



**VANCOUVER ISLAND**  
UNIVERSITY

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**Environment and Sustainability**  
**Facilities Services and Campus Development**

**Vancouver Island University**  
**Carbon Neutral Action Plan Report**  
**March 2010**

**Executive Summary**

For 2009, Vancouver Island University (VIU) has prioritized reducing energy consumption, reducing greenhouse gas (GhG) emissions, and developing a sustainability culture within the organization. These actions have resulted in a growing list of achievements in our energy management practices and processes.

When VIU was proclaimed as a University in the fall of 2008, arising from the former Malaspina University-College, a master plan for the Nanaimo Campus was required to support continued development of the University. The Nanaimo Campus Master Plan (NCMP) was approved by the Board of Governors in January, 2009. The NCMP includes: a vision of VIU's role in meeting present and future post-secondary needs of the community, a description of campus development required to meet that vision, and a review of the existing inventory of buildings on the Campus. A Sustainability policy was also a major component of the Campus Master Plan. This Sustainability policy was created to guide future campus development and VIU's strategic planning for decades to come. An Environment and Sustainability Manager position was then created for VIU, and recruited in December 2009.

One of the first objectives of the Environment and Sustainability Manager will be the development of an integrated five-year Sustainability Plan that provides a strategic approach to, among other things increasing sustainability performance in our operations, including in energy management, GhG emission reduction, traffic demand, recycling, waste management, purchasing, IT and building design and development. Establishing objectives based on both the legal obligations of VIU to meet provincial Greenhouse Gas reduction targets as well as more visionary VIU targets for sustainable practices will be part of the 2010 update to the VIU Strategic Energy Management Plan, as these are part of the broader sustainability planning being led by the new Manager of Environment and Sustainability.



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### Actions Taken to Reduce Greenhouse Gas Emissions in 2009

The VIU Energy Manager (hired 2008) worked throughout 2009 becoming familiar with the campus culture, developing draft Energy Management Policy, implementing energy conservation projects, and planning additional projects for the future. These included:

1. Lighting Improvements
  - Lamps and ballasts of interior lighting systems replaced with energy- conserving types for a reduction of over 1.2 million kilowatt hours of electricity per annum.
  
2. Mechanical Optimization
  - Heating, Ventilating, and Air Conditioning (HVAC) systems in 13 of 44 buildings on the Nanaimo Campus are being re-commissioned at the time of this Report, and
  - Direct Digital Controls (DDC) in those same buildings are being replaced with modern open architecture systems, designed to improve conservation performance, and to simplify operational functions.

### *Outreach and Education*

The Energy Manager and the Environment and Sustainability Manager are collaborating on the development and implementation of volunteer support for both the Sustainability Program and the Energy Management Program in 2009, 2010 and beyond; through a program we call *Power to Change*. These volunteer staff and students (VIU Change Agents”) will work in teams to promote sustainability and energy conservation issues on all VIU campuses, and eventually all VIU sites. Through these VIU Change Agents, VIU anticipates developing a strong culture of energy conservation and sustainability in all VIU students, staff and faculty.

### *New Campus Development*

With federal and provincial infrastructure funding made available over the past year, VIU has been able to make excellent progress on some much needed physical developments that will improve VIU’s capacity for post-secondary education. These projects include the following:

1. The Centre for Shellfish Research, under construction at Deep Bay, BC, just south of Courtenay, will provide research and educational facilities in the aquaculture industry. Construction completion is anticipated for summer, 2010.



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2. VIU Cowichan Campus, a leased facility in the City of Duncan, is being replaced by a new facility located nearby within the District Municipality of North Cowichan. It is scheduled for completion in December 2010.
3. The Aboriginal Gathering Place, a study and traditional meetings building designed to meet the needs of First Nations students on Nanaimo campus is currently under construction and scheduled to be completed in September 2010
4. The International Centre for Sturgeon Studies, a new building on Nanaimo campus, is under construction with an anticipated completion date of August 2010.
5. Relocation of the existing carpentry and automotive programs to a new stand-alone building on the main Powell River campus.

As all new VIU buildings must conform to LEED® Gold standards, the above developments include the use of energy conservation measures and construction techniques aimed at minimizing environmental impact. Open-office design minimizes the size of administration facilities, and the use of locally-manufactured building materials have been incorporated into the design of these buildings, in order to reduce their carbon footprint. Additionally, the use of alternative energy sources to provide “green” energy for the operation of the new buildings into the future, have been planned and are ready for implementation. These measures include features such as natural, passive ventilation, daylighting, minimal-energy lighting, and geo-exchange heating and cooling (using ground-source heat pumps) and will be implemented in 2010, subject to the extent of funding available.

Plans to Continue Reducing Greenhouse Gas Emissions 2010-2012

Energy conservation measures planned for the near future in existing buildings on Nanaimo campus include:

1. Envelope Optimization
  - Audit, repair, and improvement project to the exterior walls, roofs, doors, and windows, with objective reduced energy consumption in the operation of the buildings through reducing drafts and increasing envelope insulation factors.
2. Interior Lighting Improvements Phase II
  - Completion of the project implemented in calendar 2009, to replace industrial lighting in three additional buildings, as well as replacing existing incandescent flood lighting across the campus that was not addressed in the first phase of the Lighting Improvements Project.
3. Outdoor Lighting Improvements
  - Replacement of existing outdoor fixture types in parking lots, sidewalks, and on building exteriors with modern energy-saving types.



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4. Kitchen Gas Audit:

- Seeking reduced consumption of natural gas, and therefore reduced GhG emissions through:
  - i. Improvements to existing kitchen equipment
  - ii. Solar water heating installations
  - iii. Potentially replacing existing and in use range hoods with energy-conserving models.

5. Boiler and Water Tank Audits

- Seeking reduced consumption of natural gas, and therefore reduced GhG emissions, through:
  - “Right-sizing” of boilers and water tanks
  - Use of instant water heaters where that technology is appropriate
  - Utilization of condensing boilers, where that technology is appropriate.

In summary, Vancouver Island University has made excellent progress in reducing our greenhouse gas emissions in the past two years. With the recruitment of our new Manager, Environment and Sustainability, we are now beginning more comprehensive sustainability planning at VIU that will bring further progress both in our processes and in our results.

Best regards,

A handwritten signature in blue ink, appearing to read 'R. Kelm'.

Ric Kelm  
Executive Director, Facilities Services and Campus Development

# Vancouver Island University - 2009 Carbon Neutral Action Report

## Actions Towards Carbon Neutrality

The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*.

Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
<b>Mobile Fuel Combustion (Fleet and other mobile equipment)</b>							
<b>Vehicle fuel efficiency</b>							
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	1	% of vehicles are fuel- efficient models	Purchased John Deere vehicle to replace a landscape maintenance truck.	Seeking fuel-efficient types with sufficient horsepower for the local need; promoting fuel-efficient driving habits.	2009	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	1	% of vehicles down-sized since start year indicated	Purchased "right-sized" pick up truck to replace existing Shipping / Receiving vehicle.	Continue with the program of replacing existing vehicle fleet with right-sized vehicles	2009	No End Date (Continuous)
Perform regular fleet maintenance to improve fuel-efficiency	Ongoing/In Progress	100	% of vehicles are subject to regular maintenance for fuel efficiency	Service contract for regular and routine maintenance of vehicles (continuation of the same practice over past years). Maintenance based on kilometers of usage as well as on driver observations of conditions.	Service contract for regular and routine maintenance of vehicles (continuation of the same practice over past years). Maintenance based on kilometers of usage as well as on driver observations of conditions.	2009	No End Date (Continuous)
<b>Behaviour change program</b>							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	30	% of current drivers are trained	Regular and routine discussions at Facilities Maintenance Staff Meetings. Random observations of driving habits by Facilities Maintenance Manager.	Instituting an organizational policy of mandatory driver quality standards for all authorized drivers.	2009	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress	30		Regular and routine discussions at Facilities Maintenance Staff Meetings. Random observations of driving habits by Facilities Maintenance Manager.	Instituting an organizational policy of mandatory driver quality standards for all authorized drivers. Need to institute a labelling program for all VIU vehicles.	2009	No End Date (Continuous)
Encourage carpooling in fleet vehicles	In Development	0		Drivers in various departments of VIU seek voluntarily to car-pool with others when travelling to similar destinations. VIU staff voluntarily seek alternative methods of attending meetings, such as teleconferencing and video conferencing.	Develop VIU automobile use policy that applies to all drivers in all corporate vehicles and vehicles rented or leased for use on VIU business.	2010	No End Date (Continuous)
<b>Other Mobile Fuel Combustion Actions</b>							
Development of the VIU Nanaimo Transit Exchange Project as one step for encouragement of more use of public transit by VIU faculty, staff, and students.	In Development			Partnership agreements between VIU, the Regional District of Nanaimo Transit System, BC Transit, and the City of Nanaimo on the new Transit Exchange, plus extension of a connector to 3rd Street for the new Exchange. Seeking funding and receiving commitments for funding contributions to the project. First phase of construction (4th Street improvements, and loop development) approved in late 2009.	Continued fund raising for the overall project, plus implementation of the first phase of construction. VIU is also considering within its Sustainability Plans for subsidiized bus passes for faculty, staff, and students.	2009	2012
Development of the VIU Transportation Policy, to include commitments on vehicular standards, procurement, driver training, vehicle use standards, encouragement of increased public transportation, and development of alternatives to vehicular transportation.	In Development			Recruitment of an Environment and Sustainability Manager, one of whose tasks will include development of appropriate policy.	Development of relevant policies, establish awareness campaigns, and develop implementation plans.	2010	No End Date (Continuous)
<b>Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)</b>							
<b>Planning/management</b>							

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Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	40	% of buildings have a real time metering system installed	13 of 44 buildings on the Nanaimo Campus, representing the highest consumers and the largest floor areas, are fitted with pulse meters on electricity, natural gas, and water services, with algorithms in the DDC equipment to provide real time reporting of consumption data.	New developments on Nanaimo Campus, plus the new Cowichan Campus, and the new Deep Bay Research facility will be fitted with pulse metering on all utilities. The consumption data will be monitored and reported from Nanaimo FSCD, and adjustments made if and when necessary to maintain persistent energy conservation for the organization.	2009	No End Date (Continuous)
<b>Owned buildings</b>							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	0	% of owned buildings have an established energy performance baseline	Commitment to install pulse meters in 13 of 44 high consuming and largest buildings on Nanaimo Campus, to permit future benchmarking activities.	New buildings throughout the organization will be completed with pulse metering and monitoring software. The performance of existing and new buildings will be compared to similar buildings within the organization, and to similar buildings in other post-secondary institutions. In the case of some VIU buildings, comparisons will be made to similar buildings in other industries, due to the specialized nature of their functions.	2009	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	0	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	New construction designed at LEED Gold standard for New Cowichan Campus, the Gathering Place, and the International Centre for Sturgeon Studies. Deep Bay Centre for Shellfish Research designed to LEED Platinum Standard.	Implementation of each of the foregoing projects, plus design and implementation of the Powell River Trades Campus to LEED Gold standard.	2008	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	100	% of buildings built or renovated since start year indicated used the integrated design process	Project advisory committees in place on all new construction projects allowing for meaningful involvement of all relevant stakeholders	Integrated process continues as part of VIU campus development planning	2007	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	85	% of owned buildings have undergone energy retrofits since start year indicated	Lighting Improvements on the Nanaimo Campus, to about 85% of buildings.	Mechanical Optimization on the Nanaimo Campus, affecting 13 of 44 buildings, to be completed by March 31, 2010. The 13 buildings are the largest buildings and the heaviest consumers on Campus. Work includes HVAC re-commissioning and Direct Digital Controls replacements.	2009	2011
<b>Retrofitting owned buildings</b>							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	20	% of retrofits (captured above) had heating, cooling, and ventilation systems upgrades	Planned aforementioned Mechanical Optimization Project.	Implementation of Mechanical Optimization Project on Nanaimo Campus.	2009	2011
Upgrade lighting systems during retrofits	Ongoing/In Progress	85	% of retrofits (captured above) had lighting systems upgrades	Implemented Lighting Improvements Phase I on Nanaimo Campus.	Subject to available funding, implement Indoor Lighting Improvements Phase II, and Outdoor Lighting Improvements, both on Nanaimo Campus.	2009	2011
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	20	% of retrofits (captured above) had control system upgrades or adjustments	Mechanical Optimization Project.	Mechanical Optimization Project.	2009	2011
Improve building insulation (including windows) during retrofits	In Development			Consulted with engineering firms to identify and quantify the opportunity.	Work with BC Hydro and Terasen Gas to obtain funding for a thorough Energy Study on specific buildings, for envelope analysis and energy conservation opportunities through envelope repairs and improvements.	2009	No End Date (Continuous)

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Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Install an on-site renewable energy demonstration project	In Development			Initiated the Geo-Exchange Feasibility Study for the Nanaimo Campus. Considered options for solar water heating demonstration project.	Complete the Geo-Exchange Feasibility Study. Implement a geo-exchange system along with other alternative energy solutions for the New Cowichan Campus. Implement a geo-exchange system for the Deep Bay Research Facility.	2009	No End Date (Continuous)
<b>IT power management</b>							
Install power management software which shuts down computers outside of regular business hours	In Development			Testing power management software as discrete application. Testing server software that inherently include power management.	Implementation of power management in student computer labs initially. Implementation of Windows 7 roll-out to entire organization.	2009	No End Date (Continuous)
Implement server virtualization	Ongoing/In Progress			IT Department has implemented Virtual Server technologies for the Cowichan Campus, and for select servers in the Nanaimo Campus.	Virtual Server implementation on the Nanaimo Campus, the New Cowichan Campus, and Deep Bay Research Facility.	2009	No End Date (Continuous)
<b>Appliances and electronic devices</b>							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			As new refrigerators are needed, Purchasing applies the principle of procuring appliances with Energy Star certification.	Continued policy of appliance replacement to the Energy Star certification, where applicable.	2008	No End Date (Continuous)
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			As new appliances are needed, Purchasing applies the principle of procuring appliances with Energy Star certification.	Continued policy of appliance replacement to the Energy Star certification, where applicable.	2008	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress	75		Continued installation of CFL task lights where needed for health and safety reasons.	Continuation of the program.	2006	No End Date (Continuous)
<b>Behaviour change program</b>							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress	20		Message included with every Energy Management announcement (projects implementation, general communications, website information, verbal presentations).	Continuation of the program.	2008	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress	20		Included with verbal presentations and with issue-specific written responses.	Continuation of the program.	2008	No End Date (Continuous)
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress	10		Included with verbal presentations and with issue-specific written responses.	Continuation of the program.	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress	20		Student group has placed stickers at key locations to remind people to switch off lights.	A new volunteer group will be established shortly, by the name of the VIU Change Agents, which will include such campaigns as a routine, along with role modelling, to enhance the effectiveness of the message.	2008	No End Date (Continuous)
<b>Supplies (Paper)</b>							
<b>Paper Type</b>							
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	95	% of total paper purchased contains 30% recycled content	Central procurement of bulk paper supply for VIU through Grand and Toy, in partnership with City of Nanaimo and with School District 68.	Continue to promote the use of sustainable paper grades.	2008	No End Date (Continuous)
<b>Printer/document settings</b>							

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Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)		Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	40	% of network printers or photocopiers are set to automatic double-sided	IT Department filled the need for new and replacement printers and copiers with machines capable of double-sided printing. In addition, IT promoted the auto double sided printing feature, and set it up for user selection.	Seek VIU policy for double-sided printing as a standard, within the Sustainability Policy.	2008	No End Date (Continuous)
<b>Electronic media in place of paper</b>							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development			Campus Development component of the VIU Facilities Services & Campus Development Department experimented with collaborative software offerings, and tested examples during project design review phases.	Procurement of suitable application, or licensed web-based product, and roll-out as a standard.	2009	No End Date (Continuous)
Use electronic document library for filing common documents	Ongoing/In Progress	10		Re-organized FSCD network drive for more logical access to project related documentation. FSCD established standards of document retention for projects and operational needs.	On-line document review and comment system, to reduce reliance on paper-based document review.	2006	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress	10		Established a specific Energy Management website and a specific Sustainability website, linked to one another and linked to the Main VIU site, for ease of access. Achievements posted to the viu website in both text and video-news formats.	To be determined	2005	No End Date (Continuous)
Switch to an electronic payroll notification system in place of paper pay stubs	Complete	90		Information sent out on minor updates to the system. 90% of all pay advices sent out via Stargarden portal.	Leave forms to be entered via Stargarden in 2010. Plans for time sheets to be entered on line are being considered for 2011/2012.	2005	No End Date (Continuous)
<b>Behaviour change program</b>							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development			Campus Development component of the VIU Facilities Services & Campus Development Department experimented with collaborative software offerings, and tested examples during project design review phases.	Procurement of suitable application, or licensed web-based product, and roll-out as a standard.	2009	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	In Development			Various groups voluntarily using SMART Boards to provide electronic copy, rather than using printed paper copy.	Improve familiarity with the SMART Board tool, and use the technology to demonstrate the superior nature of the electronic information over printed information.	2009	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress	10		Scratch pads made up from scrap paper. Re-ue of former letterhead paper for non critical records	Continuation of the program.	2008	No End Date (Continuous)



# Vancouver Island University - 2009 Carbon Neutral Action Report

## Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)	Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
<b>Business Travel</b>						
<b>Policy and budgeting</b>						
Create a low-carbon travel policy or travel reduction goal	In Development		Recruited an Environment and Sustainability Manager, December 2009.	Development of an Environment and Sustainability Policy, and associated Plan.	2009	No End Date (Continuous)
<b>Virtual meeting technology</b>						
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	In Development		IT Department testing Elluminate.	Roll-out a web-conferencing software to key departments and faculties.	2009	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	In Development			Continue to explore options for broader use of video technology	2009	No End Date (Continuous)
<b>Behaviour change program</b>						
Train staff in web-conferencing	In Development		IT Department testing Elluminate.	Roll-out a web-conferencing software to key departments and faculties.	2009	No End Date (Continuous)
Train staff in video-conferencing or provide technical support for video-conferencing set-up	In Development			Continuing to investigate options through new VIU Sustainability Office	2009	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	In Development		Technology User Group is considering a variety of software and web-based applications that promote opportunities for virtual classrooms. Some faculty already use virtual classrooms for educational purposes, which encourages students to make responsible choices for attending classes.	Continuing to investigate options through new VIU Sustainability Office	2009	No End Date (Continuous)
Encourage carpooling to meetings	In Development		Recruitment of Environment and Sustainability Manager in December 2009. Her development of a Sustainability Policy for VIU will include promotion of various GhG emissions reductions, including alternatives to travel.	Continuing to investigate options through new VIU Sustainability Office	2009	No End Date (Continuous)
<b>Education, Awareness, and Engagement</b>						
<b>Team-building</b>						
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	In Development		Developed the concept of green teams for VIU, and established the name as VIU Change Agents.	The VIU Change Agents will be premiered in Spring of 2010, and rolled out in September 2010, at the beginning of the Fall semester.	2009	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	In Development		Energy Manager hired in 2008, Sustainability Manager and support clerk hired in 2009.	Development of the support roles for VIU FSCD staff, and implementation of the VIU Change Agents in September 2010.	2009	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	In Development		Produced the "Power to Change Week" in October 2008, where a trial of volunteers was made for support. Identification clothing for a small contingent was ordered and distributed.	Roll-out of the VIU Change Agents will include support materials, clothing, informational meetings, assigned tasks, planned activities, and defined roles.	2009	No End Date (Continuous)
<b>Staff Professional Development</b>						
Support green professional development (e.g., workshops, conferences, training)	In Development		FSCD staff attended workshops, webinars, and conferences on environment and sustainability topics.	Continuation of the Program, and development of a policy.	2009	No End Date (Continuous)

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Action	Status (as of 12/31/09)	Performance to Date (as of 12/31/09)	Steps Taken in 2009	Steps Planned for 2010 -2012	Start Year	End Year
<b>Other Sustainability Actions</b>						
<b>Water conservation</b>						
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	Ongoing/In Progress		Low flow plumbing fixtures installed, irrigation practices altered.	More detailed monitoring of the water resource at various buildings in Naanimo and Cowichan. Installation of low flow fixtures in new buildings.	2008	No End Date (Continuous)
Put in place a potable water management strategy to reduce potable water demand of building-level uses such as cooling tower equipment, toilet fixtures, etc. and landscape features	In Development		Recruited an Environment and Sustainability Manager, who will lead the development of a water management strategy as a part of her work.	Implementation of the newly developed Sustainability Plan.	2009	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development		Vegetated roofs are planned for various new developments at VIU, including the Cowichan Campus, as well as permeable paving. Stormwater management being considered in every new development.	Rain harvesting system to be implemented at "the Gathering Place," using the stored water for toilet flushing in the building. Implementation of water management strategies, in accordance with funding available. Within the Campus Master Plan, the use of bio-swales is included for stormwater control.	2008	No End Date (Continuous)
<b>Waste reduction/diversion</b>						
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	In Development		Recruited an Environment and Sustainability Manager, who will develop a waste diversion plan within her duties.	Implementation of the waste diversion plan.	2009	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	In Development		Recruited an Environment and Sustainability Manager, who will develop a waste diversion plan within her duties.	Implementation of a hazardous waste policy	2009	No End Date (Continuous)
<b>Building construction, renovation, and leasing</b>						
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	In Development		Recycled old carpets. New construction on Campus ("the Gathering Place" and the International Centre for Sturgeon Studios, classified as zero waste construction sites.	Considering inclusion of construction practices into the Campus Sustainability Plan.	2009	No End Date (Continuous)
Incorporate lifecycle costing into new construction or renovations	In Development		Informal choices on best value materials and systems for use in buildings, that result in overall best value to VIU.	Develop through VIU sustainability planning in 2010	2009	No End Date (Continuous)
<b>Indoor air quality</b>						
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress		Low VOC carpets and paints selected for "the Gathering Place," International Centre for Sturgeon Studios, and New Cowichan Campus.	Embrace the use of low VOC products in all procurement, including maintenance projects, furnishings, and improvement projects.	2008	No End Date (Continuous)
<b>Commuting to and from home</b>						
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	Ongoing/In Progress		Facilities available throughout campus and will be enhanced further with new construction	Facilities available throughout campus and will be enhanced further with new construction	2008	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress		Secure storage lockers distributed around campus. Further racks and storage to be purchased to increase and motivate the use of bicycles	Secure storage lockers distributed around campus. Further racks and storage to be purchased to increase and motivate the use of bicycles	2008	No End Date (Continuous)
Modify parking fees or parking availability for staff/students	Ongoing/In Progress		parking fees raised in 2009	Transportation demand to be further investigated as part of Sustainability program planning	2008	No End Date (Continuous)
<b>Other Sustainability Actions</b>						
Batteries recycling	Ongoing/In Progress		Since May 2008, 300 pounds of non-rechargeable batteries, and 100 pounds of rechargeable batteries, recycled in Nanaimo.	Seek oportunities to recycle batteries in other communities served by VIU.	2008	No End Date (Continuous)