Sustainability Projects Fund

ANNUAL REPORT 2012

Reporting on activities of the Sustainability Projects Fund from May 2011 – April 2012

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Office of Sustainability

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ENVISIONING SUSTAINABILITY

A sustainable future is one where "human intentions are recalibrated with the way the world works as a physical system" (Orr, 2004). The *content* of this future is endlessly diverse, and will range from new ways of producing and distributing energy, to new strategies for promoting diversity and equality, to innovative economic investments. The *process* of moving toward sustainability is where our focus is required. We must intentionally build new relationships founded on trust and anchored in a shared vision for a better future. Sustainability is that process of engaging our community in shared experiences to transform "how our community encounters the world" (Nilsson, 2009).

OUR MANDATE

To fund projects led by students and staff of McGill University that will build a culture of sustainability among our campus community.

OUR VISION

A McGill campus community working together, in transformative and engaging ways, toward a shared vision for a better future.

HISTORY OF THE SPF

In the 2009-2010 academic year, McGill's three student societies—the Students' Society of McGill University (SSMU), the Post-Graduate Students' Society (PGSS), and the Macdonald Campus Students' Society (MCSS)—partnered with the McGill administration to create the Sustainability Projects Fund (SPF). The proposal was passed by student referendum in November 2009, with 79 per cent of voters at the downtown campus and 88 per cent at the Macdonald campus voting to adopt the fund. Approximately 5,300 students voted during the SSMU referendum, the second-highest total voter turnout in the society's history.

The Sustainability Projects Fund was created for an initial three-year period, which will serve as a basis for future decisions regarding a possible extension or any changes to the contributions to the fund. Decisions about how to proceed after this initial period will be made based on an assessment of the tangible and measureable impacts of the fund over the course of the initial three-year period. Our Annual Reports are part of our efforts to track, measure, and communicate these impacts. The fee will be up for renewal in the fall semester of 2012

SPF Funding Process

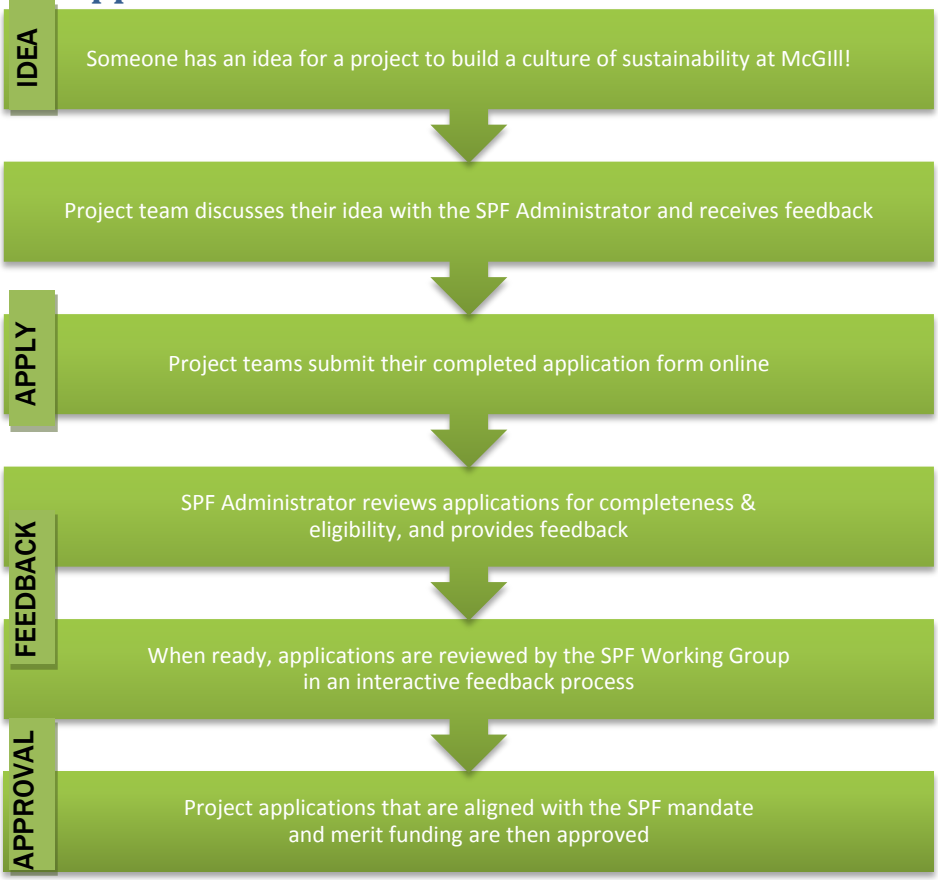
The Sustainability Projects Fund is financed partly by a 'non-opt-out-able' student fee of $0.50 per credit (with a maximum of $15/year). Funds collected from students are matched by the McGill administration. The estimated annual total of the fund is $840,000, totalling approximately $2.5 million over three years. Any unspent funds remaining from one year will be rolled over into the fund balance of the subsequent year.

SPF Fund Allocation

The fund monies will be dedicated to a wide variety of student- and staff-led sustainability projects. A portion of the monies is reserved to pay for the position of the Sustainability Projects Fund Administrator and two to three student intern positions until the end of the initial three-year period. At that time the SPF will seek a renewed mandate through student referenda in the 2012-2013 academic year.

ANY MEMBER OF THE MCGILL COMMUNITY CAN SUBMIT A PROJECT APPLICATION

SPF Application Process



ELIGIBILITY CRITERIA

Projects must:

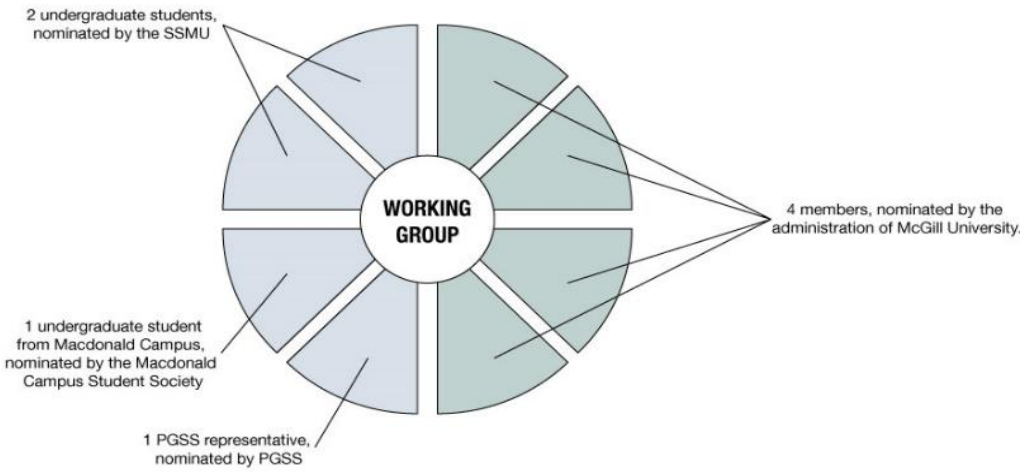
- ✓ Contribute to sustainability, in a life-cycle assessment
- ✓ Primarily impact the McGill campus community
- ✓ Be led by a current McGill student or (academic, administrative or support) staff
- ✓ Not be covered by an existing University operating budget
- ✓ Not be eligible for a research grant (evaluated case-by-case)
- ✓ Have S.M.A.R.T. objectives: Specific, Measurable, Agreed-upon, Realistic, and Time-limited

EVALUATION CRITERIA

Projects must:

- ✓ **Shift business as usual** at McGill toward sustainability
- ✓ **Engage the community** at large, or key decision makers
- ✓ Effectively **communicate why** the project is being undertaken
- ✓ **Nurture learning and change in behaviour** and evaluate success
- ✓ Demonstrate clear **commitment** from project team members and partners
- ✓ Be comprehensive and **well thought-out**
- ✓ Demonstrate the impact is **worth its cost**
- ✓ Involve institutionalizing itself and identifying **future leaders and funders**
- ✓ Identify **other benefits**, such as applied student research, innovation, etc.

THE SPF WORKING GROUP



CHAIR

Jim Nicell
Associate Vice-Principal (University Services)

STEWARD

Lilith Wyatt
Sustainability Projects Fund Administrator

STUDENT REPRESENTATIVES

Kari Ostevik
Mechanical Engineering
SSMU representative

Tyler Lawson
Philosophy
SSMU representative

Alex Goulet-Hanssens
Chemistry
PGSS representative

Kerry Blake-Savery
Wildlife Biology
MCSS representative

ADMINISTRATIVE REPRESENTATIVES

Marcy Slapcoff,
Educational Developer, Teaching and Learning Services

George McCourt
Associate Director, Undergraduate Affairs, McGill School of Environment

Steve Maguire
Associate Professor, Desautels Faculty of Management

Jerome Conraud, Energy
Manager, Facilities Operations and Development

The Sustainability Projects Fund Working Group (WG) is a parity committee responsible for reviewing & approving project applications by consensus, and providing feedback & guidance to project teams. The WG is comprised of four student representatives and four administrative representatives at any given time. Representatives are chosen based on their experience with and commitment to sustainability efforts at McGill.

The Sustainability Projects Fund Administrator acts as a liaison between the WG and project teams. They are also responsible for ensuring that approved projects are executed as planned, advising on all SPF processes, and reporting on the challenges and achievement of SPF projects.

During review meetings, any working group member in conflict of interest with the project being reviewed does not take part in the review process for that project.

SPF PROJECTS

(APPROVED OR COMPLETED BETWEEN MAY 1, 2011 AND APRIL 30, 2012)

COMPLETED PROJECTS

SP0013 Sustainable Eating

The project brings together Dietetic Stagiaires and graduate students from the School of Dietetics and Human Nutrition, the Fit@McGill Health Promotion team at Student Health Services, and the Food and Dining Services team to promote healthy, sustainable eating to students living off campus. Partnerships were also forged with the Macdonald Student-run Ecological Garden, the Yellow Door, and the McGill Farmers' Market. Strategies for choosing sustainably grown foods and planning and preparing healthy, balanced meals have been disseminated through information kiosks, website education tools, cooking demonstrations and cooking workshops throughout the McGill student community.

http://www.mcgill.ca/sustainability/sustainable-eating

Impacts

17 stagiaires

92 students educated through workshops

1 Master's thesis, associated conference presentation

SP0015 Water Collection System

A demonstrative rainwater collection system to irrigate greenhouses and fields at the Macdonald campus Horticultural Centre originating as a design project in BREE 520: Food, Fiber and Fuel. The tanks are designed to hold 35,000 L of rainwater. The system has been used for class tours in 3 different courses.

http://www.mcgill.ca/sustainability/water-collection-system

Impacts

ASR: 2 student-projects; one undergraduate, one Master's level

ASR: 119 class-workshops

318,000 litres of water collected and used, displacing municipal water use

SP0016 Gault Electric ATV

A MECH 493 capstone project to respond to the needs of the McGill's Gault Nature Reserve for an electric all-terrain vehicle. This first part designed the electrical motor as well as selected a few options for controller and battery pack, as well as feasible mounting points and hardware requirements for these extra components. Due to time and financial constraints, complete prototyping was not completed (see SP0075).

http://www.mcgill.ca/sustainability/gault-electric-atv

Impacts

Vehicle: 1 electric vehicle to displace a diesel ATV at the Gault Nature Reserve

ASR: 1 design project (4 students)

SP0020 Outdoor Frosh

An opportunity for 112 first year students to be brought into the McGill community by upper year students through various outdoor trips and engagement workshops run by the McGill Outdoors Club. Part of activities included a partnership with Macdonald Student-run Ecological Gardens 2 to plant 70 seeds.

http://www.mcgill.ca/sustainability/outdoor-frosh

Impacts

70 seeds planted

112 first-year students introduced to Quebec wilderness

25 volunteer leaders

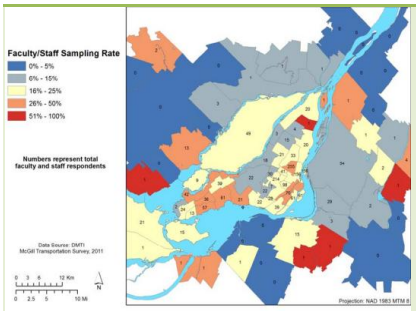


Figure 2: Sampling rate of faculty and staff by borough and municipality in the Montreal Metropolitan Region

SP0022 Transport Survey

Academic-led campus survey to assess the commuting habits of the entire McGill community (students, faculty, and staff), identify motivations and barriers to sustainable alternatives, and inform policy decisions

http://www.mcgill.ca/sustainability/transport-survey

Impacts

4 papers accepted for publishing

5000+ community members surveyed

GHG: 62.2 tons CO_{2eq}/day estimated

SP0029 Mac Bottle Refill Station

A dispenser of chilled municipal water that keeps track of how many disposable plastic water bottles are displaced

http://www.mcgill.ca/sustainability/mac-water-bottle-refill-station

Impacts

1 bottle refill station installed

26 636 disposable water bottles displaced

SP0030 Bellairs Waste Management

A first step toward integrating sustainability into the operations of the Bellairs research station in Barbados. The program was designed by students in the Barbados Field Study Semester. They installed recycling bins, clear signage, and built a sorting shed for recyclables.

http://www.mcgill.ca/sustainability/bellairs-recycling-program

Impacts

Waste: 1700 kg diverted/year

ASR: 1 undergraduate student project

SP0033 Law Plate Club

A student-led initiative based on the SSMU Plate Club to offer reusable dishware and cutlery to upper campus events, documenting the costs and benefits in order to make the case for other similar initiatives. The club purchased 100 durable plates, which they lend out for events.

http://www.mcgill.ca/sustainability/law-plate-club

Impacts

Waste: 800 kg diverted from landfill

Picture

SP0034: Food Systems Administrator 2

A full-time position co-designed by students and MFDS to integrate sustainability into procurement and operations by implementing a three-year sustainability strategy developed in 2010-2011

http://www.mcgill.ca/sustainability/food-systems-administrator-2

Impacts

ASR: 5 students worked to evaluate barriers to sustainability practices on small farms in Quebec

Impacts:

Food: 64 kg produced

Media 2 newspaper articles

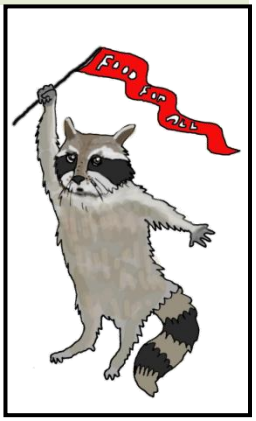
Anarchist Book Fair attendees fed: 2000

Workshop attendees: 625

SP0035 Campus Crops 2

A student garden collective dedicated to engaging the community in alternative food production on campus through open garden hours and regular workshops and events. Produce is donated during the school semester to The Midnight Kitchen. The purpose of the funding was to hire another summer garden coordinator whose goal is to ensure continuity of the initiative when many key members were graduating, as well as expand gardening to Thomson House and the Strathcona Terrace during summer 2011 and host workshops throughout the summer and into Rad Frosh. Their workshops were reported in Quartier Libre and The Montreal Mirror.

http://www.mcgill.ca/sustainability/campus-crops-2



SP0037 Farmers' Market 2

A student-led partnership to bring local farmers and artisans to the downtown campus to strengthen ties with the community and food producers. Funding employed 4 student coordinators over the summer to plan the operations of the market, promote awareness, and ensure its long-term continuity by attempting to connect it to an appropriate institutional structure. This initiative was subject to an analysis in an ENVR 490 report.

http://www.mcgill.ca/sustainability/farmers-market-2

Impacts

ASR: 2 undergraduate independent studies

Community: weekly market for September and October

Impacts

Food: 14,656 kg delivered

ASR: 3 student-projects

ASR: 268 course-workshop students

SP0038 McGill feeding McGill 2

A partnership between the Plant Science department and McGill Food & Dining Services that led to a 50% increase from the previous year of fruits and vegetable grown at the Macdonald Horticultural Centre being served to the 3,000 student living in downtown residences, only 40 km away. The Horticultural Centre was the first farm in Quebec to be certified Local Food Plus. Several classes from the fall semester used the fields to showcase various crops and cropping strategies during laboratories.

http://www.mcgill.ca/sustainability/mcgill-feeding-mcgill-2

SP0042 MSEG 2

In the 3rd year since inception and 1st year at full-scale operations, The McGill, Macdonald Student Ecological Garden (MSEG) is a student-run farming project. Cultivating 1 ¼ acres of land on and near Macdonald campus, and maintaining a medicinal herb/meditative garden, MSEG provides fresh, organic produce for sale to the university and local community, and donates to Happy Belly.

http://www.mcgill.ca/sustainability/macdonald-student-run-ecological-garden-2

Impacts

Buildings & Grounds: 68m^2 greenspace created

Community: 30 volunteers

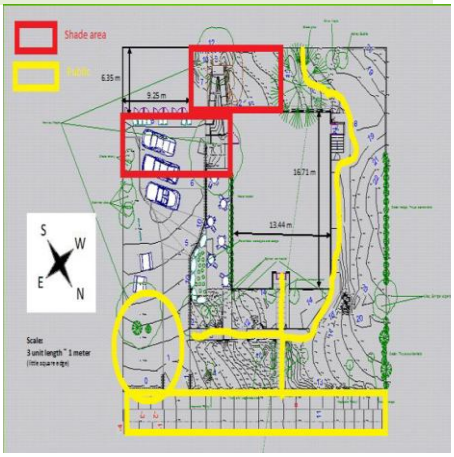
Community: 100 people educated through permaculture workshops

ASR: 3 student-projects

SP0043 Thomson House permaculture garden

A new organic garden has been created outside the Thomson Post-Graduate House. The garden, designed by students in PLNT 312, includes urban agriculture plots as well as rain gardens. The latter reduce surface runoff, reduce noise pollution, attract birds and pollinators. This project provides a garden learning environment for the campus as well as a space for horticulture workshops (students and campus daycares) as well as promoting the involvement of graduate students in the SPF. The initiative was featured in an article by the McGill Daily.

http://www.mcgill.ca/sustainability/thomson-house-permaculture-garden



MBCG | McGill Business Consulting Group

Pulse Check | Promoting Energy-effective Practices at McGill

SP0044 Pulse Check

The McGill Business Consulting Group was commissioned to investigate the effectiveness of the Pulse Energy Management Software and opportunities within McGill to reduce energy consumption. They collaborated with an ENVR 401 team to survey students' attitudes. The Final Report identifies barriers to organisational change and presents recommendations.

http://www.mcgill.ca/sustainability/pulse-check

Impacts

ASR: 6 students

600 students surveyed

Impacts

ASR: 1 project

Food: 2 McGill suppliers certified LFP

SP0045 Local Food Plus Intern

A McGill student interned with Local Food Plus, a charitable non-profit committed to growing local sustainable food systems by certifying farms and processors for environmentally and socially sustainable practices. Following up on a commitment by the McGill Food and Dining Services to purchase Certified Local Sustainable, the intern assisted Quebec farms in the certification process during the summer of 2011, in particular the Macdonald Campus Horticultural Centre. Additionally, she helped LFP prepare to launch province-wide in fall 2011 by presenting M. Pierre Arcand, Ministre de Développement Durable, Environnement et Parcs with LFP and MFDS. She also organized workshops to engage and empower first-year students to make Local Sustainable Food Days their own.

http://www.mcgill.ca/sustainability/mcgill-food-systems-project-intern

SP0046 Campus Swaps

Campus Swaps is a social enterprise recycling goods and furniture from graduating students to incoming students, thereby creating sustainable cycles of ownership. Campus Swaps has created a model to connect these two groups by offering free pickup service to graduates in the spring, storage over the summer, and affordable sales of these items to incoming students in the fall. The project was successfully piloted in 2011 with revenue over 4500$ and a number of items donated to The SWAP Team and Renaissance. In 2012 operations are expanding to UCSJ.

http://www.mcgill.ca/sustainability/campus-swaps

Impacts

Waste: 1800 kg diverted

ASR: 1 Marketing project

Community: 13 volunteers

SP0050 Sustainability Fair

The McGill Sustainability Fair provided an opportunity for members of the community to find out about what's happening on campus and how they could get involved. McGill's tenth annual Rethink conference took place in the morning. This traditionally aims to provide the community with information on sustainability initiatives on campus by students and the administration, as well as an opportunity to provide suggestions on priority sustainability projects to be addressed.

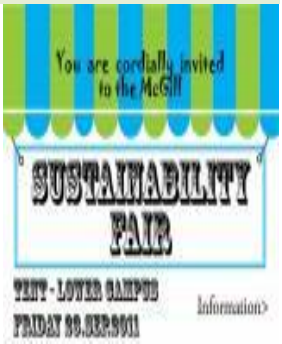
http://www.mcgill.ca/sustainability/sustainability-fair

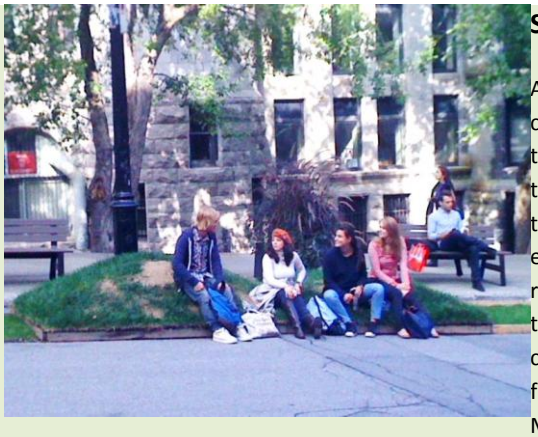
Impact

Community: 500 visitors

Community: 30 McGill groups had kiosks

Community: 6 volunteers





SP0053 Greening McTavish

As part of an ongoing project to green the downtown campus, McTavish street, recently pedestrianized, was the testing site for a variety of interventions designed to transform the paved environment into green space to promote biodiversity, reduction of the heat island effect, reduction of vehicle CO2 production and reduction of energy consumption. The interventions are to be tested before being rolled out to the rest of the campus. The initiative was the recipient of an award from Le Conseil régional de l'environnement de Montréal for working towards more convivial streets.

http://www.mcgill.ca/sustainability/greening-mctavish

Impacts

214 m^2 of pavement greened

SP0055 Teva Recycling

The Teva Recycling Initiative (TRI) is a joint venture between McGill student group Teva and the McLennan library administration to improve recycling rates. This pilot project aims to replace the current trash and recycling bins in the McLennan library with large, clearly labeled receptacles with multiple compartments for both garbage and recycling. As Daniel Shiner explains (in the McGill Daily as well), the goal is to improve recycling rates because of convenience and proper sorting.

http://www.mcgill.ca/sustainability/teva-recycling

Impacts:

Waste: 17 new multibin recycling stations in the McLennan library

Waste: 4000 kg diverted (estimate)

SP0056 MFSP Intern 2

Working to continue Local Sustainable certification of Quebec suppliers for McGill to build relationships with, coordinating Local Food Day engagement activities in Residences (one week each month), helping to design and implement accountability and reporting mechanisms on sustainability, designed and supervised an applied student research project with six students looking at barriers to sustainability for local farmers.

Impacts

ASR: 6 students with ENVR 401

Impact:

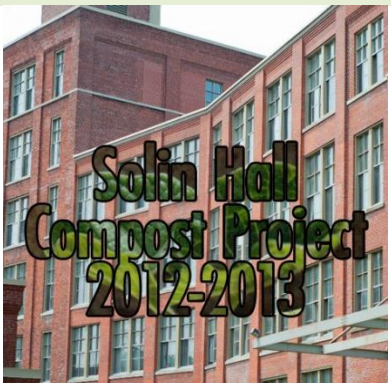
Waste: 100 permanent compost pails

Community: 100-mile potluck held with 50 participants

SP0058 Solin Hall compost pails

Solin Hall currently has the facilities for large scale food waste pick-up to be composted off-site. Unfortunately, approximately only 1/4 of this capacity is used by students. The Compost Project will distribute 100 compost pails to incoming Solin students this September along with a brochure with information on composting & recycling in residence and around Montreal.

http://www.mcgill.ca/sustainability/solin-hall-compost-pails



SP0059 Home Energy team

The Off-Campus Home Energy Team is a student effort to bridge the on-campus and off-campus experience of others living in the sometimes freezing cold but beautiful city of Montreal. The basic idea is that students living in apartments near campus sign up for a visit from a knowledgeable OCHET student team to help them reduce energy bills and live more comfortably through the winter. Arriving with an easy to follow checklist and all the needed materials to reduce the significant energy consumption resulting from heating our homes. OCHET is a tactful energy conservation program and valuable resource for McGill community members!

http://www.mcgill.ca/sustainability/home-energy-team

Impacts

6 students on the team

10 people interested in keeping the project growing

29 student dwellings visited

Impact

Community: 110 attendees

ASR: 15 poster presentations

Community: 15 volunteers

SP0063 Sustainability Symposium 2

The emerging field of sustainability is at the forefront of current scientific and social research. It spans a wide variety of academic fields and geographic scales. Real-world solutions to the challenge of sustainability will require discussion and collaboration between individuals with varying skill-sets and perspectives on human-environment interactions. The Sustainability Research Symposium @ McGill (SRS) is an initiative to encourage discussion of current research in the field of sustainability at McGill University. Participants came from over 15 different departments, about 50% were undergraduate and 40% graduate.

http://mcgillsustainabilitysymposium.wordpress.com/

SP0066: Sustainability Case Competition

Following the closure of the Architecture Café, there was a massive push from undergraduate faculty associations for SSMU to become home to an environmentally, financially, and socially sustainable café. SSMU Sustainability Case Competition was created to solicit ideas/designs for this café from undergraduate students in teams of four from a diversity of faculties. The Case Competition applied for financing for a final expo capping the second round of the competition, allowing students to interact with the competitors' visions for the cafe. Following the success of this year's competition, and incorporating feedback received, the chairs hope to institutionalize it into an annual event tackling other issues of sustainability on campus.

Impact

Community: 20 team members

Community: 700 attendees

ONGOING PROJECTS

SP0009: Food Waste Processing for In-Vessel Composting

Three pilot devices to macerate and de-water food scraps to increase the annual capacity of the Big Hanna composter from 60 to 200 tonnes. This project is pending.

http://www.mcgill.ca/sustainability/food-waste-processor-vessel-composting

photo: Travis Sweet /Creative Commons via flickr

SP0011: Electric Low Speed Vehicle

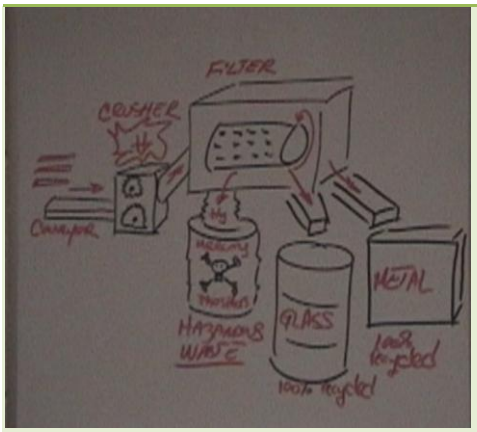
An electric vehicle to be shared by various departments, to encourage their next vehicle purchase to be electric. This project is pending.

http://www.mcgill.ca/sustainability/electric-low-speed-vehicle

SP0014: Water is Life!

An engaging traveling exhibit that summarizes the context of water issues that affect McGill and asks the community the question of how best to use water wisely. Produced by the Science Outreach team at the Redpath Museum, and running from April 2011 through December 2012, this permanent exhibit and online resource aims to help all of us learn about this most precious of resources and use water in a more sustainable way. Following an Ecolibrium Radio Residency, a podcast is in development and other buildings are planning to purchase panels in varying formats for display. An estimated 13 000 museum visitors view the exhibit.

http://www.mcgill.ca/sustainability/water-life



SP0024: Fluorescent Lamps Disposal

Demonstration of responsible recycling of mercury-containing fluorescent lamp tubes to make the case for a wider roll-out of such a program. A recycling company provides fibre drums to safely store the tubes and special storage areas have been set-up while they wait for pick-up. At the recycling facility they are crushed and the glass, metal, and mercury powder are separated and recycled appropriately. The program has been in trial since October 2011 and will be institutionalized by September 2012.

http://www.mcgill.ca/sustainability/fluorescent-lamps-disposal

SP0025: Hazardous Waste Minimization

A strategy that has identified three key leverage points for reducing waste in labs and working with lab members to shift them. Phase 1 is the substitution of toxic Liquid Scintillation Cocktail (LSC) chemicals for eco-friendly water-based LSCs to eliminate the costly handling & incineration of waste products from this process. Phase 2 involves changing processes that are performed repetitively involving toxic chemicals to use eco-friendly substitutes. Phase 3 involves determining whether all bio-medical waste need be labelled as such (and disposed accordingly) and if there are ways to change processes to reduce the amount of bio-hazardous waste produced. Phases 1 and 2 are complete, and Phase 3 is nearing completion, with all 3 to have internalized changes to lab procedures by Fall 2012.

http://www.mcgill.ca/sustainability/hazardous-waste-minimization

SUSTAINABLE THOMSON HOUSE

SP0027: Sustainable Thomson House

A collaborative audit done through community engagement and student research along with hired firms to create a baseline from which future renovations and programs can be developed. It is divided into an Operations audit run by six teams of graduate students using the Sustainability Tracking, Assessment & Rating System (STARS) framework. The operations audit includes: Waste, Food, Purchasing, Social, Landscape, and GHG. There is additionally a building audit being conducted by an architecture & engineering firm. All these teams involve 14 graduate and 3 undergraduate student volunteers, and there are proposals for 3 ASR for-credit projects which could involve up to 9 students. The GHG team has audited 69,000 kg $CO_{2\ eq}$ of Scopes 1 & 2.

http://www.mcgill.ca/sustainability/sustainable-thomson-house

MAT material analysis tool

SP0031: Material Analysis Tool

An online tool to rate the sustainability of the materials used in over $100M worth of construction and renovation projects at McGill to inform all purchasing decisions, engage manufacturers, and encourage knowledge transfer. Following feedback on the website, more funding was requested to make further modifications. Currently 210 products on the website and the goal is to have the website internalized within McGill Design Services with the potential to be a stand-alone business.

http://www.mcgill.ca/sustainability/materials-analysis-tool

SP0032: Hazardous Chemicals Disposal Campaign

The Hazardous Materials Management Project (HMMS) was launch in late 2009 using the myLab system to provide the University research community with the technological tools to ensure safe and simple management of hazardous materials, from acquisition to disposal and centralizing information previously distributed amongst over 800 research laboratories. Phase 2 involves a hazardous waste inventory and minimization program. This project is inserted into this phase as a one-time opportunity to help labs dispose of unwanted hazard chemicals prior to inventorying for the myLab system's introduction. All big departments have completed the process with target completion date September 2012.

http://www.mcgill.ca/sustainability/hazardous-chemical-disposal-campaign

SP0036: Edible Campus 2

A partnership between McGill School of Architecture's Minimum Cost Housing Group and Santropol Roulant this education-focused urban gardening project, powered by over 250 volunteers, produces over 1000 kg of produce each season for Meals on Wheels, a bike-powered program for marginalized members of the local community. The goals of this two-year expansion project are to secure permanent funding for the garden's activities as well as expanding the garden to other corners of McGill's downtown campus, including beekeeping on the Frank Dawson Adams building which is to begin honey production in 2012. Last year workshops had approximately 500 attendees and three students were involved in ASR projects in ARGI 310 and ENVR 490.

http://www.mcgill.ca/sustainability/edible-campus-2

SP0039 Aboriginal Sustainability Project

Since Fall 2010, the Social Equity and Diversity Education, First Peoples' House and the Office of the Dean of Students have been working on a project that actively incorporates and promotes Aboriginal values and learning within and between organizational units on-campus. Over the past year the Aboriginal Sustainability Project has forged many links between these agents, aboriginal students, external aboriginal communities and other campus groups interested in aboriginal issues (for example: KANATA, which provides learning opportunities for anyone interested in Indigenous Studies). 566 people attended: a week of cultural activities preceded the annual Pow-wow, another week in March 2011 focused on the Inuit, as well as other educational events throughout the year. Surveys issued during aboriginal awareness week as well as other events indicate a strong degree of appreciation for the programming as well as a deeper understanding of issues being communicated. The project continues into a second year with the goal of deepening partnerships and expanding programming, including an after-school homework program with the Inter-Tribal Youth Center and Kahnawake Survival School.

http://www.mcgill.ca/sustainability/aboriginal-awareness-project

SP0040 EnGage

EnGage is a community-based social marketing pilot project in Upper Residences (McConnell, Molson, and Gardner Halls) aimed at decreasing electricity-wasting habits. Through the collaborative work of first-year students, upper-year students, and residence directors, we are looking forward to seeing the effect of collective action for improved energy practices in residential buildings on McGill University campus. Installation of screens that stream live from MyPulse Energy Dashboard prompting students to be aware of their personal energy consumption will be paired with active commitments from students and relevant reminders, engaging students in their individual and collective impact on energy consumption. The project, originated as a business proposal in CCOM 206, was delayed a year due to a labour disruption. In winter 2012 an independent psych study (PSYC 395) and a term paper for URBP 506 were produced. Currently there is a summer intern preparing programming for the coming academic year such as a social marketing manual for the ERC, an introductory video, and a Facebook

application. Additionally, further partnership opportunities for ASR are being explored with the MEP.

http://www.mcgill.ca/sustainability/engage-campus-residence-energy-metering

photo: JohnRH4/Creative Commons via flickr

SP0041 Shut your sash

A pilot campaign in the Life Sciences Complex that aims to promote awareness about energy consumption in McGill laboratories and reduce it by implementing sustainable fume hood usage/practices. This is done through a communications campaign which involves stickering, posters and checklists at the door to be filled out when closing a lab for the day. The aim is to create a model transferable to all variable-rate fume hoods which can implemented throughout McGill. Pre- and post-campaign measurements were conducted, revealing a high adoption rate. There is currently a follow-up measurement being undertaken to see if habits have formed long-term.

http://www.mcgill.ca/sustainability/shut-your-sash

SP0047 Out of the garden

A Macdonald campus student research group examining feasibility and need for an alternative, local and responsibly sourced, food provider. The current food service provider only provides for a small number of community members and has exclusivity contract preventing use of alternative and existing food sources such as MSEG. The idea is to coordinate between on-campus food producers, the Human Nutrition and Dietetics food labs, and demand in the Macdonald and Ste-Anne communities to provide meals for community members and in-need persons.

http://www.mcgill.ca/sustainability/out-garden

SP0048 Butterfly gardens

Although much space is devoted on Macdonald Campus to the study of plants and agriculture, there is little space devoted to ecosystems. This project proposes to create two theme gardens near the existing MSEG Meditative Garden. One will be a scent garden, the other a butterfly garden. The goal is to create ecosystems from native species to educate the general public while creating an opportunity to study biodiversity and encourage the creation of further theme gardens. Funding for the gardens came from a TD Friends of the Environment Fund grant, while the SPF provided funding for workshops highlighting the space.

http://www.mcgill.ca/sustainability/butterfly-garden

SP0049 Off-campus res dashboard

The Pulse Energy Software is currently monitoring 70 buildings. Residences are where user behaviour can have the greatest impact on energy consumption, however, many of McGill's Off-campus residences are not yet connected to the Dashboard. The project will connect four of these: Solin, Carrefour Sherbrooke, New Residence Hall, and 410 Sherbrooke so that their utility consumption can be monitored and optimized. The first three have been connected, while the last is still under renovation.

SP0051 Green Biobanking

The long-term storage of biological specimens in freezers can be very expensive, costing approximately 1000$/year in energy. Possibilities exist, however, to store DNA & RNA at room temperature. This pilot investigates options, consults with student researchers on best-practices and will inform procurement. Following a survey of current McGill University practices, a symposium will be hosted on green biobanking. Additionally there will be a trial purchase of greener freezers.

http://www.mcgill.ca/sustainability/green-biobanking

SP0052 Egg grader

The Donald McQueen Shaver Poultry Unit at Macdonald Campus currently produces 1800 dozen eggs/week (21,000). Due to lack of appropriate grading equipment, eggs are graded offsite and then sold to market. Purchasing an egg grader will allow eggs to be graded on-site for use internal to McGill, providing local, affordable eggs to 1800 students and staff at the MacDonald Campus Mac Market as well as the 3000 students and staff who dine at MFDS cafeterias. The unit will also serve as a demonstration to 400 students in a variety of courses. The equipment is currently installed but awaiting certification before grading can begin.

http://www.mcgill.ca/sustainability/egg-grader

SP0054 Ecolibrium residencies

A year-long CKUT partnership with campus sustainability groups using the existing Ecolibrium radio program to provide groups with tools to produce 1 hour radio shows that have been discussing issues of sustainability and sustainable living. The partnership will continue until October with 6 episodes having been produced already and available for download at archive.org (average of 53 downloads/episode) or through iTunes.

http://www.mcgill.ca/sustainability/ecolibrium-radio-residency

SP0057 Vision 2020

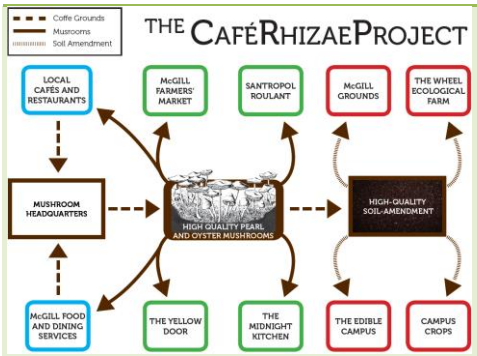
Vision 2020 is a year-long consultation and planning process to leverage and connect sustainability initiatives at McGill by building a community-wide sustainability strategy for the next decade. Vision 2020 was born from the recognition that sustainability efforts at McGill had both grassroots momentum and top-level support, but lacked an overarching strategy to guide and catalyze action.

Vision 2020 consists of three phases focused around three questions, each with a deliverable document:

- Where is McGill now relative to sustainability? (Situational Analysis)
- Where do we want to be in approximately 10 years? (Vision & Goals)
- How do we get there? (Action Plan)

Vision 2020 is participatory, collaborative, and experimental. It strives to create a fun, energizing model for consultation and engagement at McGill, and to produce a vision, goals, and action plan that are ambitious, realistic, and reflect the will of the McGill community. A core goal of Vision 2020 is for the planning process to flow smoothly into implementation.

http://www.mcgill.ca/sustainability/vision2020



SP0060 Café Rhizae

Café Rhizae project is a new initiative that seeks to produce edible mushrooms from campus generated coffee waste. McGill cafeterias produce hundreds of pounds of used coffee grounds per week, while used garbage to us, these can be the oyster mushroom's next meal. The members of this project are simply facilitators collecting used coffee grounds around campus and bringing it to the mushrooms so they can feed on it and grow. In turn, the mushrooms will provide fresh sustainable food for the community by harnessing this transformative capability of mushrooms, this project will redefine waste reduction as food production. The research component for NRSC 374 of the Café Rhizae project has been completed. The next major steps for this project will be finding a space to set up a permanent mushroom growing facility on the McGill campus and organizing the collection of used coffee grounds from McGill cafeterias.

http://www.mcgill.ca/sustainability/cafe-rhizae

photo: Colleen Lane /Creative Commons via flickr

SP0061: Addressing Business Travel

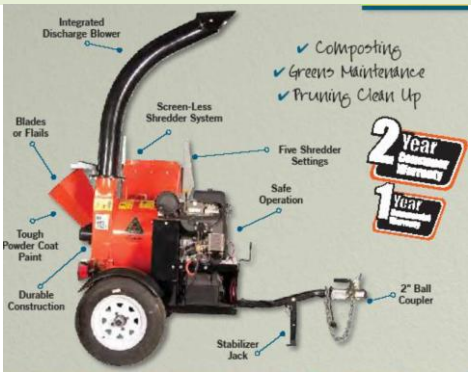
The Transport Survey (SP0022) revealed that the University had impressively green commuting modal share. No data was available to compare this with business travel behaviour. The SPF funded an independent study in Civil Engineering (CIVE 470) to analyze expense reports and estimate Scope 3 GHG emissions from air travel. The report for the course estimates emissions for 2011 at 4815 tons of CO_{2eq}. Additionally a survey is being developed and will be sent out to faculty and staff to determine barriers and benefits to substituting air travel for videoconferencing.

http://www.mcgill.ca/sustainability/addressing-business-travel-behaviour

photo: Andres Rueda/Creative Commons via flickr

SP0062: Mercury Thermometer Exchange

Currently, an unknown quantity of mercury thermometers is being used by researchers on campus. Mercury is volatile at room temperature with vapours that are odourless, tasteless and toxic. Not only do these thermometers present a hazard to staff, students and the environment, but if broken, require an extensive clean up by McGill's Hazardous Waste Management team. In light of the expected Environment Canada ban on the sale of these thermometers in 2012, Procurement and Waste Management want to replace all current mercury thermometers with equivalent alcohol-based devices. This will reduce the health risk to researchers and staff as well as prevent potential future contamination of the environment.



SP0064: Wood Shredder

A project to internalize campus grounds waste. Currently dead wood and leaves collected by the Grounds Department are shipped off-site for dumping. Meanwhile, Gorilla Composting's Big Hanna Composter has to purchase required carbon material for proper operation. The introduction of a shredder would allow for this waste to replace part of Gorilla Composting's need for carbon while freeing up campus space currently used as storage.

photo: chrisdonia/Creative Commons via flickr

SP0065: Greening Indoor McGill

Greening Indoor McGill Initiative promotes the use of indoor plants to improve air quality and promote a healthy aesthetic through the greening of indoor environments for McGill faculty, staff, and students. Drawing on the expertise of Department of Plant Science faculty and students, this pilot project is 1) propagating and distributing suitable indoor office plants; 2) holding workshops to disseminate information on plant care; 3) developing a resource website; 4) conducting follow-up surveys to provide additional information on plant care and maintenance. The impacts of these activities will be realized in both improvements to indoor environments and the creation of a McGill network to maintain and expand such improvements.

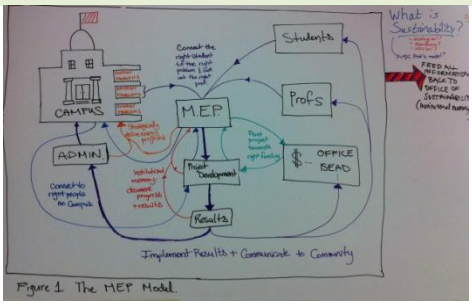


Figure 1 The MEP Model

SP0067: McGill Energy Project Interns

The McGill Energy Project (MEP) seeks to create applied student research opportunities, wherein students, faculty and administration collaborate on creating a more energy efficient and sustainable campus. We are currently propelled by the efforts of two paid student interns, a half-dozen student volunteers, as well as the support of several members of both the academic and administrative staff. These efforts include: the creation of a comprehensive map of the technical and organizational aspects of McGill's energy system, a GIS powered tool to visualize campus energy data, an analysis of the impact of the Ministère de l'Éducation, du Loisir et du Sport energy funding methodology on consumption reduction projects, the investigation of new remote thermostat controlled energy management techniques in residences, the creation of a final year engineering design project focusing on passive solar heating in the upper residences, a look at some of the behavioral changes needed on campus, and an event presenting these results to the McGill community in the Fall. In the short term, we intend to grow these efforts, adding several for-credit projects in the Fall semester. In the long term, we seek to institutionalize, become an integral part of curriculum, and spread our model to surrounding universities.

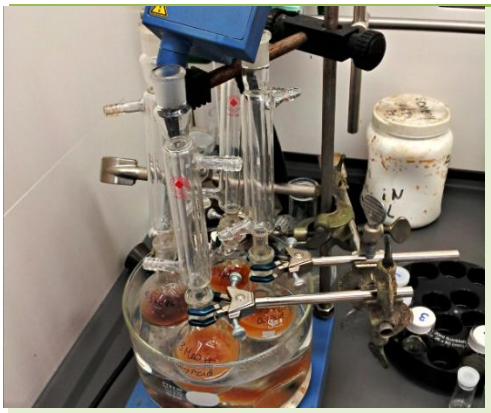
photo: zhouxuan12345678/Creative Commons via flickr

SP0068: Chemistry Lab Sustainability Curriculum Development

Creativity in curriculum development can ultimately lead to more sustainable lab practice. By using modern techniques and technology it is possible to eliminate waste at the undergraduate lab level by replacing solvents with water or grinding. Ultimately the goal is to replace petroleum derived chemicals with renewable feedstocks. It is possible to develop undergrad curriculum where students can contribute to research by doing experiments that push the boundaries of knowledge and by linking undergraduate and graduate research by having undergraduate labs preparing compounds for use in graduate research. Currently 40 students in CHEM 392 will experience 4 new lab modules this Fall and ultimately this project will after 800 chemistry students/semester. The project is actively seeking to encourage other faculties and departments to follow their model of curricula sustainability.

SP0069: Community Engagement Day

Community Engagement Day is a joint student-staff initiative that aims to have the McGill community participating in group activities on campus and around Montreal for one day this fall. The purpose of these activities, and indeed of the Day, is to address social needs and to celebrate and build upon the pre-existing initiatives that connect McGill to the many communities around the city. The first annual Community Engagement Day will take place on Friday, October 5, 2012.



SP0070: Biodiesel Production

The McGill Food and Dining Services (MFDS) produces approximately 14,000 liters of waste vegetable oil (WVO) per year. Disposal of this oil represents a loss of a valuable commodity: WVO contains an amount of chemical energy comparable to crude oil. While unsuitable for direct use in its native form, a simple chemical reaction transforms WVO into *biodiesel*, an ASTM International regulated alternative to fossil diesel fuel. Biodiesel offers many benefits over fossil diesel and combusts in conventional diesel engines without modification. This project is investigating the feasibility of biodiesel production from WVO at McGill for use in campus vehicles and equipment.

SP0071: MSEG 3

At the Macdonald campus of McGill University a student-led initiative is bringing forth ecological agriculture into its food system, curriculums, internship opportunities and its social sphere. With the support of McGill professors and staff, local organic farmers, and student volunteers, the Macdonald Student-run Ecological Gardens (MSEG) has grown into a 1 1/4 acre ecological vegetable farm, creating student opportunities for volunteering, internships and employment. Each year brings new members and therefore new interests and backgrounds, making MSEG a rich, diverse project. This builds our repertoire of information, increasing its scope and depth. Using the records, future generations of the project can assess ecological impact, economic feasibility and social involvement. Many of this year's members have used this experience as a launchpad for their own future farm businesses. The project is being integrated into classwork at various degrees; ranging from a 45 minute lecture to an entire course dedicated to its advancement. Student classwork ameliorated this year's field practices, allowing to increase MSEG's production, while matching harvests more closely to market demands. Indeed, more rigorous planning and commitment was needed to fulfill a 20+ full-season basket program and to provide food to the Dietetics' summer cafe; developing alternatives in Macdonald Campus' food system.

University Gazette Online, The University of North Carolina at Chapel Hill,http://gazette.unc.edu/archives/06apr26/file.3.html, accessed July 13th, 2012.

SP0073: Water Resource Management Intern

In 2011, the Ministère de l'Éducation, du Loisir et du Sport mandated all universities to reduce their water usage by 10% by 2015 and by 20% by 2020, relative to 2011 levels. McGill University Services hired an intern to determine the baseline water usage on the downtown campus and to help identify areas where consumption could be reduced. A total of 32 buildings have been audited. Shortly, we will begin identifying water conservation initiatives and drafting a water conservation communication campaign. This project will be proposed to students of ENVR 401in the fall 2012 semester.

SP0074: McGill Feeding McGill 3

A partnership between the Plant Science department and McGill Food & Dining Services that has fruits and vegetable grown at the Macdonald Horticultural Centre being served to the 3,000 student living in downtown residences, only 40 km away. The Horticultural Centre was the first farm in Quebec to be certified Local Food Plus. Several classes from the fall semester used the fields to showcase various crops and cropping strategies during laboratories. This year's funding is to make up the difference between wages for students working in the garden and revenue from residences.

SP0075: Gault Electric ATV 2

This mechanical engineering design team is taking the vision, parts and initial prototype from the first project and making it into a working vehicle for the Gault Nature Reserve to use and showcase on their grounds.

SP0076: McGill Farmers' Market 3

The McGill Farmers' Market is a collaborative initiative that draws from all corners of McGill University. It aims to bring delicious, local, seasonal produce to McGill's downtown campus. It is also an educational outlet for students, administration, faculty and the surrounding McGill community to learn about eating locally, staying healthy and promoting sustainable food choices both at McGill and in Montreal. The McGill Farmers' Market consists of two major projects annually. During the summer and fall, we offer a weekly Community Supported Agriculture Program (I like this version better). Basket-holders pre-pay in the spring to receive fresh in-season produce every week throughout the summer and fall either for a summer or fall session (or both), at a slightly discounted rate, helping farmers pay their up-front costs at the start of the growing season. The second is the weekly market throughout the fall, which runs from August to October. The market takes place every Thursday on McTavish and features local vendors that specialize in honey, maple syrup, tea and baked goods.

ANALYSIS OF SPF 2011-2012

The Sustainability Projects Fund received a steady influx of applications during its first year from both McGill students and staff. The number of applications dropped in its second year but as of April 30th 2012, the fund has committed a total of $648,254 to finance the 35 approved projects listed earlier in this report. This comes to a total of $1,643,129 for 74 projects since its inception, which is in line with the ideal timeline for the commitment of funds. The number and diversity of applicants demonstrates the desire of the McGill community to work together toward change on our campuses and reaffirms that the SPF is meeting an important need at McGill.

Table 1: Summary of Submissions 2011-2012

	Count	Percentage	Value ($)
Total Applications Received	47	100	874,492
Approved Applications	**35**	**74**	**648,254**
Rejected Applications	11	23	217,438

Table 1 shows the value of applications received and approved for this past year. There has been a decrease in applications for 2011-2012, for which there are a number of contributing elements. A decrease in awareness from the previous year, which featured multiple referendum campaigns, is certainly a factor. Increasing the amount of promotion will be important going forward. Additionally there could have been a build-up of projects searching for funding prior to the SPF coming into being, and the first year of operations satisfied this need. The 24% decrease in average application budget from one year to the next might indicate a better understanding of the eligibility criteria and purpose of the fund. The SPF Administrator would also had a hand in this as she was able to guide projects more pre-application, letting them know whether they are eligible and what they can expect from the fund.

Table 2: 2011-2012 Project Themes (% do not add up to 100)

Theme	**Academic**	**Energy**	**Water**	**Purchasing**	**Food**
% of Approved Projects	17%	17%	2%	5%	22%
Total Budget ($)	151,492	75,508	6,300	5,904	116,437
Theme	Buildings & Grounds	Community	Waste	Transportation	
% of Approved Projects	17%	46%	15%	12%	
Total Budget ($)	99,143	317,228	46,001	117,550	

The SPF's significant investments have also led to a number of concrete positive impacts, some of which are highlighted by theme in the sidebar. These themes were emergent from last year's projects,

IMPACT HIGHLIGHTS*

APPLIED STUDENT RESEARCH

54 STUDENT-PROJECTS

427 CLASS-WORKSHOP STUDENTS

ENERGY

4884 TONS OF CO_2EQ AUDITED

3 NEW BUILDINGS CONNECTED TO PULSE

WATER

318 M^3 RAINWATER COLLECTED

32 BUILDINGS AUDITED

PURCHASING

2 FOOD SUPPLIERS CERTIFIED LFP

FOOD

15,721 KG PROVIDED

BUILDINGS & GROUNDS

456 M^2 GREENSPACE CREATED

COMMUNITY

16,584 EVENT ATTENDEES

405+ VOLUNTEERS

WASTE

16,000 KG DIVERTED

TRANSPORTATION

5 TRAVEL BEHAVIOUR PAPERS SUBMITTED TO ACADEMIC JOURNALS

*These themes were emergent from last year and we recognize that they are not comprehensive; the themes are currently under revision.

the themes are being revised for subsequent years to be more comprehensive including the division of the Community theme to highlight elements of social sustainability. Table 2 shows the allocation of funding by theme.

Figure 1 gives a graphical representation of the timeline of funding approval for the past year. Working group meetings are approximately every two months.

Year-by-Year Comparison

The past year saw growing unrest in students at McGill and within and within Quebec. Despite this, SPF projects are even more more collaborative than last year, increasing by 17%. As

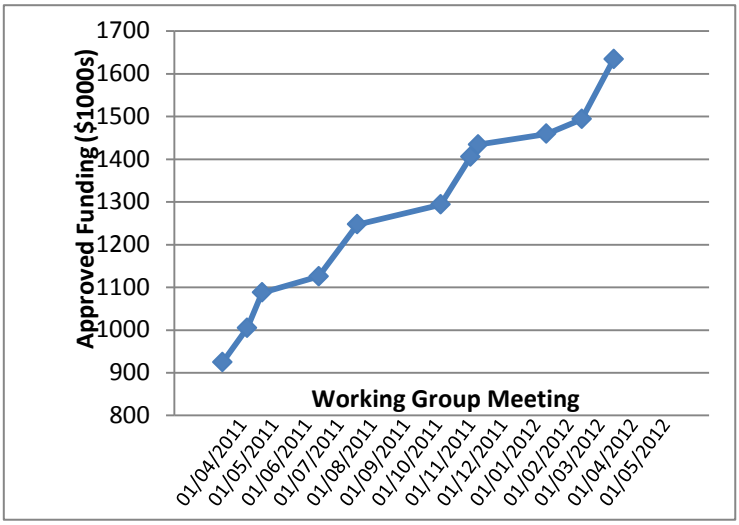


Figure 1 Cumulative Committed Funding from April 2011-April 2012

shows, 90% of committed funds, equivalent to over $600 000, have been allocated to collaborative projects, with nearly half of funding being led by Administrative & Support Staff. These multi-stakeholder projects rely on individuals moving beyond their traditional roles and relationships in order to work and build connections with people from different groups and departments. This has been the most effective way to build the significant cultural shift towards sustainability that the fund aims to create.

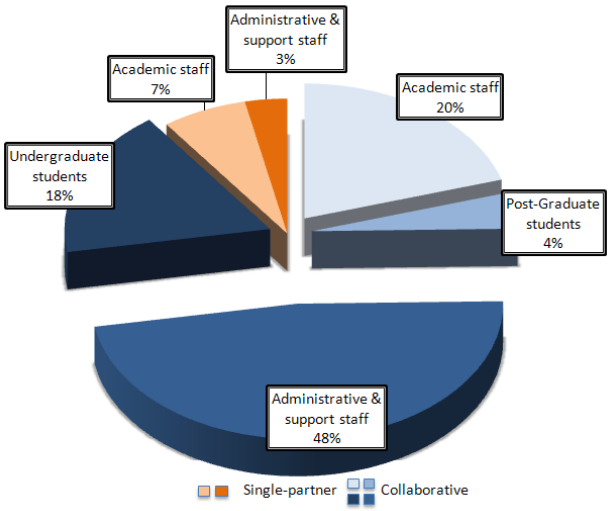


Figure 2 Distribution of Funding by Lead Partner and Collaboration

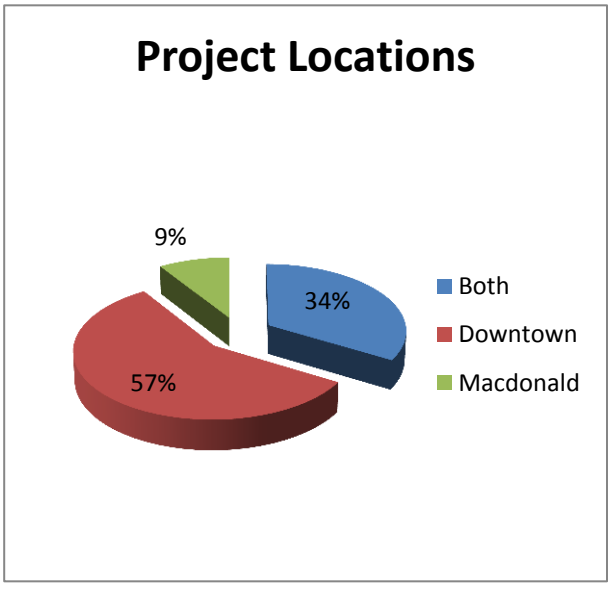


Figure 3 Fund Allocation by Location

The fund has been used to implement projects at both the Macdonald and Downtown campuses. Before its adoption, there had been discussions about an independent fund for the Macdonald campus. However, the decision to have one McGill-wide fund has proven effective in addressing the needs of both campuses. It has been important in facilitating the implementation of projects that span both campuses and build stronger connections between them. The past year saw a 10% increase in project funding spanning both campuses as can be seen in Figure 3.

The breakdown of funds disbursed from 2011-2012 is shown in Figure 4. Payroll data shows that 100 students were employed by the fund.

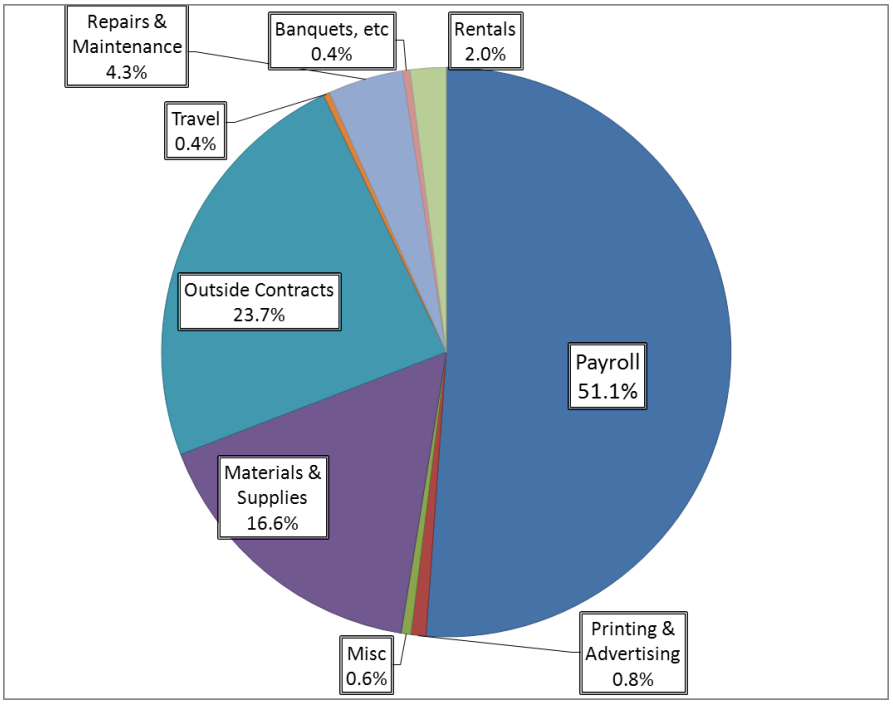


Figure 4 Funds Disbursed 2011-2012

There are 12 individuals over the past two years who have been responsible for more than one project: three of whom are responsible for three projects, and the rest responsible for two. Five of these individuals are students, while the other seven are staff. Most of these are for multi-year projects, in particular ones relating to food: MFSP, McGill Feeding McGill, Campus Crops, Edible Campus, MSEG, Food System Administrator, McGill Farmers' Market the Pulse Dashboard and the Big Hanna Composter.

Interns hired (and what they've done to advance the goals of the SPF)

Applied Student Research (ASR): Max Luke and Susanna Klassen

As an Applied Student Research (ASR) & Curriculum Intern at the Office of Sustainability, I was involved in building a network of faculty members who shared common interests in sustainability. This work followed from an ENVR 401 project that I was involved in the previous semester, where faculty interviews were conducted to assess departmental interest in sustainability. In addition to network building, I was involved in an ongoing discussion about the creation of new courses that would facilitate sustainability-focused applied student research. I initiated a discussion with the School of Environment about creating two interdisciplinary, applied student research courses. The courses would be student-centered and student-led, and course projects would be directly related to enhancing campus and community sustainability.

Reporting: Raphael Dumas

Raphael Dumas started his position in November. He has been devising processes to facilitate managing the SPF projects, from important milestones to aggregating impacts. After finishing the last Annual Report, he immediately jumped into working on this one, modifying the layout of the project blurbs. Additionally he has worked with the ASR intern on a partnership between the Office of Sustainability and CCOM 206, a communications course that 700 engineering students take every year. He also created promotional slides to send out to displays across campus.

Finance: Jennifer Cox

Jen Cox was the Finance intern for 2011-2012. She was in charge of tracking the finances of all 76 SPF projects and making sure that the administration matched their half of the expenses. She also tracked and evaluated the application process, finding statistics such as the average application process time and the most common reasons that projects are given regrets. Working with Helen and Justin, the Web interns, she relayed this information to potential applicants on the website. The Finance position has evolved and now, as a recent graduate, she works for the SPF as an accountant. New tasks involve processing most of the payroll and expense forms. She is developing a monthly budget check-in for all projects so that both the projects and the SPF team can have a better idea of the project's status.