Sustainable Development Summer Intern

SDB
Sustainable Development at Bishop's

Final Report and Recommendations

2013

Presented by:

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Bishop's University is a worthy competitor amongst university's invested in sustainable development. Our small but mighty size allows us to build a community of peoples dedicated to improving the quality of education, environmental surroundings and life through positive sustainable practices. As the Sustainable Development Summer Intern I am fortunate enough to be able to work alongside these motivated individuals.

Bishop's is impressive in housing their very own geothermal natural energy system, is Quebec's first bottled water free campus, and is continuously creating leadership opportunities for students to showcase their environmental innovations. As the Sustainable Development Summer Intern I was able to prepare a website dedicated to promoting awareness of Bishop's many sustainable development initiatives.

This summer we are officially showing our commitment to sustainability and the fight against environmental degradation through attaining a Carbon Care Certification. My efforts were concentrated in completing a green house gas inventory of various campus activities. This will provide Bishop's University with a tool to monitor its carbon foot print and create strategies in which to decrease it.

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Sustainable Development at Bishop's Website

The Sustainable Development at Bishop's website acts as an informative resource for students, faculty, administration and outsiders interested in sustainability at Bishop's University.

There are 4 categories for the user to explore regarding Bishop's sustainable initiatives: Policies and Committees, Programs and Research, Student and University Projects, Get Involved and Contact Us.

Policies and Committees: This section contains information regarding Bishop's commitment to sustainable practices throughout all aspects of the campus. Information is provided on the various committees at Bishop's dedicated to sustainable development, along with official documents such as the Bishop's University Environmental Policy, the Talloires declaration and the Campus Master Plan. Policies and Committees showcases Bishop's approach to sustainability, and the advancements within it from past to present.
Means of collecting the information: Many documents were collected from administration at Buildings and Grounds, past websites for the Sustainable Development Committee, as well as reports from previous Sustainable Development Interns.

Programs and Research: This section provides information regarding academic programs, courses and research relating to various channels of sustainable development.

Programs such as Environmental Science and Studies are displayed to demonstrate Bishop's strengths in environmental academia. Interviews of well known and liked

professors were created to provide students with more insight on these programs, as well applicable skills they will gain in a more personal style whilst highlighting Bishop's interactive and small class size teaching methods.

Descriptions of faculty based research groups focusing on climate change, sustainable education and the environment are provided. This allows students interested in research to easily access those professors to which they share a common interest.

Means of collecting the information: Information was collected from course calendars and program specific websites, professor profiles, as well as from professors themselves.

Student and University Projects: This section consists of large and small scale projects focusing on sustainable development successfully initiated by both the students and the university. This section is particularly important as it demonstrates the leaps and bounds all of Bishop's University has made to promote a sustainably minded campus. These projects can provide a springboard of ideas for future proposals.

Means of collecting the information: Information was collected from the director of Buildings and Grounds, Michel Caron, (in regards to large scale projects), from specific project leaders, as well as past sustainable development intern reports.

Get Involved and Contact Us: This section provides the necessary contacts and resource people for students to become leaders in sustainability. Funds specific for developing student leadership in sustainability and environmental action are advertised, as well as clubs and activities open to all students where one can engage with like minded individuals. This page is particularly important for users looking to network with others interested in sustainable development at Bishop's University.

Means of collecting the information: Contact information was collected from personnel specific to their roles, as well as past sustainable development intern reports.

An interactive guide (B.U. Be Green) to sustainable living on and off campus was created for students to adapt daily ecological thinking.

Pictures were about campus were added to enhance the visual aspect of the website. Some photos were provided from past sustainable development files, from student photographers, by Julie Fradette and Méryl Martin.

In order for this website to continue to act as a key resource for users, information must be continuously updated in each of the sections such as contacts, official documents, clubs, and new projects.

Construction, design and translation of the site were accomplished by Bishop's Webmaster, Julie Fradette.

Information was collected and translated by the current sustainable development intern, as well as Méryl Martin.

Bishop's Carbon Care Certification

Bishop's University has become a Carbon Care Certified campus. This certification is provided by the non-profit Canadian Environmental Technology Advancement Centre Envrio-Acces. Enviro-Access' mission is to support the innovation of projects to improve the quality of the environment and sustainable development. The Carbon Care certification signifies Bishop's University's commitment to developing and improving their sustainability all throughout campus activities and facilities. The certification was attained through the completion of a Green House Gas inventory done in compliance with the ISO Standard 14064-1, measuring direct and indirect emissions of the campus. The objectives of this inventory (as stated by the Enviro-Access report) are to:

- Establish GHG reduction objectives and follow the University's performance throughout the years
- Identify GHG reduction opportunities
- Identify potential GHG projects
- Communicate results to the university's community and general public
- The opportunity to register to many voluntary action programs including GHG registries

The following is the set of categories to be assessed for the Green House Gas inventory. I have included the university members who aided in providing me with the required information for that category.

Inventaire des émissions GES 2012 – Université Bishop's

Liste des données à fournir

1. Énergie

1.1 Pour chaque bâtiment et/ou équipement :

1.1.1. Gaz Naturel

Bâtiment	Consommation*	Superficie
	m^3	m^2
Total		

- *Means of collecting the information:* Ameresco Energy Audit

*Si seule la consommation totale de gaz naturel est connue, l'ajouter dans la case «Total» de la colonne «Consommation». Advenant le cas, il est toutefois indispensable d'obtenir la superficie de tous les bâtiments.

1.1.2. Mazout no 2 (huile à fournaise)

	litres
Total	

- *Means of collecting the information:* Berenice Rodriguez, Administrative Assistant Buildings and Grounds; Francine Hamel, Accounts Payable Technician

1.1.3. Diesel

	litres
Total	

- *Means of collecting the information:* Berenice Rodriguez, Administrative Assistant Buildings and Grounds; Francine Hamel, Accounts Payable Technician

1.1.4. Propane

	litres
Total	

- *Means of collecting the information:* Berenice Rodriguez, Administrative Assistant Buildings and Grounds; Francine Hamel, Accounts Payable Technician

1.1.5 Quantité d'électricité consommée pour chaque bâtiment et superficie

Bâtiment	Consommation*	Superficie
	kWh	m^2
Total		

*Si seule la consommation totale d'électricité est connue, l'ajouter dans la case «Total» de la colonne «Consommation». Advenant le cas, il est toutefois indispensable d'obtenir la superficie de tous les bâtiments.

1.2. Consommation de CO_2 et de glace sèche pour les laboratoires

- *Means of collecting the information:* Karl Gagnon, Chemistry Laboratory Technician; Benjamin Hobson, Biology Laboratory Technician

1.3. Consommation d'acétylène pour la soudure

Means of collecting the information: Berenice Rodriguez, Administrative Assistant Buildings and Grounds; Regine Neumann, Fine Arts Technician

1.4. Types et quantités de réfrigérant pour le système de climatisation des bâtiments

Nom/No d'équipement	Type de réfrigérant	Quantité de réfrigérant

Means of collecting the information: Jean-Guy Hamel, Refrigeration Mechanic

Est-ce que des équipements ont été mis au rebus en 2012 ?

1.5. Types et quantités de liquide/gaz utilisé pour le système de suppression des incendies

Means of collecting the information: Robert Poulin, Lead Hand

1.6. Types et quantités de réfrigérants pour une utilisation autre que le système de climatisation (ex. réfrigération)

Nom/No d'équipement	Type de réfrigérant	Quantité de réfrigérant

Means of collecting the information: Jean-Guy Hamel, Refrigeration Mechanic

Est-ce que des équipements ont été mis au rebus en 2012 ?

2. Équipements motorisés

2.1 Pour chacun des équipements motorisés appartenant à l'Université :

No	Année	Marque et modèle	Type de carburant (essence ou diesel)	Consommation carburant	Climatisé (oui ou non)

Means of collecting the information: Steven Rowe, Building and Grounds Foreman; Bertrand Collins, Manager of Lennoxville Golf Course

Est-ce que des véhicules ont été mis au rebus en 2012?

3. Autres (facultatif)

3.1. Nombre d'employés

Enseignants	Personnel d'encadrement	Personnel professionnel	Personnel de soutien

3.2. Nombre d'étudiants

3.3. Distance moyenne parcourue par les employés pour se rendre au travail

3.4. Distance moyenne parcourue par les étudiants pour se rendre à leurs cours

	Total
1. Moins de 1,9 km	
2. Entre 2 et 4,9 km	
3. Entre 5 et 14,9 km	
4. Entre 15 et 39,9 km	
5. 40 km et plus	
Total	

Means of collecting the information: Estimation with Michel Caron

3.5. Nombre de déplacements (incluant la distance) et moyen de transport utilisé pour les déplacements des employés dans le cadre de leur travail

3.6. Consommation de papier

Means of collecting the information: Brigitte Talbot, Print Shop Services

3.7. Provenance du papier

Means of collecting the information: Brigitte Talbot, Print Shop Services

3.8. Lieu d'enfouissement des matières résiduelles

Means of collecting the information: Jean Vaillancourt, Custodial Supervisor

3.9. Lieu du centre de tri et de l'usine de recyclage

Means of collecting the information: Jean Vaillancourt, Custodial Supervisor

3.10. Lieu de la plate-forme de compostage

Means of collecting the information: Jean Vaillancourt, Custodial Supervisor

3.11. Quantité de matières résiduelles produites sur le campus en 2012 et les années précédentes (en tonnes ou kg)

Année	Quantité de déchet ultime (enfouissement)	Quantité de matières recyclables	Quantité de matières compostables	Population de la communauté de l'université
2012				
2011				
2010				
2009				

Means of collecting the information: Jean Vaillancourt, Custodial Supervisor

3.12. Quantité de matières dangereuses enfouies

Means of collecting the information: Jean Vaillancourt, Custodial Supervisor; Karl Gagnon, Chemistry Laboratory Technician; Benjamin Hobson, Biology Laboratory Technician

3.13. Lieu d'enfouissement des matières dangereuses

Means of collecting the information: Jean Vaillancourt, Custodial Supervisor

3.14. Lieu de l'usine d'incinération des matières dangereuses

Means of collecting the information: Jean Vaillancourt, Custodial Supervisor

3.18 Volume d'eau potable consommée

Appareils, accessoires et électroménagers ou bâtiment	Nombre total sur le campus	Consommation annuelle (Gal.)
Total		

3.19 Volume d'eau usée générée

The next steps for Bishop's University are to share and communicate the findings of the Green House Gas inventory to campus and community members. The significance of this inventory could easily be discussed during Bishop's annual Eco-week which is open to all. We would also brainstorm ideas for our next goal of becoming a Carbon Neutral campus. In order to become Carbon Neutral, Bishop's would need to:

1. Have compensated all direct and indirect energy emissions detailed in the GHG inventory ending during the year for which the certification shall apply by purchasing and withdrawing GHG emissions, meeting one or the other of the following requirements:

    a. Credits issued by one of the following recognized programs: Verified Carbon Standards (VCS), Climate Action Reserve (CAR), The Gold Standard

    b. GHG emission reductions from a GHG project that complies with ISO standard 14064-2 and audited, with a reasonable level of assurance, by an auditing firm accredited by the Standards Council of Canada.

2. Provide proof of payment for, or withdrawal of, GHG emission reductions.

Gaiter Gears

Gaiter Gears is a student initiated bicycle rental program on campus. The aim of this project is to provide sustainable recreational activities and transportation to all.

In order for Gaiter Gears to continue to perform as a self sustaining project, promotion is needed throughout the school and community.

Additions to the project:

- Simple posters stating the rental location, times available and pricing. This has increased the amount of users during the summer season.
- Prices were lowered to account for the addition of taxes.
- Greater communication in financial records between Patterson Conference Services and Annis Karpenko (SRC- General Manager). Annis will now receive a monthly financial report of the Gaiter Gears activity.
- Purchasing of repair equipment, to do self repairs.

Future goals:

- To create a relationship with the Bike Club to help with maintenance and repairs of bikes, as well as to set up workshops for other students.
- To personally train conference service staff on how to efficiently and fully rent a bike (including checking bike care upon return), and to convert to having electronic records of rentals for ease of monitoring and viewing trends.
- To move the Gaiter Gear's rental location to the sports plex when construction is completed.

Bishop's Community Garden

The Bishop's Community Garden is located behind the far hangars near Patterson. This is a beautiful serene location next to the Peter Currie Marsh. The garden is greatly utilized by the spring and summer organic gardening class. After the students have completed their course the previously owned plots are given to other community garden members. This year there were less than ten members of the community garden and a number of people abandoned their plot part way through the season.

Changes needed:

- This location though not ideal for watering, nor for ease of access, remains the community garden spot and as such needs more promotion to attract more users.
- A single large fence around the circumference of the entire garden location would be more welcoming then, multiple, separately fenced in plots.
- A visible plot signup sheet.
- Bi-weekly or monthly meetings for members to learn, eat and ultimately create a sense of community.

Sustainability and the SRC

Many strides were taken to strengthen the partnership between the Student Representative Council and the Sustainability Office.

Clubs and Events: Myself and Anna Macdonald (VP of Social Affairs), created a set of guidelines for clubs and event committees to coordinate projects or events in a more ecological manner. This set of guidelines will be presented at the Club Heads meeting in September. My hopes for the future are to develop a point system associated with various sustainably oriented actions (ex. Compost bin at a wine and cheese= 10pts.). The club or committee with the highest amount of points would then receive an award or prize.

Orientation Week: Through collaboration with Jason Earl (VP of Student Affairs) and the frosh coordinators we were able to create an Orientation Week with a minor sustainability flair. I was able to do a short 5 minute presentation to the orientation leaders and judges in regards to how they can educate their new students as well as themselves regarding sustainable development. I was able to create a fun video to inform students of the ecological opportunities available to all. We also created the Green Team award to promote sustainable leadership among orientation week teams.

Notes for future collaboration during Orientation week:

- The Sustainable Development Intern should engage in the full judge and leader training in order to participate more actively and comfortably in orientation.
- Encourage the SRC Environmental Officer to become more involved in orientation week.
- Ensure you have a detailed list of all the orientation week events.
- Encourage leaders to be more ecologically aware so that they may act as ecological mentors for the new students.

Sustainability and the Recruitment Office

This summer the recruitment office and myself worked together to promote sustainable development at Bishop's University. We completed a survey to be published in the Alternative Journals Canadian Environmental Education Guide, which provides prospective students with an inside look of how Bishop's is sustainable; from its programs to its Geothermal Energy system, to the Sustainable Development Action Group.

I had short, weekly meetings with Kathleen Mulawka, (2013 BU Recruitment Officer) to ensure the officers were well versed in Bishop's sustainable development initiatives.

Green Levy Projects

This summer we approved one Green Levy request done by education student Adam Young. Adam will explore the Education for Sustainable Development movement in Sweden through attending classes, job shadowing and surveying model schools. He will gain new approaches and knowledge in which to incorporate environmental curriculum and knowledge in the university's policies, the School of Education and for Quebec schools locally and provincially.