

Sustainable Development Summer Intern

Final Report and Recommendations



2010

Presented by:

Adam Bond

Bishop's University is a leader in the move toward sustainability. While a great deal of work is still required to make the campus a net contributor to ecological integrity, rather than a burden on the environment, the dedication of the student body, faculty and management to make the campus an environmentally sustainable place is inescapable.

From successful student referendums which resulted in the establishment of a "Green Levy" and a ban on bottled water to a variety of volunteer initiatives in promoting environmental awareness, the student body has and continues to stand up to the plate and accept their environmental responsibilities. The commitment of the student body to sustainability exists in positive synergy with the dedication of the institution. Environmentally responsible policies ranging from the promotion of sustainability content in the curriculum to LEED Certification requirements for all new buildings exemplify the commitment to sustainability that exists in all corners of Bishop's University.

The role of the Sustainable Development Summer Intern (SDSI) is to coordinate and organize sustainable development information and activities during the summer months. Ensuring the dissemination of sustainable development information is a central challenge to achieving the sustainability objectives of the University. Student positions such as the Sustainable Development Intern and the SRC Environmental Officer which are mandated to promote environmental awareness are important resources in promoting environmental awareness.

The SDSI works during a period when the student body has left for the summer and has the benefit of working to organize sustainability information during a time of relative calm. That said, a great deal of change and progress is taking place at Bishop's University on the sustainability front. From changes in the corporate structure to a multitude of

development projects, creating a more environmentally sustainable campus is no small undertaking. And while a great deal of work is being done to make Bishop's a more environmentally responsible community, more work needs to be done to inform the community about these initiatives – this is a central challenge to sustainability at Bishop's University.

This year a focal mandate of the SDSI was to assess the Sierra Youth Coalition's Sustainable Campus Certification (SCC) and determine to what extent Bishop's has satisfied the requirements of the SCC and where improvements are needed. Another important area of focus for the SDSI this year has been to assess the University's obligations to the recently signed Talloires Declaration. This document summarizes the assessments of the SCC and Talloires at Bishop's University as well as a number of additional initiatives Bishop's is involved in.



Table of Contents

Sierra Youth Coalition's Sustainable Campus Certification **(pg 3)**

Talloires Declaration **(pg 19)**

Sustainable Development Office **(pg 25)**

Education in Sustainable Development Committee **(pg 26)**

Education in Sustainable Development Project **(pg 27)**

Liberal Arts Concentration in Ecology (Sustainability) **(pg 28)**

Sustainability Audit **(pg 28)**

RezLife EcoFloor **(pg 38)**

Summary of Recommendations **(pg 38)**

Sierra Youth Coalition's Sustainable Campus Certification

The Sierra Youth Coalition's Sustainable Campus Certification SCC is a tool that recognizes the work universities have done to make their campuses more sustainable and which helps the institutions to identify areas which require amelioration. While Bishop's has been very successful in implementing initiatives which promote sustainability, there are many areas which require some small improvements in order to satisfy the requirements of the SCC.

There are nine areas of campus sustainability that are graded by the SCC ([Appendix i](#)). Engaging in the certification process has two main benefits for Bishop's University. First, acquiring the SCC will enhance the institution's ability to act as a leading example in sustainable development by communicating our success to the world, and second, the process of becoming certified will help us to identify areas of the university which need improvements in sustainability.



The following is a summary of the SCC criteria assessment at Bishop's University. For the full report please reference the appendix.

Sustainability Assessment					
Identification		Criteria	Met? Yes/ No		Recommendations
Mandatory	SA-R1	Consultation with the university community	Yes		the audit must be approved by the SDLU
	SA-R2	Content of the sustainability assessment	Yes		Audit indicators and research and data collection methodologies must be clearly identifiable.
Identification		Criteria	Points Obtained	Points Possible	
Option	SA-O1	Assessment of the university community's perception	0	2	The tri-annual SD audit should include a survey of how SD is perceived in the community.
Orientation	ORI-1	Health and well-being	1	2	
	ORI-2	community	0	2	Improvements in the audit could be made by reviewing community involvement through volunteerism by students, faculty and alumni; voter turnout; diversity in race, ethnicity, religion, etc; equity opportunities; community meeting/ activity space; public transit; on-campus housing and satisfaction; and on-campus employment opportunities.
	ORI-3	Knowledge	2	2	
	ORI-4	Governance	1	2	Improvements to the audit can be made by including a review of the SRC's role in SD as well as the reporting procedures for the SDLU, SDAG and SRC in regards to SD.
	ORI-5	Economy and Wealth	2	2	Improvements can be made to the assessment by reviewing University purchasing and investment policies.
	ORI-6	Water	0	2	Because Bishop's does not have water meters, there is no way of measuring the consumption of water on campus. The assessment can be improved by reviewing management of water infrastructure and waste water.
	ORI-7	Materials	1	2	Improvements can be made to the assessment by reviewing local food production and life cycles of university equipment.



	ORI-8	Air	2	2	Improvements to the assessment can be made by including a survey of forests on campus and the true GHG footprint of the university to understand the institution's impact on outdoor air. A review of the HVAC system should also be included in the evaluation of indoor air quality.
	ORI-9	Energy	1	2	Improvements can be made to the assessment by including a review of energy efficient equipment.
	ORI-10	Land	2	2	Improvements to the assessment can be made by reviewing the full extent of green spaces on campus and the plant species present, Protected and unique ecosystems on campus, parking density and occupancy rates for residence and classrooms/ offices.
	Total		12	22	

Sustainability Policy					
Identification	Criteria		Met? Yes/ No		Recommendations
Mandatory	POL-R1	Consultation with the university community		No	The Sustainability Policy must be approved by the SDLU. Student representatives, faculty, staff, administration and senior management must be consulted in the drafting of the policy.
	POL-R2	Adoption by the board of directors		No	Adoption of the policy by the board of directors constitutes the formal commitment of the university to the Sustainability Policy. The date that the policy takes effect is required by the SYC to follow the university's application for Sustainable Campus Certification.
	POL-R3	Appointment of sustainability officer		No	Must hold a senior position at the university. Becomes the responsible authority for the policy.



	POL-R4	Application and follow-up mechanism		No	The SDLU should include in the sustainability policy an evaluation process of the university's performance through a sustainability assessment/ audit.
	POL-R5	Allocation of human, financial and material resources		No	The sustainability policy must state that the human, financial and material resources needed to fulfill the policy will be allocated.
	POL-R6	Publication of the policy		No	The policy must be published on the SDLU website.
Identification		Criteria	Points Obtained	Points Possible	
Option	POL-O1	Commitment to the coherence of the new decrees		1	A stipulation should be included in the policy which requires future university polices to comply with the sustainability policies.
Orientation	ORI-1	Health and well-being		2	The sustainability policy should promote recreation, sustainable diets, safety and security, health and spiritual services, and access to green spaces free of light and noise pollution.
	ORI-2	community		2	The sustainability policy should promote community involvement such as volunteerism, diversity among employees and students, gender equity, and community services such as sustainable housing, employment, environmental literacy and affordable public transit.



ORI-3	Knowledge		2	the policy should promote training in sustainability for students and teachers, environmental research, and the integration of sustainability into the curriculum of existing courses throughout the university and in the development of courses specifically dedicated to concepts of sustainable development.
ORI-4	Governance		2	The policy should promote positions in the university and student governments dedicated to sustainable development and monitoring of sustainability by these bodies.
ORI-5	Economy and Wealth		2	The sustainability policy should promote sustainability related financial awards and scholarships. The policy should also promote responsible investment policies by the university in local, ethically and environmentally sound opportunities.
ORI-6	Water		2	The sustainability policy should address the consumption, management and waste of drinking water as well as the management of runoff/ storm water.
ORI-7	Materials		2	The sustainability policy should promote the use of sustainable, local and energy efficient material including building supplies, paper, food and equipment. The reduction and maintenance of waste should also be addressed.
ORI-8	Air		2	The sustainability policy should promote clean, scent-free, chemical-free indoor air. The policy should also promote smoke-free, fresh outdoor air as well.



	ORI-9	Energy		2	The sustainability policy should promote renewable energy sources, reduced energy intensity and closer energy monitoring.
	ORI-10	Land		2	The sustainability policy should promote access to and sustainable maintenance of green spaces, reduction of impermeable surfaces and protection of natural ecosystems on campus.
Total			0	21	

Sustainability Action Plan					
Identification	Criteria	Met? Yes/ No		Recommendations	
Mandatory	AP-R1	Consultation with the university community	Yes		
	AP-R2	Adoption by the board of directors	Yes		
	AP-R3	Appointment of a person in charge	-	No	A responsible authority must be appointed by the SDLU to be responsible for the Action Plan. This person should be a university administrator, member of senior management or a university employee.
	AP-R4	Content of sustainability action plan		No	For each element of the Action Plan, objectives, actions, responsible authorities, resources, indicators, targets and deadlines should be included. A clear coherence between the Sustainability policy and the Action Plan should be observable.
	AP-R5	Renewal rate	Yes		
	AP-R6	Partial publication of sustainability action plan	Yes		
Identification	Criteria	Points Obtained	Points Possible		



Option	AP-O1	Progressive and innovative commitments	<u>1</u>	1	
	AP-O2	Full publication of sustainability action plan	<u>2</u>	2	
Orientation	ORI-1	Health and well-being	2	2	
	ORI-2	community	0	2	The Action Plan should work to advocate volunteerism and voter participation. The plan should promote access to affordable public transit and other community services.
	ORI-3	Knowledge	2	2	
	ORI-4	Governance	1	2	The Action Plan should identify responsible authorities, clear objectives, indicators of progress and resources afforded to each policy article.
	ORI-5	Economy and Wealth	2	2	
	ORI-6	Water	1	2	Initiatives to reduce water consumption should be incorporated into the plan.
	ORI-7	Materials	1	2	The action plan should promote local, organic food consumption on campus and by the BU community and promote the purchase of long-lasting, environmentally friendly equipment.
	ORI-8	Air	2	2	
	ORI-9	Energy	2	2	
	ORI-10	Land	1	2	The Action Plan should aim to reduce/ limit the non-permeable land cover of the campus.
Total			17	23	



Bishop's University Action Plan		Orientation	Sustainability Policy Objective	Person Responsible	Resources	Indicator	Target	Date
3.1 Administration and University Policy								
	Prepare and implement a Sustainable Development Action Plan based on the audit results.							
	Revise current Environmental Policy to create a Sustainable Development Policy for the University.							
	Ensure campus master plan takes into account sustainable development imperatives.							
	Examine on-campus initiatives and policies to encourage pedestrian, bicycle, public transportation and car pooling and to discourage use of cars on campus.							
	Ensure regular review and updating of Sustainable Development Action Plan.							
	Ensure regular review of the Sustainable Development Policy.							
3.2 Academics								
	Increase sustainable development content in curriculum.							
	Encourage Bishop's library to showcase sustainable development as separate field of study							
	Fund more and seek more funding for sustainable development research.							
	Ensure greater awareness of student aid and scholarships.							
3.3 Finance and Operations								
	Ensure that sustainable development becomes a required element of all budgetary processes of the University.							
	Review purchasing policies to purchase more recycled paper, ideally paper which is 100% recycled.							
	Review purchasing policies to ensure that low-impact							



pesticides are favoured.							
Review and monitor use of pesticides and fertilizers on campus, including on the golf course.							
Encourage greater distribution of nutritional information at on-campus food sources.							
Invest resources in upgrading recreational and sports facilities, including the Price Sports Complex.							
Invest resources in Old Lennoxville golf course and other exterior recreation areas.							
3.4 Facilities							
Install water meters and monitor University's water consumption.							
Review purchasing policies to ensure ecofriendly cleaning products are favoured.							
Review energy systems to ensure lower environmental impact, notably reducing emissions.							
Measure and record recycling, composting and garbage volumes at University.							
Reduce energy consumption.							
Increase use of renewable energy systems.							
Increase awareness of interior air quality and improve maintenance of HVAC systems.							
Review processes regarding stewardship of on-campus trees.							
Examine possibility of a carbon sequestration and forest stewardship project on campus lands.							
Ensure all future construction on campus is LEED certified and obtain BOMA "go green" certification for 40% of existing buildings.							
Improve overall fuel efficiency of University vehicles and review purchasing policies to ensure fuel efficient vehicles are favoured.							



	Determine with greater accuracy the scope of University lands.							
	Obtain information on green space surrounding the campus.							
3.5 Human Resources								
	Create a position of Sustainable Development Officer.							
	Provide training opportunities to staff and students on health & safety.							
	Organize training for staff on sustainable development.							

Performance Measurement and Follow-up					
Identification		Criteria	Met? Yes/ No		Recommendations
Mandatory	PMF-R1	Consultation with the university community		No	The PMF must be approved by the SDLU.
	PMF-R2	Appointment of a person in charge		No	A member of the SDLU who is also a university employee must be appointed as the responsible authority for the PMF.
	PMF-R3	Renewal rate		No	A PMF must be submitted to the SDLU every three years. This document should be produced in conjunction with the audit.
	PMF-R4	Partial publication of the performance measurement and follow-up		No	THE PMF reports must be published on the SDLU website.
Identification		Criteria	Points Obtained	Points Possible	
Option	PMF-O1	Full publication of the performance summary	0	2	In addition to publishing the full PMF online, a report summary should also be published and distributed throughout the university (possibly in <i>The Campus</i>).



	PMF-O2	Performance measurement and intermediate report	0	5	By conducting a PMF based on the objectives of an Action Plan which satisfies the SCC Orientation requirements, all the Orientations for the PMF should be addressed.
Orientation	ORI-1	Health and well-being	0	2	
	ORI-2	community	0	2	
	ORI-3	Knowledge	0	2	
	ORI-4	Governance	0	2	
	ORI-5	Economy and Wealth	0	2	
	ORI-6	Water	0	2	
	ORI-7	Materials	0	2	
	ORI-8	Air	0	2	
	ORI-9	Energy	0	2	
	ORI-10	Land	0	2	
Total			0	27	

Multi-stakeholder Committee					
Identification	Criteria	Met? Yes/ No		Recommendations	
Mandatory	MC-R1	Frequency of meetings	Yes		
	MC-R2	Sustainability mandate	YES		
	MC-R3	Transparency in committee appointments		No	To improve transparency in the SDLU, the appointment, election or selection of members should be published on the SDLU web page as well as the appointment/ election process. The roles and responsibilities of the SDLU members should be defined and published on the SDLU web page.
	MC-R4	Transparency in archiving and sharing information	Yes		
	MC-R5	continuity in committee composition		No	To insure continuity in the SDLU, the committee should strive to maintain at least 50% member composition from one year to the next. This should be noted and passed in the minutes of an SDLU meeting.



	MC-R6	Composition of the multi-stakeholder committee	<u>Yes</u>		The SDLU must be composed of the following university representatives: Senior management, department director, faculty, support staff, professional staff and students.
Identification		Criteria	Points Obtained	Points Possible	
Option	MC-O1	Visibility/ communication	0	2	The SDLU should conduct an annual review of its activities and post it on the website.
	MC-O2	Persons assigned or appointed		2	
	MC-O3	Reporting to senior administration	<u>2</u>	2	
	MC-O4	Advanced multi-stakeholder composition		15	
Total			2	21	

Fund						
Identification	Criteria	Points Obtained	Points Possible	Recommendations		
Option	FUN-O1	Existing fund that is accessible and with defined criteria.	<u>1</u>	1	SDAG should be given webpage on university website which clearly describes the Green Levy, the criteria for funding, and provides application forms.	
	FUN-O2	Multi-stakeholder fund management		2	The SDAG should be composed of representatives from: senior management, department directors, faculty, support staff, professional staff, and the SRC. A document outlining the structure of the SDAG should be published on the website.	
	FUN-O3	Visibility/ Communication		2	Projects which receive funding and the amount of funding each project receives should be published in <i>The Campus</i> every year.	



	FUN-04	Fund amounts		4	If the amount dedicated to the fund annually divided by the number of people in the university community is greater than one, 2 points are allocated, if the amount is greater than two, 4 points are allocated.
Total			1	9	

Human Resources					
Identification	Criteria	Points Obtained	Points Possible	Recommendations	
Option	HR-O1	Coordination		3	The establishment of a Sustainability Office which possesses resources for the Sustainable Development Intern and other persons involved in sustainability at Bishop's to communicate information to the community and beyond, coordinate actions and activities and hold meetings would be a great advantage to persons with sustainability related positions in the Bishop's community. The job description of the Sustainable Development Intern should be published online.
	HR-O2	Definition, documentation and communication of roles		2	The SDLU website should create a Human Resource page which identifies all the positions throughout the university which are involved in sustainable development.
Total			0	5	



Sustainability-related Education						
Identification		Criteria	Points Obtained	Points Possible	Recommendations	
Option	Students	EDU-O1	Mandatory Training		14	A committee of professors should be created to develop sets of principles and concepts of sustainability to be taught in courses throughout the university as well as creating a Liberal Arts Concentration in Sustainability (ecology). This committee should work with the Consultants on Education in Sustainable Development based out of Sherbrooke to ensure collaboration with other educational institutions in the region. This committee should work to promote environmental literacy in the content of curriculum throughout the university and highlight the relationships between environment, society and economy.
		EDU-O2	Optional Training		10	
		EDU-O3	Transversality of Sustainability Concepts		5	
	Faculty	EDU-O4	Training for Teaching Staff		6	To ensure teaching staff is qualified to enhance the environmental literacy of their students, training courses for new and existing professors in incorporating sustainability concepts into their programs should be established. This should be a mandate of the above mentioned committee of sustainability professors.
	Staff	EDU-O5	Training for Employees		6	To promote awareness and compliance with the university's sustainability policies, the SDLU should promote the training of staff in sustainability and the role of employees in ensuring sustainable business practices.



	Board Members	EDU-O6	Training for Board Members		3	The SDLU should create a training program in sustainability for board members which covers aspects of, and relationships between, environment, society and economy. The program should also promote awareness of sustainability initiatives and policies at Bishop's.
	All	EDU-O7	Sustainability Research Institute		3	A research team should be established to study sustainability at Bishop's and collaborate with other institutions in moving toward sustainability in general and on campus. This research team could double as the above mentioned committee of professors for promoting sustainability in curriculum.
Total				0	47	

Communications						
Identification		Criteria		Points Obtained	Points Possible	Recommendations
Option	Awareness	COM-O1	Commitment charter		2	A document should be created by the SDLU which states a commitment to sustainability that is available for every member of the community to sign and which is presented to every new member of the Bishop's community (ie. Frosh week kits, employee welcome packages, etc.)
		COM-O2	Events that integrate notions of sustainability		2	The SDLU should work with Residence and Conference Services and the SRC to establish a document that outlines sustainability principles for the organizing of events on campus (Home coming, sports events, guest speakers, conferences, etc)



	COM-03	Awareness raising activities		2	At least three awareness raising activities need to be organized and lead by sustainability professionals each year (conferences, lectures, actions, etc). The organizers, hosts number of participants and a description of the events should be reviewed and published online and in <i>The Campus</i> .	
	COM-04	Community relations and communications		2	Promoting and ensuring the regular involvement of the Bishop's community should be established through the creation of partnerships between various departments at the university. Regular communications of sustainability initiatives should be made online, through local media and particularly in <i>The Campus</i> .	
	Access to Information	COM-05	Communications plan for sustainability		2	A communications plan that outlines the objectives, means, timeline, persons in charge, budget and evaluation of how sustainability information is communicated should be created and adopted by the SDLU in coordination with the SDAG and the SRC.
		COM-06	Sustainability report for the general public		2	An easy to read annual report on how the Bishop's community is working toward achieving our sustainability goals, persons and groups involved in sustainability actions, how community members can become involved and areas of focus for the future should be published and distributed throughout the university.
	Total			0	12	

Talloires Declaration

The Talloires Declaration is a ten-point action plan for universities to move toward sustainable development. The declaration is a commitment of university signatories to environmental sustainability on their campuses and a recognition of the responsibility of institutions of higher education to set an example in environmental stewardship. More than 418 signatories in more than 50 countries have joined the Talloires Declaration network since its conception in 1990. In Canada alone there are 33 universities and colleges which have become signatories.

Principal Goldbloom signed the Talloires Declaration on May 21, 2010, committing Bishop’s University to the principles of this international declaration of universities to sustainable development. Below is an outline of the various ways the Bishop’s community is fulfilling the university’s obligation to the Talloires Declaration.

<p>1) Increase Awareness of Environmentally Sustainable Development Use every opportunity to raise public, government, industry, foundation, and university awareness by openly addressing the urgent need to move toward an environmentally sustainable future.</p>	<p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Action Plan <ul style="list-style-type: none"> • Encourage Bishop’s library to showcase sustainable development as separate field of study. • Encourage greater distribution of nutritional information at on-campus food sources. • Increase awareness of interior air quality and improve maintenance of HVAC systems. • Environmental Policy <ul style="list-style-type: none"> • 2.1 Environmental Awareness: B.U. will endeavour to enhance awareness of campus environmental projects and the
---	--

	<p>activities of the Sustainable Development & Land Use Committee (SDLU).</p> <p><u>SDAG/ SDI</u></p> <ul style="list-style-type: none"> • SRC Sustainable Development Fund. • Environmental Officer • Environmental Awareness Week/ The Sustainable Development Fair. • The Environmental Club. • “Think Global, Drink Local” Bottled Water Free Campus Campaign • The Campus Forest Project (BUCFP) • Lennoxville Plastic Bag Initiative
<p>2) Create an Institutional Culture of Sustainability Encourage all universities to engage in education, research, policy formation, and information exchange on population, environment, and development to move toward global sustainability.</p>	<p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Action Plan <ul style="list-style-type: none"> • Ensure regular review and updating of the Sustainable Development Action Plan. • Ensure regular review of the Sustainable Development Policy. • Prepare and implement a Sustainable Development Action Plan based on the audit results. • Revise current Environmental Policy to create a Sustainable Development Policy for the University. • Ensure campus master plan takes into account sustainable development imperatives. • Review processes regarding stewardship of on-campus trees. <p><u>SRC:</u></p> <ul style="list-style-type: none"> • Sustainable Development Fund (Green Levy). • Environmental Officer



<p>3) Educate for Environmentally Responsible Citizenship Establish programs to produce expertise in environmental management, sustainable economic development, population, and related fields to ensure that all university graduates are environmentally literate and have the awareness and understanding to be ecologically responsible citizens.</p>	<p><u>Faculty:</u></p> <ul style="list-style-type: none"> • Education for Sustainable Development (ESD), Multi-institution project. <p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Environmental Policy • 2.2 Curriculum: B.U. encourages faculty and Senate to consider, where appropriate, taking steps to incorporate environmental content throughout existing curriculum, increasing environment related course offerings and programs seeking more resources to dedicate to environmental research. <p><u>SDAG/ SDI:</u></p> <ul style="list-style-type: none"> • SRC Sustainable Development Fund. • Community Garden. • Environmental Awareness Week/ The Sustainable Development Fair. • The Environmental Club. • “Think Global, Drink Local” Bottled Water Free Campus Campaign • The Campus Forest Project (BUCFP). 		<ul style="list-style-type: none"> • 2.2 Curriculum: B.U. encourages faculty and Senate to consider, where appropriate, taking steps to incorporate environmental content throughout existing curriculum, increasing environment related course offerings and programs seeking more resources to dedicate to environmental research. <p><u>SDAG/ SDI:</u></p> <ul style="list-style-type: none"> • Environmental Awareness Week/ The Sustainable Development Fair.
<p>4) Foster Environmental Literacy For All Create programs to develop the capability of university faculty to teach environmental literacy to all undergraduate, graduate, and professional students.</p>	<p><u>Faculty</u></p> <ul style="list-style-type: none"> • Education for Sustainable Development (ESD), Multi-institution project. <p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Action Plan • Increase sustainable development content in curriculum. • Environmental Policy 	<p>5) Practice Institutional Ecology Set an example of environmental responsibility by establishing institutional ecology policies and practices of resource conservation, recycling, waste reduction, and environmentally sound operations.</p>	<p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Action Plan: <ul style="list-style-type: none"> • Examine on-campus initiatives and policies to encourage pedestrian, bicycle, public transportation and car pooling and to discourage use of cars on campus. • Invest resources in upgrading recreational and ports facilities, including the Price Sports Complex. • Invest resources in Old Lennoxville golf course and other exterior recreation areas. • Install water meters and monitor University’s water consumption. • Review energy systems to ensure lower environmental impact, notably reducing emissions. • Measure and record recycling, composting and garbage volumes at University.



	<ul style="list-style-type: none"> • Reduce energy consumption. • Increase use of renewable energy systems. • Examine possibility of a carbon sequestration and forest stewardship project on campus lands. • Ensure all future construction on campus is LEED silver certified and obtain BOMA “go green” certification for 40% of existing buildings. • Improve overall fuel efficiency of University vehicles and review purchasing policies to ensure fuel efficient vehicles are favoured. • Determine with greater accuracy the scope of University lands. • Obtain information on green space surrounding the campus. • Energy Efficiency Plan • Environmental Policy • 2.3 Energy Efficiency: B.U. will endeavour, in conjunction with the Facilities Department, to minimise energy consumption, reduce emissions and reduce the consumption of fossil fuels and other non-renewable energy sources. • 2.4 Transportation: B.U. will endeavour, in conjunction with the Facilities Department, to minimise vehicular energy consumption and to reduce emissions and the consumption
--	---

	<p>of fossil fuels.</p> <ul style="list-style-type: none"> • 2.5 Water Consumption: B.U. will endeavour, in conjunction with the Facilities Department, to minimise water consumption. • 2.6 Waste Reduction: Solid, Organic and Hazardous Materials: B.U. will endeavour, in conjunction with the Facilities and other departments, through recycling, composting and other waste management projects, to minimise solid and organic waste production and to limit and monitor the use of hazardous materials on campus grounds, in cleaning and in laboratories. • 2.7 Purchasing: B.U. will endeavour, in conjunction with the Vice-Principal Finance and Administration to minimise the ecological impact of the products and services purchased in support of campus operations. • 2.8 Buildings: B.U. will endeavour, in conjunction with Facilities Department, to minimise the ecological impact of the construction, maintenance and operation of the buildings on campus. <p><u>SDAG/ SDI:</u></p>
--	--



	<ul style="list-style-type: none"> • SRC Sustainable Development Fund. • Community Garden. • Fair Trade Coffee • Lennoxville Plastic Bag Initiative • Gaiter Gears • “Think Global, Drink Local” Bottled Water Free Campus Campaign
<p>6) Involve All Stakeholders Encourage involvement of government, foundations, and industry in supporting interdisciplinary research, education, policy formation, and information exchange in environmentally sustainable development. Expand work with community and nongovernmental organizations to assist in finding solutions to environmental problems.</p>	<p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Sustainable Development and Land Use Committee. <p><u>SDAG/ SDI:</u></p> <ul style="list-style-type: none"> • Sustainable Development Officer <p><u>SRC:</u></p> <ul style="list-style-type: none"> • Environmental Officer
<p>7) Collaborate for Interdisciplinary Approaches Convene university faculty and administrators with environmental practitioners to develop interdisciplinary approaches to curricula, research initiatives, operations, and outreach activities that support an environmentally sustainable future.</p>	<p><u>Faculty:</u></p> <ul style="list-style-type: none"> • Education for Sustainable Development (ESD), Multi-institution project. <p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Action Plan; • Ensure that sustainable development becomes a required element of all budgetary processes of the University. • Fund more and seek more funding for sustainable development research. • Ensure greater awareness of

	<p>student aid and scholarships.</p> <ul style="list-style-type: none"> • Review purchasing policies to purchase more recycled paper, ideally paper which is 100% recycled. • Review purchasing policies to ensure that low-impact pesticides are favoured. • Review and monitor use of pesticides and fertilizers on campus, including on the golf course. • Review purchasing policies to ensure eco-friendly cleaning products are favoured. • Create a position of Sustainable Development Officer. • Provide training opportunities to staff and students on health & safety. • Organize training for staff on sustainable development. • Increase sustainable development content in curriculum. <p><u>SRC:</u></p> <ul style="list-style-type: none"> • Sustainable Development Fund (Green Levy).
<p>8) Enhance Capacity of Primary and Secondary Schools Establish partnerships with primary and secondary schools to help develop the capacity for interdisciplinary teaching about population,</p>	<p><u>Faculties:</u></p> <ul style="list-style-type: none"> • Education for Sustainable Development (ESD), Multi-institution project. <p><u>SRC:</u></p> <ul style="list-style-type: none"> • Big Buddies



<p>environment, and sustainable development.</p>	
<p>9) Broaden Service and Outreach Nationally and Internationally Work with national and international organizations to promote a worldwide university effort toward a sustainable future.</p>	<p><u>Faculty:</u></p> <ul style="list-style-type: none"> • Student exchanges and international internships. <p><u>SDLU:</u></p> <ul style="list-style-type: none"> • SYC Sustainable Campus Certification. <p><u>SDAG/ SDI:</u></p> <ul style="list-style-type: none"> • Environmental Awareness Week/ The Sustainable Development Fair.
<p>10) Maintain the Movement Establish a Secretariat and a steering committee to continue this momentum, and to inform and support each other’s efforts in carrying out this declaration.</p>	<p><u>SDLU:</u></p> <ul style="list-style-type: none"> • Sustainable Development and Land Use Committee. <p><u>SRC:</u></p> <ul style="list-style-type: none"> • Sustainable Development Fund (Green Levy) • Environmental Officer. <p><u>SDAG/ SDI:</u></p> <ul style="list-style-type: none"> • Sustainable Development Action Group. • Sustainable Development Intern.

Definitions

Action Plan

The recommendations and suggested priorities of the SDLU to create a sustainable campus at Bishop’s University.

Big Buddies

Big Buddies is a mentoring program wherein Bishop’s students volunteer to become a “big buddy” to an elementary school student. The role of the big buddy is to set a positive example for their little buddy engaging them

in fun, healthy and educational activities. This is a good avenue through which the SRC could promote environmental sustainability in elementary schools.

Bishop’s University Campus Forest Project (BUCFP)

The BUCFP is a student-based initiative adopted by the SDLU and supervised by the SDAG with a mandate to promote sustainable relationships with nature by facilitating fun and educational activities that encourage students to engage with the natural environment responsibly. By leading outdoor games, guiding nature tours and promoting awareness of and respect for green spaces on campus the BUCFP works to help students appreciate the value of natural environments.

Community Garden

The Community Garden is an on-campus vegetable garden cultivated by students and the local community. The products of the garden are sold on campus in an effort to promote local produce consumption.

Energy Efficiency Plan

See [Energy Efficiency Plan](#).

Environmental Club, The

The Environmental Club is a student group which works on several environmental initiatives each year. This is a focal component of the Bishop’s environmental awareness apparatus. Many of the initiatives focus on concrete actions such as a campaign to ban bottled water which use dissemination of information to achieve success.

Environmental Awareness Week/ The Sustainable Development Fair

Environmental Awareness Week brings representatives from various environmental organizations and government departments to present their organizations and discuss important environmental issues in order to foster greater understanding and awareness of our environment. The



Sustainability Fair is an opportunity for student-based environmental initiatives and groups to increase awareness of their actions by presenting displays in the student union building.

Fair Trade Coffee

Members of SDAG and the Dining Committee agreed unanimously that Sodexo should purchase Fair Trade certified rather than Rainforest Alliance certified coffee. Deborah Langford, head of residences, worked with Sodexo to ensure that this was realized by April 2010.

Gaiter Gears

A bike share program that acquired bikes to be rented by students, community members, and tourists. The project is meant to allow access to the several bike trails around Bishop's.

Lennoxville Plastic Bag Initiative

A campaign to ban the use of plastic bags in Lennoxville by targeting individuals and local businesses. The campaign promoted awareness and understanding and aims to reduce the use of plastic bags in Lennoxville by 2.6 million bags per year.

Education for Sustainable Development (ESD), Multi-institution project

An agreement between La Ministre de l'éducation, du loisir et du sport and seven educational institutions (UdeS, BU, Champlain College, Cégeps de Granby, Sherbrooke, Drummondville and Victoriaville) to develop innovative practices to promote education in sustainable development at all levels of education.

Sports Centre Expansion

The John H. Price Sports Centre will be undergoing a \$29.5 million renovation that will more than double health and wellness facilities on campus. The renovations will be the first LEED (Leadership in Energy and Environmental Design) certified building on campus.

SRC Environmental Officer

The SRC environmental officer is responsible for ensuring sustainable practices within the SRC, working with groups and organizations to promote environmental awareness and to sit on the Student Affairs Committee and the SDAG.

Sustainable Development Action Group/ Sustainable Development Intern (SDAG/ SDI)

The SDAG is a student-based sub-committee of the SDLU, chaired by the SDI and which has a mandate to:

- provide a forum for ideas coming from the 'grassroots' of the Bishop's University community;
- provide a connection to those parts of Bishop's University administration affected by these ideas, and whose collaboration is necessary for their implementation;
- foster the realization of initiatives relating to sustainable development on the Bishop's University campus.

SRC Sustainable Development Fund.

The Sustainable Development Fund (a.k.a. the Green Levi) is a fund available to students that want to implement sustainable initiatives or promote sustainable development on campus. The fund is financed by a \$2.50 student fee per student, per semester.

Student exchanges and international internships

Many Bishop's students choose to go on exchange or acquire internships abroad. Providing knowledge and expertise in sustainable development to these students is a good approach for the university to broaden our reach in promoting sustainability internationally.

Sustainable Development and Land Use Committee



Sustainable Development Summer Intern Report 2010

Includes students, teachers, administrators and Champlain College representatives. Its mandate is to:

- establish sustainable development and land use policies regarding the campus,
- analyze and evaluate campus-wide related environmental issues, including hazardous material and laboratory use and storage, and to make appropriate recommendations to the Executive Committee and as needed, to the Finance Committee,
- analyze and evaluate the land use issues and to make appropriate recommendations to the Executive Committee and as needed, to the Finance Committee,
- ensure that the Peter Curry Marsh continues to flourish in conjunction with the mandate with Ducks Unlimited,
- review and report on the following:
 - University Sustainable Development Audit, every three years.
 - Land Use and Management Program
 - Waste Management Program
 - Energy Conservation Program

Sustainable Development Student Intern (SDI)

The SDI is a student internship position funded by the Bishop's Foundation, using income from the Elizabeth Harvey Memorial Sustainable Development Student Internship trust fund. The intern's purpose is to play a leadership role in promoting awareness of sustainable development and in the realization of sustainable development projects, activities and initiatives on Bishop's Campus, particularly those emanating from the 'grassroots' (individual students or others).

SYC Sustainable Campus Certification

The Sierra Youth Coalition's Sustainable Campus Certification (SCC) is a certification given to university campuses which meet a detailed set of requirements. Through an assessment of the university's policies, environmental action plan, sustainability committee, environmental fund, human resources, governance, community, energy use and efficiency,

curriculum, health, knowledge communication and more, the SCC determines the level of a campus' sustainability and identifies the areas where improvements are required.

"Think Global, Drink Local" Bottled Water Free Campus Campaign

A campaign to phase out the sale of bottled water on campus. The campaign worked to educate the student body of the environmental impacts of bottled water and held a referendum in which the majority of the student body supported the ban of bottled water on campus.

Bishop's University Sustainable Development Office (SDO)

SRC President, Paige Johnson, has been extremely helpful to the SDSI in providing information on SRC sustainability policies and positions, attending and valuably contributing to sustainability meetings and affording time for discussion and brain storming.

The SRC has decided to open a LEAP resource room on the main floor of the SUB and offered the space to double as Bishop's University's first Sustainable Development Office.

While Bishop's does not have the resources to employ full-time SDO staff such as exist at more populous universities, there exist several positions at the university already involved in sustainability that will benefit from having the resources of a shared office space. The SDO will act as a central hub of sustainability at Bishop's, where the Sustainable Development Intern, SRC Environmental Officer, Environmental Club President and other environmental activists on campus can coordinate actions and promote synergy in achieving



the community's environmental goals. The SDO will be a place where students can go to get information on sustainability policies of the university, environmental initiatives and how to get involved, and even academic information on courses students can take to become more environmentally literate citizens.

The SDO will provide office space and resources to the sustainability related positions at the university as well as offer meeting space and act as a central location where students seeking information on sustainability policies and actions at campus can have their questions answered. Making the LEAP resource room and the SDO roommates addresses the challenge of space limitations in the SUB and provides an important benefit to the student body by having a one stop location for environmental and leadership resources. An additional benefit to both the LEAP resource room and the SDO is the potential for providing information on either program to students that may be seeking information on the other program.

Though resource limitations preclude the option of the creation of a fully-staffed sustainability office at a small university such as Bishop's, the competitive advantage of having a small, engaged and motivated community will enable us to achieve our environmental objectives in ways that are effective, efficient and organic to Bishop's university.

Education in Sustainable Development Committee

B.U. encourages faculty and Senate to consider, where appropriate, taking steps to incorporate environmental content throughout existing curriculum, increasing environment related course offerings and programs seeking more resources to dedicate to environmental research.

-Bishop's University Environmental Policy article 2.2

Both the Talloires Declaration and the SCC require that sustainable development be integrated into the curriculum of member institutions. Additionally, it is in the very policies of Bishop's University that sustainable development be promoted through education. The establishment of a faculty-based committee which is responsible for outlining principles of sustainability that should be included in curriculum throughout the University departments, provide assistance for professors in integrating concepts of sustainability in their courses, designing and implementing a Liberal Arts Concentration in Ecology (sustainability), monitoring progress in the integration of sustainability into the curriculum and acting as the main contact body for the *Education in Sustainable Development Project* will be an effective way to ensure environmental literacy of Bishop's students and sustainable practices of the University.

The SDSI has been working with Prof. Keith Baxter who has come-up with the idea for a Liberal Arts Concentration in Ecology. The concentration would be composed of pre-existing courses with content already dealing with elements of sustainability. An



Education in Sustainable Development Committee (ESDC) would be a useful tool in moving forward on this initiative. While some courses have already been identified to potentially include in this concentration ([Appendix ii](#)), an ESDC could work with professors to tailor the content of their courses to increase focus on sustainability.

During the course of the summer the SDSI came across an agreement between the Government of Quebec and a group of seven post-secondary educational institutions (UdeS, BU, Champlain College, Cégeps de Granby, Sherbrooke, Drummondville and Victoriaville) which provides funding for two consultants on Education in Sustainable Development (ESD). The agreement (*Programme de collaboration universités: Education et développement durable, une nécessaire intégration*) arranged for the Education in Sustainable Development Project to begin in 2009, but it was not until July 2010 that the two consultants were selected.

On Monday August 9, 2010 the SDSI arranged a meeting with the ESD Consultants, Prof. Keith Baxter and Dr. Heidi Webber ([Appendix iii](#)) that resulted in some useful dialog and a helpful first contact with the ESD consultants. It is important that these consultants as well as professionals involved in ESD at other institutions party to the ESD Project have contact representatives at Bishop's University that are well informed and actively involved in ESD. An ESDC could be an appropriate authority for this responsibility.

The Sustainable Development Student Intern and the SRC Environmental Officer should continue to work with Prof. Baxter

and the ESD Consultants to create a proposal for the creation of an ESD Committee at Bishop's.

Education in Sustainable Development Project

The Education in Sustainable Development Project is part of an agreement between l'Ministère de l'Éducation, du Loisir et du Sport du Québec (MELS) and seven post-secondary education institutions (UdeS, BU, Champlain College, Cégeps de Granby, Sherbrooke, Drummondville and Victoriaville) ([Appendix iv](#)). The ESD Project, which was intended to begin in 2009 but which was delayed until 2010, has created two ESD consultant positions based out of the Université du Sherbrooke.

The SDSI arranged a meeting with the ESD Consultants (Mélanie Drouin and Véronique Bisailon) for Monday August 9th where they were able to explain their roles in the project to us and make initial contact with the University – Prof. Baxter is currently the designated contact person for these consultants at Bishop's. Because the project has only just begun, the consultants are just beginning to make contact with the project parties to determine the details of how they can best aid the institutions in integrating sustainable development content into course curriculum.

The general mandate of the ESD Consultants is to facilitate the establishment of cooperative relationships among the ESD Project parties that promotes the integration of Sustainable Development into the curriculum and to provide expertise in this process when possible ([Appendix iii](#)).



The creation of an ESD Committee at Bishop's, composed of professors, would be a valuable tool in maintaining contact with the ESD Consultants, other ESD representatives at other educational institutions and in the implementation of ESD at Bishop's.

Liberal Arts Concentration in Ecology (Sustainability)

Professor Keith Baxter has been working on the creation of a Liberal Arts Concentration in Ecology. The aim is to construct the concentration out of pre-existing courses which already have sustainability related content or that can be slightly tailored to increase such content.

In the tradition of liberal education at Bishop's, the concentration will be composed of courses from departments across the University. Through exposing students to concepts of sustainability in fields from Environmental Studies to Literature and from Business to Sociology, students in the Ecology Concentration will become professionals of sustainability and how it applies to all corners of society.

Prof. Baxter asked the SDSI to compile a list of courses that could be considered for the concentration. See [Appendix V](#). The establishment of an ESD Committee would be a useful resource for the continued development of this concentration.

Sustainability Audit

Where appropriate, incorporating cases and examples derived from the Campus Environmental Audit Project or other on-campus environmental projects into course-work.

- Bishop's University Environmental Policy article 4.2.1

The Sustainability Audit (SA) at Bishop's University is an important tool for monitoring the institution's progression toward sustainable development. A series of audits have been conducted at the University since the late 1990s, mainly under the supervision of Dr. Daren Bardati. In 2008 the Audit was conducted by Daphne D. Fisher under the supervision of Mr. Michel Caron.

There are a handful of policies at the University which are intended to ensure regular environmental audits; however, the amount of work involved in conducting a detailed sustainability audit is greater than can be satisfied by a single, part-time student. Thus, it is important that the SA be housed within the academic arena, not the administrative apparatus, of the university for two focal reasons: 1. Incorporating the SA within the curriculum as assignments will provide cost-effective resources capable of conducting an in-depth SA and 2. Inclusion of SA assignments in the classroom will provide local, experiential learning opportunities for students.

The SDSI has been working with Dr. Heidi Webber to develop a plan for the inclusion of the SA within the curriculum at Bishop's University. It has become apparent that the SA should be divided into pieces and assigned to courses with relevant content. For



example, ESG260: Research Methods could design data collection methods; ESG100: Introduction to Environmental Studies could collect the data using methods outlined by ESG160; ESG261: Quantitative Methods could analyze and present the collected Data; and ESG262/ 362 Geographical Information Systems could collect and organize geographical data.

The SDSI has been in contact with several professors in the Environmental Studies and Geography Department (Dr. Webber, Dr. Levac, Dr. Fletcher, Dr. Bardati) and has found that there is a great deal of support for this project but that there remain important details that must be resolved to ensure that the Sustainability Audit Project is conducted every three years using comparable methods for the development of an interdepartmental GIS Database that will allow for the long-term monitoring of sustainable development at Bishop's. The details which have become apparent to date are:

1. Designing a Sustainability Audit Project Outline.
2. Approval of the project outline by the Senate.
3. Approval of the project outline by the SDLU.
4. Designation of a Project Coordinator position on a tri-annual basis.

Below is a draft for a proposal outline created by the SDSI.

Sustainability Audit Project Proposal

Experiential Learning in the Classroom

Introduction

In order for Bishop's University to fulfill the environmental obligations which have been willingly assumed by the student body and the administration and to satisfy those requirements for the exemplification of sustainable development inherent in any institution of higher education, the collection of data and the organization of information which depicts the condition of sustainability of the university is a major requisite. The Sustainability Audit (SA) at Bishop's University is an important tool that allows us to monitor progress in the move toward building a more environmentally sustainable campus and to identify the areas which require greater attention.

Executing a detailed and reliable sustainability assessment of any institutions requires a great deal of work. While Bishop's University does not possess the resources to employ a full-time environmental office staff, the existing policies which promote the inclusion of the SA in course content provide experiential learning opportunities to the students and cost management tools to the institution.

The SA must be conducted every three years, yet there is not an institutionalized process established at Bishop's which ensures that consistent methods are employed from one year to the next. Currently there is no identifiable responsible authority for conducting the audit and there is no established outline, guide or template designated for conducting the sustainability audit at this university.

In order to provide consistency to environmental audits conducted every three years an institutionalized protocol and a responsible authority must be established. Because the limited resources of the university preclude the assignment of the SA to the responsibility of



employees of the university and because university policy promotes the inclusion of the audit in course content to capitalize on experiential learning, the audit should be established within the curriculum of related courses at Bishop’s.

Dividing elements of the audit among various classes and students will provide valuable, hands-on learning projects that will enhance the competencies of participant students. One central, responsible authority is still required to ensure that consistency, communication and coherence persist between and among the groups of students involved in the process. Failure to effectively establish an institutionalized protocol for conducting the Sustainability Audit will reaffirm the University’s reliance on ad hoc approaches to conducting the audit and reduce the usefulness of resulting information due to inconsistency in methodologies from one year to the next.

University Policies Relating to Curriculum-based Sustainability Audit

Bishop’s University Environmental Policy

2.2 *B.U. encourages faculty and Senate to consider, where appropriate, taking steps to incorporate environmental content throughout existing curriculum, increasing environment related course offerings and programs seeking more resources to dedicate to environmental research.*

4.2.1 *Where appropriate, incorporating cases and examples derived from the Campus Environmental Audit Project or other on-campus environmental projects into course-work.*

Bishop’s University Sustainable Development Action Plan

3.2.1 *Increase sustainable development content in curriculum.*

SYC Sustainability Assessment Requirements for the SCC

The Sierra Youth Coalition’s (SYC) Sustainable Campus Certification (SCC) has 13 requirements for the Sustainability Assessment of applicant universities. Though there are several requisites established by the SYC for SCC, the adaptability of these requirements make the SCC a good guide for conducting the sustainability audit at Bishop’s in a way that provides consistency in methods from year to year and which helps to identify areas of the audit which require improvements.

To include the SA within the curriculum, projects should include a proposal for data collection methods and reports that summarize the findings and, where appropriate, maps and charts. An interdepartmental database should also be established for maintaining data from year to year.

Sustainability Assessment			
Identification		Criteria	Description
Mandatory	SA-R1	Consultation with the university community	An outline of the Sustainability Audit must be approved by the SDLU and the completed document must be submitted to the SDLU for review.
	SA-R2	Content of the sustainability assessment	The research conducted during the audit must be well organized with properly



			referenced sources. Indicators and methods must be clear.
Identification		Criteria	
Option	SA-O1	Assessment of the university community's perception	By conducting interviews and surveys to address the ten Orientations an assessment of the University's perceptions will be conducted.
Orientation	ORI-1	Health and well-being	<p>Recreation</p> <ul style="list-style-type: none"> - Recreation Space - Recreation Participation - <i>Any other appropriate theme</i> <p>Food</p> <ul style="list-style-type: none"> - Nutritional information - Organic, fair trade and not genetically modified - <i>Any other appropriate theme</i> <p>Safety</p> <ul style="list-style-type: none"> - Motor vehicle accidents - Workplace incidents - Incidents of assault - <i>Any other appropriate theme</i> - Health services - Health professionals - Sick days - Smoking - Mental health professionals - Retention rate - Spiritual services

			<ul style="list-style-type: none"> - Mental illnesses - Student suicide rate - <i>Any other appropriate theme</i> <p>Environnement</p> <ul style="list-style-type: none"> - Accessible green spaces - Noise pollution - Light pollution - <i>Any other appropriate theme</i>
	ORI-2	community	<p>Involvement and cohesion</p> <ul style="list-style-type: none"> - Volunteerism - Alumni volunteerism - Graduates in the community - Sense of belonging to the community - Voter turnout - <i>Any other appropriate theme</i> <p>Diversity</p> <ul style="list-style-type: none"> - Disabled teachers, employees and students - Teachers, employees and students who are members of a minority - Gender of the faculty, staff and students - Equal opportunity for indigenous faculty, staff and students - <i>Any other appropriate theme (international students)</i>

		<p>Services</p> <ul style="list-style-type: none"> - Indoor community spaces - On-campus housing - On-campus employment services - Community library cards - On-campus media expenditures - Affordability of public transit - <i>Any other appropriate theme lodging in the community)</i> 			<ul style="list-style-type: none"> - Course with sustainability content - Collaborative or for-profit course - <i>Any other appropriate theme</i>
	ORI-3	Knowledge	<p>Training</p> <ul style="list-style-type: none"> - Sustainability training for teachers and employees - Student jobs in areas related to campus sustainability - <i>Any other appropriate theme</i> <p>Research</p> <ul style="list-style-type: none"> - Collaborative research on campus - Sustainability research expenditures - <i>Any other appropriate theme</i> <p>Curriculum</p> <ul style="list-style-type: none"> - Sustainability pledge - Sustainability literacy survey - Courses with applied learning 	ORI-4	Governance



		<ul style="list-style-type: none"> - University government - Implementation planning - University government: reporting - University government: information management - Student government: implementation planning - Student government: reporting - Student government: information management - Any other appropriate theme
ORI-5	Economy and Wealth	<p>Individual</p> <ul style="list-style-type: none"> - Student with loans - Student fees - Financial awards - Wage pay equity - Any other appropriate theme <p>Institutional</p> <ul style="list-style-type: none"> - Income - Locally purchased goods and services - Deferred maintenance - Ethically and environmentally sound investments - Local investments - <i>Any other appropriate theme</i>

ORI-6	Water	<p>Consumption</p> <ul style="list-style-type: none"> - Potable water consumed - Storm and grey water reuse - <i>Any other appropriate theme</i> <p>Management</p> <ul style="list-style-type: none"> - Leaking fixtures - Water metering: potable - Water metering: wastewater - Pressure testing for leaks - Efficiency of fixtures - Motion detectors installed - Any other appropriate theme <p>Wastewater and storm water</p> <ul style="list-style-type: none"> - Wastewater produced - Wastewater treatment - Storm water contaminant separation/collection - <i>Any other appropriate theme</i>
ORI-7	Materials	<p>Buildings</p> <ul style="list-style-type: none"> - LEED™ certification - <i>Any other appropriate theme</i> <p>Paper</p> <ul style="list-style-type: none"> - Paper consumption - Post-consumer content of paper - Tree-free paper - Chlorine-free paper - <i>Any other appropriate</i>



		<p><i>theme</i></p> <p>Food</p> <ul style="list-style-type: none"> - Local food production - <i>Any other appropriate theme</i> <p><i>theme</i></p> <p>Equipment</p> <ul style="list-style-type: none"> - Life cycle - <i>Any other appropriate theme</i> <p>Residual waste</p> <ul style="list-style-type: none"> - Solid waste and recyclables produced - Solid waste reduction - Compost - Hazardous waste - <i>Any other appropriate theme</i>
ORI-8	Air	<p>Indoor</p> <ul style="list-style-type: none"> - Asbestos and mould - Scent-free indoor spaces - Opening windows - Air change effectiveness - Chemical free cleaning - Pesticides used indoors - Cleaning of air handling units - Carbon dioxide monitoring indoors - <i>Any other appropriate theme</i> <p>Outdoor</p> <ul style="list-style-type: none"> - Smoke-free outdoor spaces - Living trees outdoors - Monitoring of exterior

		<p>vents</p> <ul style="list-style-type: none"> - <i>Any other appropriate theme</i>
ORI-9	Energy	<p>Source</p> <ul style="list-style-type: none"> - Renewable energy - Local energy sources - <i>Any other appropriate theme</i> <p>Intensity of use</p> <ul style="list-style-type: none"> - Greenhouse gas emissions (buildings, commuting transportation, fleet and grounds vehicles) - Reduction in energy consumption - <i>Any other appropriate theme</i> <p>Management</p> <ul style="list-style-type: none"> - Energy metering - Energy efficient equipment - HVAC&R system control - Automatic lighting sensors - <i>Any other appropriate theme</i>
ORI-10	Land	<p>Managed green space</p> <ul style="list-style-type: none"> - Managed green space - Fertilizers - Pesticides - Native plant species



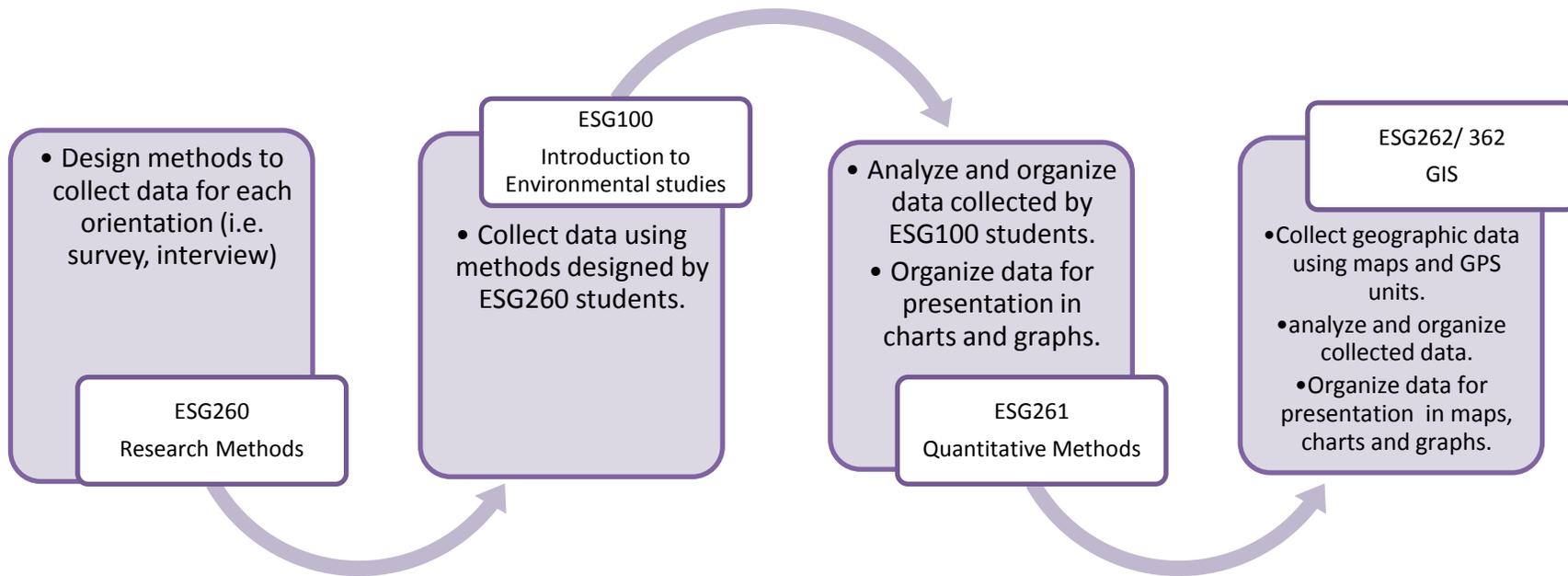
		<ul style="list-style-type: none"> - <i>Any other appropriate theme</i> Natural areas - Healthy natural areas - Restoration of degraded areas - Protection of natural areas - Unresolved land claims - <i>Any other appropriate theme</i> Intensity of use - Impermeable surface coverage
--	--	--

		<ul style="list-style-type: none"> - Parking density - Building density - Occupancy rates: on-campus residences - Occupancy rates: classrooms - <i>Any other appropriate theme</i>
Total		



Project Structure and Course Change Proposals

The Sustainability Audit utilizes experiential learning in a multi-disciplinary network of courses. Through the division of assignment of SA elements to students in courses with related content, a student-based learning approach to conducting the audit will promote learning and awareness while providing resources necessary for conducting an in-depth study. The following is a proposed structure for the SA.



Course Description	Proposed Change
<p>ESG 100 Introduction to Environmental Studies 3-3-0 An introductory approach toward understanding the global environment and the human impact on this environment. Topics covered include processes operating in natural systems, the identification of problems caused by human interaction with these systems, solutions to these problems and the implementation of possible solutions.</p>	<p>Sustainability Audit Project Assignments will be given to collect data on the level of sustainability on campus.</p>
<p>ESG 260 Research Methods 3-3-0 An introduction to research methodology and its application to environmental studies and geography. Course modules include research design, hypothesis testing, sampling techniques, interview techniques, archival techniques and other approaches to primary and secondary data gathering.</p>	<p>Sustainability Audit Project Assignments will be given to design methods for collecting data on the level of Sustainability on campus.</p>
<p>ESG 261 Quantitative Methods 3-3-0 Quantitative methods in environmental studies and geography; the nature of explanation; problems of observation and data collection; descriptive statistical analysis; inferential statistical analysis.</p>	<p>Sustainability Audit Project Assignments will be given to analyze data collected on the level of sustainability on campus and to organize the data for presentation.</p>
<p>ESG 262 Introduction to Geographic Information Systems 3-3-0 An introduction to geographic information systems including cartographic concepts, basic remote sensing (aerial photography and digital imagery), vector and raster digital spatial data models, data input and editing, database management, structured query language, and elementary spatial analysis.</p>	<p>Sustainability Audit Project Assignments will be given to collect geographic data for analysis of the level of sustainability on campus and the analysis and organization of data for presentation.</p>
<p>ESG 362 Advanced Geographic Information Systems 3-3-0 Project-based applications stress the utility of advanced GIS analysis in environmental studies and geography.</p>	



Rez Life Ecofloor

Residence and Conference Services is extending their Living and Learning Community this year from the Leadership Community pilot project from the 2009-2010 school year. This year RezLife will be hosting the EcoFloor – a community of students living in Paterson with the aim of promoting environmentally responsible living.

Residence Life Coordinator (Bronwyn Coates Bonney) asked the SDSI to arrange an event for the EcoFloor Participants to visit the green campus and meet some of the people involved in sustainability at Bishop's. A picnic was organized for Friday September 3rd on the shores of the St. Francis. Several people were invited to meet and eat with the EcoFloor participants in an informal setting in on-campus green spaces. This is an opportunity, not only for the EcoFloor Participants to meet the people involved in sustainability at Bishop's, but also for the new people filling the sustainability positions to meet each other and plan for the year ahead ([Appendix VI](#)).

The EcoFloor Participants may be a valuable volunteer resource for environmental initiatives and actions in the Bishop's Community. Already the SDSI has scheduled a Path Maintenance event for the EcoFloor with Prof. Baxter on the Tomifobia Trail in mid-October.

Summary of Recommendations

While several recommendations have been made throughout this report (particularly in the section on the Sierra Youth Coalition's Sustainable Campus Certification (SCC)) the following suggestions are broad recommendations for improving sustainability at Bishop's.

- The SDLU should upgrade the Environmental Policy to a Sustainability Policy using the SCC as a guide.
- The SDLU should designate responsible authorities, specific resources, targets, indicators and deadlines for every element of the Action Plan.
- An Education in Sustainable Development (ESD) Committee should be established, consisting of professors with a mandate to promote ESD throughout the university, develop a Liberal Arts Concentration in Ecology (Sustainability), and coordinating with ESD professionals at other educational institutions.
- A Sustainability Audit should be incorporated into the course description of a variety of courses based on the SYC's SCC. A part-time student position as the Sustainability Audit Project Coordinator should be created to supervise this project. This student position should also be responsible for the initiating the SYC SCC application process by promoting the satisfaction of the certification's requirements throughout the university and by establishing relations with the SYC.
- The SDO should be provided a webpage on the University website for promotion of sustainability initiatives and coordination of information.
- A plaque of the Talloires Declaration should be displayed in the Library Lobby.

