kick off meeting
Professional fees increasing	Sign an agreement before project starts
Autoclave price increasing	Call for tender
Researchers not following disposal guidelines	provide training before project completion

If needed, list additional Main Risks in a separate appendix.

**6. List the 3 to 10 stakeholders/partners on/off McGill campus(es) that will be involved with and/or impacted by your project, and indicate their respective role in your project.** *If your project team (as presented on Section A - Cover Page) does not include a student member or a faculty or administrative staff member, please make sure to have this group represented as part of your stakeholders/partners to better align with [SPF Evaluation Criterion #5](#).*

Stakeholder's Name(s)	Affiliation	Role in the project	Confirmed support/participation
Andrea Gore	Project Management FMAS	Project Manager	Yes
Work Study student #1	McGill	Operates autoclave	Yes
Work Study student #2	McGill	Operates autoclave	Yes
Université Laval	Université Laval	Benchmark	Yes
University of Toronto	University of Toronto	Benchmark	Yes
Research community	McGill	Benchmark/main users	Yes
Procurement services	McGill	Call for tender	Yes

**- PRELIMINARY TIMELINE ASSUMING THAT PROJECT STARTS IN 3 MONTHS -**

**Note:** *If your project is approved, you will be asked by the SPF staff to fill out a more detailed timeline before any funding can be allocated.*

Key Tasks and/or sub-tasks	Related Output(s)	Responsible Team Member(s) and Time <i>(initials + if paid, estimated # of hours to do task)</i>	Start Date	End Date
Core team meeting	Scope definition	All members	Mar 5, 2018	Apr 30, 2018
Design phase	Design plans	CB, Andrea Gore	Apr 30, 2018	Jun 29, 2018
Tender/contract awards	CFT/CFQ	CB, Andrea Gore	Jul 2, 2018	Aug 31, 2018
Construction	Autoclave	Cb, Andrea Gore	Sep 3, 2018	Nov 30, 2018

**Provide any additional details that you would like to share with the SPF about your timeline.** *(530 charac. max. ~80 words)*

This timeline is included in the Facilities Management preliminary budget/timeline estimate signed in december 2015.

**- ADDITIONAL INFORMATION -**

**Qualifications:** If applicable, a List of Tasks for each position to be funded and the CVs of those to be employed in the project are attached:

**List of appendices, if any** *(maximum 7 pages of appendices, excluding CVs, but including List(s) of Tasks for all positions to be funded):*

*If a McGill department/unit is to contribute financially to your project, make sure to include a support letter from its Financial/Budget Officer confirming contribution.*

*Note that the SPF Working Group will evaluate your project based on your main application forms (i.e. Sections A, B, and C), not on appendices.*

Appendix #	Title/Topic of Appendix	Total Qty of Pages
1	Support letter from the University Laboratory Safety Committee chair	1
2	Support letter from Associate VP FMAS Robert Couvrette	1
3	Waste disposal assistant job description	1
4		
5		
6		
7		



**- BUDGET -**

When completing this form, please refer to the [SPF Guide to Budgeting](#) for additional information and explanations. If you would like to submit a more elaborated Financial Model/Business Case in addition to this SPF project budget (for instance, because of the nature of your project; e.g. you plan to generate some revenues through selling some items, revenues that will then allow your project to become financially self-viable), please develop it separately and join it as an appendix to this application. If you need guidance on how to elaborate a Financial Model/Business Case, see [suggested resources on the SPF website](#).

**REVENUES**

Please indicate any funding you will receive or anticipate receiving to complete your project, including funds from McGill Departments and Units. Reminder: For McGill department/unit's financial contributions, make sure to include a letter from its Financial/Budget Officer confirming contribution in appendix. Note that this contribution will also need to be confirmed at the end of the project.

(A) Funding Source(s)	(B) Amount (\$)	(C) Status
1. Sustainability Projects Fund (SPF)	\$294,346.00	Unconfirmed
2. FMAS	\$300,000.00	Confirmed
3.		
4.		
<b>REVENUES GRAND TOTAL - add all (B)</b>	<b>\$594,346.00</b>	

**EXPENSES**

**1. Salaries & Wages** (only if applicable)

If applicable, indicate the job position(s) under your project and the associated costs. See the [SPF Guide to Budgeting](#) for further instructions.

(A) Position Title	(B) ~# of Hours per Week	(C) ~# of Weeks	(D) Hourly Wage* (\$)	(E) Subtotal (\$) (B x C x D)	(F) 20% Benefits	(G) Total Cost (\$) (E x F)	(H) Funding Source(s)**
Waste disposal assistant (WS)	21	52	\$14.00	\$15,288.00	1.2	\$18,345.60	SPF
					1.2		
					1.2		
					1.2		
<b>Expenses Subtotal 1 - add all (G)</b>						<b>\$18,346.00</b>	

Do you already have a specific person in mind for filling the above position(s)?

Y  N

Do you have a personal and/or professional affiliation with the above position(s)?

Y  N

If you answered 'Y' to one or both of the above questions, please disclose:

**2. Other Expenses**

Indicate all of the expenses associated with your project; think back to all of your project's activities and all of the items that you need to complete them. It may be beneficial to group by category (not required); if you do so, please use the following categories: Materials-Supplies, Equipment, Printing, Events, Transportation, One-time Profess. Fees, and Miscellaneous.

(A) Item Description (inputs)	(B) # of Units	(C) Unit Cost (\$)	(D) Total Cost (\$) (B x C)	(E) Funding Sources**	(A) Item Description (inputs)	(B) # of Units	(C) Unit Cost (\$)	(D) Total Cost (\$) (B x C)	(E) Funding Sources**	
Autoclave	1	\$250,000.00	\$250,000.00	SPF						
Wheelie bins	60	\$100.00	\$6,000.00	SPF						
Bag holders	100	\$100.00	\$10,000.00	SPF						
Autoclave maint.	1	\$10,000.00	\$10,000.00	SPF						
Instal./profess. fees	1	\$300,000.00	\$300,000.00	FMAS						
<b>Expenses Subtotal 2 - add all (D)</b>				<b>\$576,000.00</b>	<b>Expenses Subtotal 3 - add all (D)</b>					

**EXPENSES GRAND TOTAL (Subtotals 1 + 2 + 3) \$594,346.00**

\* See the [SPF Guide to Budgeting](#) for the conditions and Hourly Wages applicable to hiring under the SPF.

\*\* To indicate the one or many Funding Source(s) that will pay for the expenses, use their respective number as you listed under Revenues (SPF or other).

Thank you! After you save it to your files, you can now upload this form and any appendices on the SPF website to complete the application process. The SPF staff will contact your team within two weeks to provide feedback. Congratulations for applying to the SPF!



## Department of Physiology

Faculty of Medicine  
3655 Promenade Sir William Osler  
Montreal, QC, H3G 1Y6

Tel: (514) 398-4317  
Fax: (514) 398-7452

November 9, 2017

McGill Office of Sustainability  
1010 Sherbrooke Street W. Suite 1200  
Montreal, Quebec  
H3A 2R7

Dear SPF Administrator:

As Chair of the University Laboratory Safety Committee (ULSC), I would like to express my support for the « Biomedical Waste Sterilization » project submitted by M. Christian Bouchard, Manager of McGill Hazardous Waste Management.

This project is in alignment with the ULSC mandate, which includes:

- To receive and review reports related to laboratory health and safety services (...) and to develop corrective strategies where needed.

I also believe that this project is in alignment with both the McGill Environmental Policy and Sustainability Policy, which stipulates that the McGill University community shall make every reasonable effort to:

- Prevent the over-consumption of energy and other resources and *reduce the production of waste and the release of substances harmful to the biosphere*;
- Encourage *economic efficiencies* in the University's operations that are consistent with social equity and respect for the environment;

By centralizing waste autoclaving activities, not only are we protecting McGill from potential liability issues, but also minimizing waste volumes by 80%.

In brief, this is a project that addresses fundamental operational needs of the University while promoting environmental and sustainability policies. I am most enthusiastic about the project as are the members of the ULSC.

Yours sincerely,

A handwritten signature in black ink, appearing to read "Alvin Shrier". The signature is fluid and cursive, with the first name "Alvin" and last name "Shrier" clearly distinguishable.

**Alvin Shrier PhD**  
**Chair, University Laboratory Safety Committee (ULSC)**

Hosmer Chair and Professor  
Department of Physiology  
Director, Cell Information Systems  
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# McGill

Facilities Management and Ancillary Services

Gestion des installations et services auxiliaires

McGill University  
1010 Sherbrooke St. West, 10<sup>th</sup> Floor  
Montreal, Quebec, Canada, H3A 2R7

Université McGill  
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Montréal, Québec, Canada, H3A 2R7

Tel: (514) 398-2926  
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Email: robert.couvrette@mcgill.ca

November 22, 2017

McGill Office of Sustainability  
1010 Sherbrooke Street W. Suite 1200  
Montreal, Quebec  
H3A 2R7

Dear SPF Administrator,

As Associate Vice-Principal of Facilities Management and Ancillary Services (FMAS), I am supporting the Biomedical Waste Sterilization SPF project submitted by our Hazardous Waste Management (HWM) manager, M. Christian Bouchard. We have assigned a project manager to this project, Ms. Andrea Gore, and completed the pre-design phase, which was necessary to determine the feasibility of this initiative. The engineering and architectural reports concluded that the autoclave can indeed be installed in the HWM warehouse.

Our office will provide funding for the design phase, as well as professional fees (architectural, electrical and structural). We are hoping to receive a positive response from the SPF to cover for the autoclave purchase as well as supplies, so we can make this great sustainability project a reality.

Sincerely,

Robert Couvrette, M.G.P.  
Associate Vice-Principal (FMAS)

cc : Christian Bouchard



## WASTE DISPOSAL ASSISTANT JOB DESCRIPTION (WORK STUDY)

- Operate the autoclave: prepare containers, feed the autoclave, dispose of the waste
- Clean, label and prepare waste disposal containers for the waste disposal technicians
- Operate the LSV crusher: prepare waste containers, feed the LSV crusher, label waste accordingly
- Help the hazmat specialist to write SOP for HWM
- Collect old electronic waste and scrap metal: drive pick-up truck around campus to collect e-waste, batteries and scrap metal for recycling
- Extra hand: help the waste disposal technicians and the hazmat specialist with their regular work (including waste tracking, chemicals segregation, hazardous waste collection), help coordinator with filing paperwork
- Keep the facility clean and free from contamination