



VANCOUVER ISLAND
UNIVERSITY

CARBON NEUTRAL ACTION REPORT

March 17, 2011

Vancouver Island University

900 Fifth Street, Nanaimo, BC V9S 4Z9

Deep Bay Field Station, Bowser, BC. VIU's first LEED Platinum Building



Photo: Brian Kingzett

Executive Summary

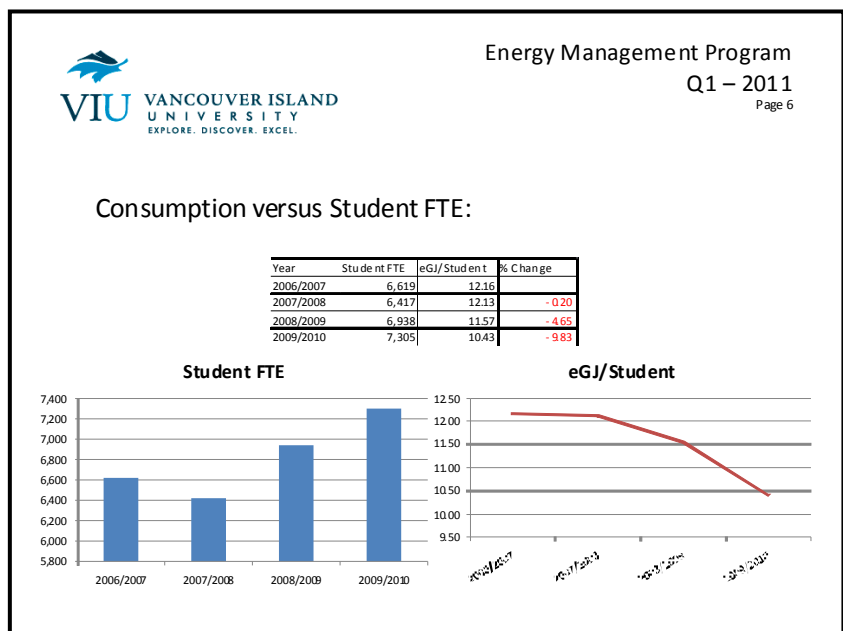
2010 has been an eventful and successful year for VIU in sustainability activities and achievements. Among many, these included:

- Extensive mechanical optimization including HVAC re-commissioning and Direct Digital Controls replacement (sub-metering for gas, electricity and water), took place in 13 existing buildings on the Nanaimo Campus,
- Creation of a new transit exchange on the Nanaimo campus in partnership with the Nanaimo Regional District, BC Transit and the City of Nanaimo that will allow for additional transit routes and increased service to and from VIU,
- Two new LEED certified buildings (new Cowichan Campus LEED Gold and Deep Bay Field Station LEED Platinum) which are nearing completion,
- Two additional buildings on the Nanaimo Campus that have been completed, and which are LEED Gold equivalent,
- Creation of a sustainability policy and a new Academic plan that highlights VIU's sustainability commitments, and
- Recruitment of a new Sustainability Advisory Committee which will be focused on staff and student engagement, and collaborative development of a 5-year sustainability plan for VIU.

VIU has also seen success in reducing our carbon footprint over recent years, as, in spite of increased enrollment of 4% per year for each the past three years, and campus total area growth from 65,647m² to 67,001m² in 2010, our energy consumption remains relatively flat. Similar performance is expected for the 2010-2011 year.

Additionally, when measured by student FTE, there is a significant drop in our energy consumption in contrast to increased enrollment. *(Graph right)*

In 2011 and beyond VIU will continue our carbon reduction activities and expand our focus on behaviour change amongst staff and students as a low-cost way to achieve energy conservation results in an environment with little continued funding for capital improvements. This focus on behaviour change includes campaign activities, incentive programs, education, and communications; as well as ongoing operational improvements in our institutional behaviour to increase cost avoidance and decrease energy consumption and GhG emissions.



1.0 2010 Greenhouse Gas Emissions

VIU's total emissions for the Calendar Year 2010 were 3,060.35 tCO₂e. This included (all in tCO₂e):

- Total Scope 1 Emissions = 2,618.64
- Total Scope 2 Emissions = 281.52
- Total Scope 3 Emissions = 144.36
- Total Biomass Emissions = 15.82

2.0 Offsets Applied to Become Carbon Neutral in 2010

Total emission offsets in the amount of \$76,113.50 were applied to make Vancouver Island University carbon neutral for 2010. Biomass Emissions were not offset as they are out of scope.

3.0 Emissions Reduction Activities

3.1 Actions Taken to Reduce Greenhouse Gas Emissions in 2010

3.1.a Mobile Fuel Combustion

- In partnership with the Nanaimo Regional District, BC Transit and the City of Nanaimo, a new VIU transit exchange project was completed this year that will allow for additional transit routes and increased service to and from VIU over time. *(Photo right – completed transit exchange)*
- 100% of VIU fleet vehicles undergo regular, routine vehicle inspection and servicing.



- VIU purchased two fuel efficient John Deere 'gator' utility vehicles for use on the Nanaimo Campus reducing use of larger, less efficient utility vehicles. *(Photo left - President Ralph Nilson tries out one of the new machines)*

3.1.b Stationary Fuel Combustion and Electricity

- Extensive mechanical optimization including HVAC re-commissioning and Direct Digital Controls replacement (including the addition of new sub-metering for gas, electricity and water consumption), took place in 2010 on the Nanaimo Campus in existing buildings. 15/46 Nanaimo Campus buildings are now fully retrofitted, with re-commissioned HVAC, updated mechanical controls and improved lighting. The Paine Horticultural Centre site in Nanaimo also had new DDC controls installed in 2010.

- Construction of new buildings for VIU, including the new Cowichan Campus in North Cowichan, the Deep Bay Field Station in Bowser, the Aboriginal Gathering Place and the International Centre for Sturgeon Studies were all nearing completion. The new Cowichan Campus will be a LEED gold certified building and the Deep Bay Field Station will be a LEED platinum certified building. The Aboriginal Gathering Place and the International Centre for Sturgeon Studies are LEED Gold equivalent. *(Photo right, new VIU Cowichan Campus, North Cowichan, BC)*



- A power management software pilot evaluation project for after-hours control of computer energy consumption is currently underway using Verdiem software. If successful, desktop power management will be implemented across VIU's campuses in 2011. In addition, 30% of VIU's servers have now been virtualized.
- In 2010, VIU won the *Society of College and University Planning* (SCUP) award for Institutional Innovation and Integration related to the development of our 2009 Campus Master Plan. This award recognized the integrated planning and design process used to develop our new university capital plan that will guide our Nanaimo Campus' sustainable growth and development for the next 50 years.

3.1.c Paper

- The VIU Library switched over to 30% recycled content paper in all its photocopiers and printers. All new printers and photocopiers purchased by VIU are now set to default double sided printing before being installed.
- VIU continues to expand the number and types of paper forms/materials/applications online in 2010; and uses shared servers and a web-based document archive for committee and board correspondence. Our new Cowichan campus will have reduced storage space for paper filing, with file cabinets only available in central areas, not to individual room occupants.

3.1.d Business Travel

- Video conferencing equipment has been purchased for our Powell River, Cowichan and Nanaimo campuses. Desktop software means this system can also be used on laptops to connect with meetings while travelling. *(Photo right: VIU Powell River Campus)*



3.1.e Education Awareness and Engagement

- A volunteer team of staff and students called the "Power to Change" team have adopted buildings on campus and have been equipped with toolkits and energy meters to do peer-to-peer engagement with building occupants

regarding energy conservation awareness and activities. This year the team is focused on getting people to completely turn off or unplug their peripheral devices when away from their desks to avoid 'vampire power' consumption. This project is a partnership between VIU and BC Hydro (Workplace Conservation Awareness Program). A related energy conservation awareness e-survey in fall 2010 generated over 1000 responses from VIU staff and students.

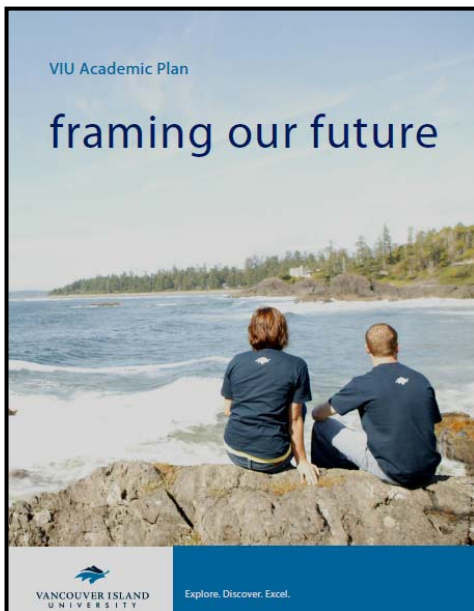
- A new formal, representative Environment & Sustainability Advisory Committee was launched in December 2010. The committee is meeting monthly to work on development of a 5-year sustainability plan for VIU as well as assist the sustainability office by increasing engagement and communications amongst VIU staff and students. *(Photo left: Sustainability Booth at VIU new Student Orientation event Sept 2010)*



- The VIU ACER (Awareness of Climate Change through Education and Research) Club was awarded a \$50,000 NSERC PromoScience grant to promote scientific literacy and to encourage high school students to pursue careers in science and engineering. ACER also led a public event in Nanaimo on climate change as part of VIU's 2010 Power to Change week.

3.1.f Other Sustainability Actions

- New pictorial waste management signage was created and installed at the Nanaimo campus in 2010, and new products were added to VIU's list of recycled materials (poly film, large Styrofoam and wax covered milk containers).
- 75% of our toilets are now low flow models. New buildings capture rainwater for other uses reducing overall potable water demand.



- As part of the transition from a college to a special-purpose teaching university, VIU completed a new Academic Plan in 2010 which, among other things, highlights sustainability as a part of our university vision, a key element of our engagement with the communities we serve, and as an operational function through the upcoming development of a 5-year sustainability plan. Academic Plan visionary goal: ***Through the***

promotion of excellence in learning, we inspire our students and the people of Vancouver Island and coastal British Columbia as a trusted educational partner in the search for sustainable cultural, economic, environmental and social prosperity.

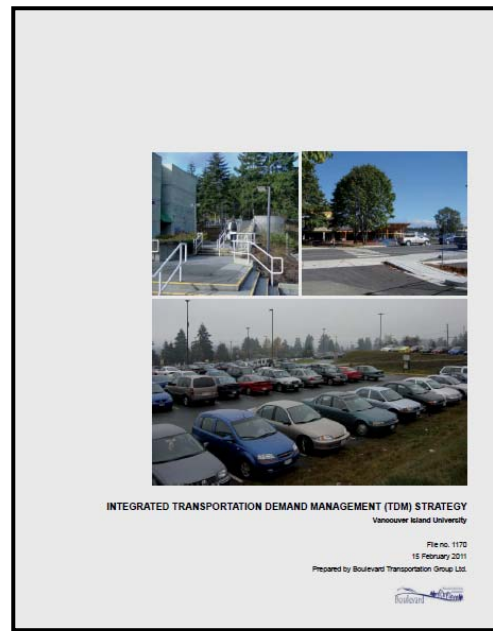
- VIU's first ever Sustainability Policy (44.14) was completed and posted on VIU's website:

Vancouver Island University is committed to being a sustainability leader, in our operations, teaching, research and community engagement. This includes: implementing local and regional campus sustainability policies and practices; policies and practices that promote the sustainability of the adjacent community and bioregion; and policies and practices that advance sustainability of the general global environment. This policy applies to all activities under the governance of Vancouver Island University.

3.2 Plans to Continue Reducing Greenhouse Gas Emissions 2011-2013

3.2.a Mobile Fuel Combustion

- VIU completed an integrated transportation demand management strategy for our Nanaimo and Cowichan campuses that included implementation strategies for parking management and alternative transportation. Implementation of the report's recommendations will begin in 2011.
- VIU will be investigating the development of a fuel efficiency focused fleet driver training module in 2011. There is keen demand across the institution for such training.



3.2.b Stationary Fuel Combustion and Electricity

- VIU's new LEED Gold certified Cowichan Campus building will open in 2011. Our new Deep Bay Field Station LEED Platinum Building will also officially open early in the same year. The design and development of LEED Gold or higher certified buildings will continue to a cornerstone of VIU's sustainability commitments. (Photo below: Cowichan Campus in early construction phase)



- A document study to assess VIU's overall print profile and how to move to multi-function devices will begin in 2011. This study will assess both potential cost efficiency and GhG emissions reductions, and will recommend where multi-function

devices could replace individual printers, photocopiers and fax machines on VIU campuses and sites.

- Cooling deck platforms in all of our walk in coolers and beverage machines in cafeterias are being upgraded in 2011 as part of our Pepsi contract. The new platforms will make these machines 54% more energy efficient which will then exceed Energy Star ratings for that type of equipment.
- VIU's Health and Safety department is piloting the use of LED task lights for broader distribution at VIU, which could reduce the use of overhead fluorescent lighting.

3.2.c Paper

- All VIU Nanaimo campus photocopiers (75 machines) will be changed over to default to double sided printing. Printers in all student labs will have duplex units installed so they will now be capable of double sided printing.
- VIU will investigate the development of a 30% recycled content requirement (policy) for paper at all campuses and sites.

3.2.d Business Travel

- The VIU Sustainability Office will help to actively promote and facilitate the use of new video-conferencing equipment installed at three of our campuses and available for desktop use, as a way to reduce staff and student travel.
- Carpooling and other alternative travel to VIU events and meetings will be increased as VIU implements the recommendations of our 2010 integrated transportation demand management strategy report. Mode split targets will be set to monitor progress. *(Photo above: View from Milner Gardens & Woodland, Qualicum Beach, BC)*



3.2.e Education Awareness and Engagement



- VIU's two sustainability teams (Sustainability Advisory Committee and Power to Change team) will continue activities that engage the VIU community in reducing our carbon footprint. An Ugly Sweater campaign has already taken place (Feb 2011) in which we encouraged VIU occupants to wear their favourite crazy sweaters while we turned down the heat in VIU buildings by two degrees for four days. *(Photo left: Stephan Iwasawa, Research Assistant, Centre for Coastal Health. Ugly Sweater Week Contest Winner 2011)*

- “Sustainability at VIU” Fact Sheets will be created for use in new staff and student orientation packages beginning fall 2011 semester.

3.2.f Other Sustainability Actions

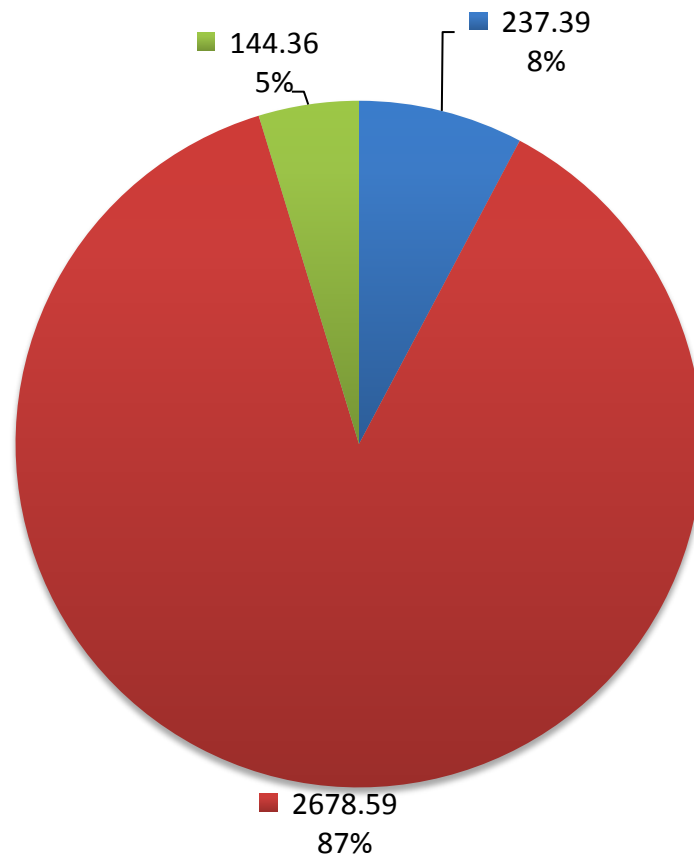
- Pilot desk-side waste management project using 1.5L garbage and compost cans alongside a 14 L recycling bin will be rolled out in 4 buildings on the Nanaimo Campus. If successful, this system will be further implemented, including within the new Cowichan Campus building for all of its occupants.
- VIU’s first comprehensive waste audit will take place in 2011. A zero waste program will also be developed in partnership with “Solutions, A Sustainability Network,” the VIU student environmental club, Nanaimo Hauling Company, and VIU’s Facilities Services and Campus Development Department. *(Photo right: Wayne Hiles, Manager, Facilities Services. Ugly Sweater week contest winner 2011)*
- VIU’s first 5-year Sustainability Plan (draft) will be completed in 2011. VIU is investigating the potential in using the AASHE STARS (Association for the Advancement of Sustainability in Higher Education – Sustainability Tracking and Reporting System) framework as a way to measure and describe our progress.



Ric Kelm, Executive Director, Infrastructure and Ancillary Services, Vancouver Island University

April 12, 2011

Vancouver Island University Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO₂e*)



Total Emissions: 3060.34

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion and Electricity (Buildings)
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2010

Total offsets purchased: **3044.52**. Total offset investment: **\$76,113.00**. Emissions which do not require offsets: **15.82** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

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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 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)						
Vehicle fuel efficiency						
Replace vehicles with more fuel-efficient models	Ongoing/In Progress	10 % of vehicles are fuel- efficient models	VIU purchased two fuel efficient John Deere gators for maintenance use around campus.	No new vehicle purchases or replacements are planned at VIU for the foreseeable future due to funding constraints.	2009	No End Date (Continuous)
Replace larger vehicles with smaller models according to fleet "right-sizing" principles	Ongoing/In Progress	5 % of vehicles down-sized since start year indicated	n/a	No new vehicle purchases or replacements are planned at VIU for the foreseeable future . Vehicle life is extended through good maintenance procedures. VIU will be investigating developing a formal procedure to better support fuel efficient vehicle purchases.	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 contracts are in place for regular and routine maintenance of vehicles (continuation of the same practice over past years), based on kms of usage as well as on driver observations of conditions. Generally, servicing takes place at least every six months, plus once a year tune-ups.	Service contracts exist for regular and routine maintenance of vehicles (continuation of the same practice over past years). Maintenance is based on kms of usage as well as on driver observations of conditions	2009	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	100 % of small maintenance vehicles are fuel-efficient	VIU purchased two fuel efficient John Deere gators for maintenance usage around campus.	No new vehicle purchases or replacements are planned at VIU for the foreseeable future due to funding constraints.	2009	No End Date (Continuous)
Behaviour change program						
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	30 % of current drivers are trained	Driver behaviour is discussed at regular and routine discussions at Facilities Mgmt staff meetings. Random observation of driving habits by Facilities Maintenance Manager also takes place.	VIU will be investigating a fleet driver training module for in 2011. Conversations across the institution show keen demand, including for student Residence Advisors in our VIU residences. VIU H&S department has previously recommended fleet driver defensive driving courses.	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	50 % of current drivers are aware of anti-idling preference at VIU	Anti-idling stickers are affixed to fleet vehicles on Nanaimo campus.	Anti-idling stickers will be given to broader group (regional campuses). VIU will investigate the need for an anti-idle policy.	2009	No End Date (Continuous)
Encourage carpooling in fleet vehicles	In Development	20 % of drivers are aware of carpooling preference at VIU	Cowichan Campus (Duncan) will only reimburse mileage to staff for maximum two vehicles at a time when travelling to Nanaimo campus events/meetings. VIU Trades program has purchased a Prius and encourages staff carpooling in it.	VIU will endeavor to promote carpooling amongst drivers in both fleet and personal vehicles. Nanaimo staff are and will be strongly encouraged to walk rather than drive around the campus. Integrated transportation strategy completed in 2010 will implement further "active transportation" activities	2009	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	In Development	10 % of drivers are advised of preference for alternatives to using fleet vehicles	Nanaimo campus limits tradespeople travelling to the Duncan campus on a regular basis, by using staff in the existing region, or contractors where applicable. VIU encourages trades staff to find alternate ways to deliver parts than single occupancy vehicle travel.	Powell River Campus will be promoting more bus use by staff who usually use fleet vehicles. Nanaimo campus will investigate stocking building parts in specific buildings instead of in vehicles so staff would walk to buildings for some maintenance instead of driving. Nanaimo campus will look at better work order system to combine work orders in buildings to avoid number of trips by tradespeople. Will investigate promotion of transit use when travelling to downtown VIU Foundation office.	2010	No End Date (Continuous)

Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Planning/management							
Reduce office space (square meters) per employee	In Development			Existing buildings use standard university office sizes(GOSS). New VIU buildings built in 2010 have reduced office space (square meters per employee) to maximize efficiency. The Powell River campus converted one classroom to an open area office that houses 12 faculty. Part time people share offices. A new LEED equiv.building at the Powell River campus (trades facility) was completed in 2010 includes smaller spaces to maximize efficiency.	New buildings completed in 2011-2013 will be below university standard office sizes (GOSS) to maximize efficiency. Where possible, all spaces will be multipurpose.	2009	No End Date (Continuous)
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	Ongoing/In Progress	20	% of buildings have a real time metering system installed	New buildings are fitted with gas/electric/water metering (DDC controls). This includes 15/79 buildings at VIU. (Nanaimo campus is 30% metered, Cowichan campus is 100% metered)	Any new buildings completed in 2011-2013 will have DDC controls with GWE metering installed. Existing buildings will have DDC controls with GWE metering installed as funding permits.	2009	No End Date (Continuous)
Owned buildings							
Establish energy performance baseline for owned buildings	In Development	20	% of owned buildings have an established energy performance baseline	17/46 Nanaimo campus buildings are now metered (DDC controls). MTRS in 92% of owned buildings gives overall campus consumption baseline.	Existing buildings will have further DDC controls installed as funding permits. New buildings will have DDC controls installed as part of construction. The new Deep Bay Field station (completed Feb 2011) is LEED platinum and full building verification for one year is a LEED point. Deep Bay will also have real time monitoring through Delta controls	2009	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development	0	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	One LEED gold certified building (new Cowichan Campus) and one LEED platinum certified building (Deep Bay Field Station) are due to be completed in 2011.	One LEED gold certified building (new Cowichan Campus) and one LEED Platinum certified building (Deep Bay Field Station) will be completed in 2011.	2009	2011
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	All new construction incorporates integrated design process	New buildings completed will use an integrated design process	2009	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	20	% of owned buildings have undergone energy retrofits since start year indicated	Mechanical optimization for VIU on the Nanaimo campus (15/79 buildings in total) completed in 2010. 13 bldgs on the Nanaimo campus are heaviest energy consumers, and those have all been retrofit. Work included HVAC re-commissioning and Direct Digital Controls replacements (80% buildings have had lighting retrofits Nanaimo Campus)	Mechanical optimization and lighting improvements will continue as funding permits.	2009	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress	20	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Mechanical optimization for VIU on the Nanaimo campus (15/79 buildings in total) completed in 2010. Work included HVAC re-commissioning and Direct Digital Controls replacements.	Mechanical optimization and lighting improvements will continue as funding permits.	2009	No End Date (Continuous)
Upgrade lighting systems during retrofits	Ongoing/In Progress	85	% of retrofits since start year indicated had lighting systems upgrades	85% of 46 buildings on the Nanaimo Campus have had lighting improvements completed	Further lighting improvements will continue as funding permits	2009	No End Date (Continuous)
Upgrade/adjust control systems during retrofits	Ongoing/In Progress	100	% of retrofits since start year indicated had control system upgrades or adjustments	All 13 buildings on the Nanaimo campus that had mechanical retrofits in 2010 had control system upgrades or adjustments. Paine Horticultural Centre also converted to DDC controls in 2010	Further control system upgrades or adjustments will continue as funding permits	2009	No End Date (Continuous)
IT power management							

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Install power management software which shuts down computers outside of regular business hours	In Development	0	% of computers shut down automatically outside of regular business hours	A power management software pilot evaluation project for after hours use is currently underway using Verdiem software. If successful, power management software will be implemented across VIU's campuses in 2011.	A power management software pilot evaluation project for after hours use is currently underway using Verdiem power management software. If successful, the program will be implemented across VIU's campuses in 2011.	2010	2011
Implement server virtualization	Ongoing/In Progress	30	% of servers have been virtualized since start year indicated	The server virtualization process continues.	The server virtualization process will continue as funding permits.	2009	No End Date (Continuous)
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	85	% of computers have auto-sleep settings applied	Most desk top computer monitors shift into low power mode when not in use.	All computers will have auto sleep settings as part of power management software program implementation in 2011.	2009	2011
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	In Development	5	% reduction in printers, copiers, and/or fax machines since start year indicated	Research and discussions have taken place with a number of vendors about carrying out a document study (includes anything that puts ink on paper) to assess our overall print profile and how to move to multi-function devices. Powell River campus has transitioned 30% of their print devices to multi-function in 2010.	Contract and carry out document study for VIU to assess where to move to multi-function devices. Depending on results of the study, VIU could move gradually to multi-function devices over next few years as funding permits.	2010	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress	85	% of devices have auto-sleep settings applied	85% of printers shift to low power mode when not in use.	n/a at this time	2009	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress	75	% of computers are ENERGY STAR rated	VIU has a computer evergreening program and all replacement computers are energy star certified.	VIU has a computer evergreening program and all replacement computers are energy star certified.	2009	No End Date (Continuous)
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	20	% of fridges are ENERGY STAR rated	VIU Purchasing Department has good control over purchasing. All purchases must go through purchasing system, and cannot be made on purchasing cards (visa cards). New buildings under construction include specs for purchases of energy star refrigerators. VIU student residences have 29 full size refrigerators, 286 bar fridges and 12 upright freezers. The bar fridges are outdated and are being replaced, 15-20 per year, with energy star fridges.	Any new refrigerators purchased will be Energy Star certified but purchase of new equipment is funding dependent. VIU will investigate developing a 5 and 10 year plan for replacing inefficient appliances. The fridges in student residences continue to be replaced over time. Cooling deck platforms in all walk in coolers and pop machines in cafeterias (pop, etc) are being upgraded in 2011. This will be 54% more efficient and will exceed Energy Star ratings.	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			New buildings under construction include specs for purchase of energy star rated appliances and electronic devices.	All new appliances are energy star where applicable. Energy efficiency is a key part of any specifications outlined by VIU for vendors.	2008	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	In Development			VIU Health and Safety Department is piloting LED task lights for potential use, to reduce use of overhead fluorescent lighting where possible	VIU Health and Safety Department is piloting LED task lights for potential use, to reduce use of overhead fluorescent lighting where possible. VIU Powell River will be investigating stocking of energy efficient lightbulbs.	2010	2011
Behaviour change program							
Help staff reduce personal energy use through "workstation tune-ups"	In Development			n/a	VIU will look at workstation tune up for new staff moving into Cowichan Campus in spring/summer 2011.	2011	No End Date (Continuous)
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			New BC Hydro-VIU Workplace Conservation Awareness campaign is focused on getting staff and students to turn off peripheral electronic devices and be aware of vampire power. This campaign includes peer-to-peer conversations, stickers, posters, personal energy metering.	BC Hydro-VIU Workplace Conservation Awareness campaign to continue if funding permits.	2010	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Ongoing communications	Ongoing communications	2007	No End Date (Continuous)

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Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress			Energy Manager has done presentations to security and cleaning staff about energy use and savings after hours while on campus	Ongoing communications	2008	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			New BC Hydro-VIU Workplace Conservation Awareness campaign is focused on getting staff and students to turn off peripheral electronic devices and be aware of vampire power. This campaign includes peer-to-peer conversations, stickers, posters, personal energy metering.	Campaign to continue in 2011 and beyond, as funding permits.	2007	No End Date (Continuous)
Other Stationary Fuel Combustion and Electricity Actions							
VIU student residences plan to participate in the Go-Beyond 'Do-it-in-the-Dark' university residence energy conservation competition in 2011	Ongoing/In Progress			n/a	VIU student residences will participate in the Go-Beyond 'Do-it-in-the-Dark' university residence energy conservation competition in 2011	2011	2011
VIU is currently developing an integrated IT/IS strategy which includes discussion of both green IT and IT greening.	In Development			Sustainability Manager participates in IT/IS strategy committee.	Integrated IT/IS Strategy will be complete in 2011.	2010	2011
VIU won the Society of College and University Planning (SCUP) 2010 award for Institutional Innovation and Integration related to development of our VIU Campus Master Plan.	Completed in 2010			VIU won the Society of College and University Planning (SCUP) 2010 award for Institutional Innovation and Integration related to development of our VIU Campus Master Plan. This award recognized the integrated design process used to develop our new university Capital Plan that will guide our growth and development for future.	n/a	2008	2010
Supplies (Paper)							
Paper Type							
Purchase 30% post-consumer recycled paper	In Development	10	% of total paper purchased contains 30% recycled content	VIU library has just switched over to 30% in its photocopiers and printers. VIU purchasing department has made recommendations to all departments to switch to 30% recycled content paper.	VIU sustainability office will work with the print shop to assess opportunities for moving to 30% for all printing jobs. IT Department is now switching over to 30% paper in all computer labs. VIU is considering a 30% recycled content requirement (policy) covering all departmental purchases.	2011	2012
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	In Development	40	% of network printers or photocopiers are set to automatic double-sided	All new printers and photocopiers purchased for newly constructed buildings or as replacements are set to default double sided before being installed.	All VIU Nanaimo Campus photocopiers (75 machines) are being switched to default double sided. Printers in student labs are having duplex units installed so they are capable of double siding. Setting systems to duplex is next step.	2009	2012
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress	30	% of network printers have 'print and hold' settings applied	All printers/photocopiers available to students have print and hold settings by default as the students have to pay for printer/photocopier use.	n/a at present	2009	2012
Electronic media in place of paper							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	In Development	0	% of staff workstations with software installed	Sharepoint is used by some techs and is available for use at VIU via the network.	There are currently no plans to install on individual computers as Sharepoint is available on the network. VIU promotes use of Google Docs, Drop Box and other free, open source web 2.0 technology instead of purchasing)	2009	2011
Use electronic document library for filing common documents	Ongoing/In Progress			Use of shared servers for storing data is common practice at VIU. A web-based document archive is also used as a central repository for committee, board correspondence and meeting materials, as well as other archived material.	n/a	2007	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Post materials online that were previously printed	Ongoing/In Progress		VIU has now moved a number of paper forms/materials to online, including: our PO system, an online HR portal, online transcript creation, application to graduate, student fees overdue notices. As well, good practices continue to grow generally regarding posting meeting materials online. Our Cowichan campus new facility has reduced storage space for paper filing, with cabinets only in central areas.	Staff leave requests will be added to our online list of forms. VIU will be evaluating possibilities for vendors accepting online payments instead of cheques. Print shop will be implementing an on-line job order system this year.	2009	No End Date (Continuous)
Behaviour change program						
Encourage re-use of scrap paper	Ongoing/In Progress		VIU print shop makes available to all staff scratch pads cut to size from scrap paper	Continuation of the program	2008	No End Date (Continuous)
Other Paper Supplies Actions						
All paper with 0% recycled content by VIU is FSC certified	Ongoing/In Progress		All paper with 0% recycled content by VIU is FSC certified	Ongoing	2009	No End Date (Continuous)

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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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Business Travel							
Virtual meeting technology							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress	5	% of computers have web-conferencing software installed	VIU participated in a pilot Elluminate project that had two years of funding, but the project is not being renewed as funding is not available.	VIU IT department supports staff in their use of free Skype software for business use. Staff who want to continue to use Elluminate are still supported. No funding is available at this time to support Live Meeting.	2008	No End Date (Continuous)
Make desktop web-cameras available to staff	In Development	5	% of staff have access to a desktop web-camera	Powell River Campus makes webcams available to all staff	Staff and Departments can purchase webcams for their own use as needed.	2010	No End Date (Continuous)
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	In Development	25	% of meeting rooms have access to video-conferencing equipment	Video conferencing equipment has been purchased for use at our Powell River and Cowichan campuses. Two systems will also be installed at the Nanaimo campus. All will be in use in 2011.	Video conferencing equipment will be available for use at our Nanaimo, Powell River and Cowichan campuses in 2011.	2010	No End Date (Continuous)
Behaviour change program							
Train staff in video-conferencing or provide technical support for video-conferencing set-up	In Development	0	% of staff are trained in video-conferencing or have access to technical support	Video conferencing equipment has been purchased for use at our Powell River and Cowichan campuses. Two systems will also be installed at the Nanaimo campus. Desktop software means this system can also be used on laptops to connect with meetings while travelling. All will be in use in 2011.	User guides will be made available in meeting rooms where video conferencing equipment is available. Desktop software application means this system can also be used on laptops to connect with meetings while travelling. Sustainability Office will investigate options for providing further support and training for video conferencing to reduce travel between campuses.	2011	No End Date (Continuous)
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Regional campuses have noted increases in online documentation in 2010, meaning less travel than previous. (eg: Principal from Powell River is able to reduce travel to Nanaimo campus by one trip per month). This is also due to Skype use. This also means better regional representation on VIU committees as sometimes travel is not required. Some Nanaimo events are remotely broadcast to other campuses. A pilot in virtual advising for students in rural, coastal BC is also currently being carried out.	Continued use of on-line meeting materials and web/video conferencing will allow for even further reductions in travel between VIU campuses and sites. VIU is also piloting further virtual course delivery or blended course delivery in some courses and for some complete programs.	2010	No End Date (Continuous)
Encourage carpooling to meetings	In Development			Remote sites (Milner Gardens, Deep Bay Research Station) promote carpooling for staff, students and volunteers.	Carpooling will be better facilitated in 2011 as part of the implementation of VIU's integrated transportation strategy.	2010	No End Date (Continuous)
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	In Development			All VIU campuses and sites have bike racks/lockers and end of trip facilities (except no end trip facilities at Powell River). Some remote or not well serviced sites are not within reasonable biking distance and do not have transit access.	Active transportation options will be examined in 2011 through the implementation of VIU's integrated transportation strategy.	2010	No End Date (Continuous)
Other Business Travel Actions							
New Nanaimo Campus transit exchange completed in summer 2010 will allow for increased access and frequency of transit service to and from VIU	Completed in 2010	100	% completed	VIU Nanaimo Campus transit exchange was a partnership between VIU, Regional District of Nanaimo, BC Transit and the City of Nanaimo.	New Nanaimo Campus transit exchange completed in summer 2010 will allow for increased access and frequency of transit service to and from VIU	2010	2010
Completion of 2010 integrated TDM implementation strategy report includes recommendations for further implementation of "active transportation" options	Ongoing/In Progress	50	% completed	An integrated TDM implementation strategy report (Boulevard Transportation Group) was completed.	Implementation of VIU Executive approved recommendations in TDM study will take place.	2010	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
New bike locker policy and plan completed to allow for better turnover of highly used bike lockers	Completed in 2010	100	% completed	A new bike locker policy and plan was completed to allow for better turnover of highly used bike lockers.	n/a	2010	2010
Education, Awareness, and Engagement							
Team-building							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Completed in 2010			new formal, representative Environment & Sustainability Advisory Committee launched in December 2010. Power to Change volunteer energy conservation team also launched in 2010	Sustainability Committee meetings to continue monthly. Power to Change team will broaden to other sustainability actions as it grows.	2010	No End Date (Continuous)
Provide resources and/or dedicated staff to support teams	Ongoing/In Progress			Sustainability office staff support provided for committee. Regional Cowichan Campus committee also supported with small amount of funding for their use. Powell River committee is supported as well. Power to Change team, made up of volunteer staff and students and focused on energy conservation, has expense funding provided by BC Hydro through Workplace Conservation Awareness Program	VIU will investigate providing further funding for sustainability programs and initiatives from increases to parking revenue.	2010	No End Date (Continuous)
Providing behaviour change education/training to teams (e.g., community-based social marketing)	Ongoing/In Progress			Power to Change team (volunteer staff/student energy conservation team) participated in BC Hydro workplace conservation awareness training program. Further ongoing training and education occurs through regular team meetings. Educational opportunities for sustainability committee are underway through information provided as part of development of a 5 year sustainability plan	Power to Change team (volunteer staff/student energy conservation team) participated in BC Hydro workplace conservation awareness training program. Further ongoing training and education occurs through regular team meetings. Educational opportunities for sustainability committee are underway through information provided as part of development of a 5 year sustainability plan	2011	No End Date (Continuous)
Staff Professional Development							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			Green professional development provided as needed and requested for Environment & Sustainability staff. Training course in Community Based Social Marketing taken by Sustainability Assistant, AASHE (Association for the Advancement of Sustainability in Higher Education) conference attended by Manager, Env. & Sustainability. Energy Mgr attended BC Hydro Energy Forum events.	Ongoing as needed	2008	No End Date (Continuous)
Staff awareness/education							
Provide green tips on staff website or in newsletters	In Development			New sustainability website launched in 2010. Energy conservation suggestions were recently solicited from staff and students as part of a contest. Over 200 sustainability suggestions were submitted. Some of these will win prizes and will be highlighted on website and in other communications. IT department has a Green IT tips webpage, including about how to reduce margin size.	As part of new sustainability website, further green tips and suggestions will be highlighted.	2010	No End Date (Continuous)
Provide sustainability education during new staff orientation	In Development			n/a	"Sustainability at VIU" fact sheets will be developed for use in new student and new staff orientation as of fall 2011.	2011	No End Date (Continuous)
Client/public awareness/education							
Provide education to clients/public about the science of climate change	Ongoing/In Progress			A number of classroom presentations and external presentations were done this year both by the VIU Sustainability Manager, and the VIU Energy Manager.	Classroom and external presentations will continue as requested and recommended.	2008	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Provide education to clients/public about the conservation of water, energy, and raw materials	Ongoing/In Progress			A number of classroom presentations and external presentatons were done this year both by the VIU Sustainability Manager, and the VIU Energy Manager. Some research sites and programs also provide education and outreach to students or the public as part of their research and teaching mandate (Paine Horticultural Centre and Milner Gardens, fisheries program)	Classroom and external presentations will continue as requested and recommended.	2008	No End Date (Continuous)
Other Education, Awareness, and Engagement Actions							
VIU Powell River is one of five community partners who developed a sustainability charter for the region. Among other things, they hold an environment and sustainability lecture series three times a semester.	Ongoing/In Progress			VIU Powell River signed regional sustainability charter.	Further activities in sustainability charter will take place in years to come.	2010	No End Date (Continuous)
VIU ACER (Awareness of Climate Change through Education and Research) club provides climate change education in the public school system and to the public.	Ongoing/In Progress			ACER was awarded a \$50,000 NSERC PromoScience grant to promote scientific literacy and to encourage high school students to pursue careers in science and engineering. ACER also led a public event on climate change as part of VIU's Power to Change week. They hosted speaker Richard Littlemore (author: the Climate Cover Up) in November 2010.	Continued public school and public presentations by ACER	2008	No End Date (Continuous)
Workplace Conservation Awareness program for 2011 will focus on continuing to engage staff and students about their role and responsibility in reducing energy costs and VIU's carbon footprint	Ongoing/In Progress			Energy conservation awareness baseline survey created which drew over 1300 responses. Program for 2010-2011 designed in partnership with BC Hydro	Campaign continues with activities including energy conservation suggestion contest, Ugly Sweater Week (including dropping the temperature by 2 degrees in VIU buildings), peer-to-peer education through building adoptions, photography contest, etc)	2010	2011
Other Sustainability Actions							
Water conservation							
Establish a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models	In Development	75	% toilets with low flow model (6L)	No water conservation strategy exists, but any replacement water fixtures, and fixtures in new buildings are all more efficient low flow models. All purchasing is centralized and department has good control over procurement.	Further toilets will be refitted as funding permits.	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			No potable water management strategy exists but good practices are followed, including no industrial grass watering at VIU which has significantly reduced water consumption. New Powell River Campus building, and new Aboriginal Gathering Place building in Nanaimo both capture rainwater for other purposes. Gathering Place also captures grey water. New Sturgeon Centre has a recirculation system for water in fish tanks. Water meters have been installed in 15 buildings. Native plants are used to reduce water use, and moisture sensors installed. New Deep Bay site uses rainwater for non potable use	Good practices regarding water use and conservation will occur in any new construction.	2008	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	In Development			No stormwater management strategy exists but good practices for new construction ensure good stormwater management, including: permeable paving, bio-swales	Good practices regarding water use and conservation will occur in any new construction.	2008	No End Date (Continuous)
Waste reduction/diversion							

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Put in place an operations policy to facilitate the reduction and diversion of building occupant waste from landfills or incineration facilities	Ongoing/In Progress			No waste strategy or policy yet in place, but a number of supportive activities in 2010, including: new buildings using LEED waste disposal guidelines/points, new construction sites are zero-waste. New recycling signage created for Nanaimo Campus. New products added to recycling list at Nanaimo campus (poly film, styrofoam). Overall, re-use rather than dispose of, is key practice at VIU. Expanded battery recycling through 'Call to Recycle Program'	Pilot desk-side waste mgmt program rolled out in early 2011 in 3 Nanaimo campus buildings, and for Cowichan Campus when opened. 1.5 L garbage and compost containers for each occupant. 14L recycle bin. Organics disposal bin purchased for use at new Cowichan Campus. Further signage being created for regional campuses. Further organics recycling support will be facilitated for VIU student residences	2010	No End Date (Continuous)
Implement a hazardous waste reduction and disposal strategy	Ongoing/In Progress			Hazardous waste reduction and disposal procedures are in place at VIU	Ongoing improvements as needed	2009	No End Date (Continuous)
Procurement (non-paper supplies)							
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	In Development			VIU Purchasing Department promotes green products for use at VIU	VIU will investigate instituting a default green option policy on all our consumable non-paper items	2008	No End Date (Continuous)
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	In Development			VIU Purchasing promotes green products for use at VIU. All capital purchases are vetted through purchasing which has good control and promotes green products. Purchasing Dept subscribes to the BuySmart Network.	Ongoing improvements as needed	2008	No End Date (Continuous)
Implement sustainable purchasing program for cleaning products, disposable paper products and trash bags	Ongoing/In Progress			VIU has green cleaning product list, developed originally to meet LEED criteria. Many products are eco-logo certified. Good relationships with local cleaning product vendor who understands our green cleaning product purchase requests/requirements.	Ongoing improvements as needed	2009	No End Date (Continuous)
Require a minimum purchase of sustainable, and organic food and beverages supplied by contracted food suppliers or caterers	In Development	10	% of the combined total food and beverage purchase (in cost) meets these requirements	New Food Services Manager hired, and is investigating options for further sustainable and organic food purchases.	Ongoing discussions and support will be provided by VIU Sustainability Office.	2010	No End Date (Continuous)
Building construction, renovation, and leasing							
Establish a policy to reuse materials where possible and divert construction and demolition debris from landfills and incineration facilities	Ongoing/In Progress			No policy in place yet but good practices exist at VIU and all wood waste, metal waste, drywall and gypsum are diverted. New construction practices follow LEED criteria for waste mgmt. Also, standard practice at VIU is to reuse/refit rather than dispose of.	VIU will be developing and promoting a Zero Waste program in 2011 or 2012.	2008	No End Date (Continuous)
Indoor air quality							
Incorporate low volatile organic compounds (VOCs) standards into procurement policy for products such as paints, carpets, and furniture	Ongoing/In Progress			All new construction meets LEED criteria for VOC's. Procurement is centralized and VIU purchasing has good control over replacement purchasing. VIU subscribes to the Buy Smart network.	Ongoing good practices for both replacement and new purchases.	2008	No End Date (Continuous)
Commuting to and from home							
Encourage commuting by foot, bicycle, carpool or public transit	In Development			Integrated Transportation Strategy report completed that includes recommendations to support active transportation	Implementation of recommendations from Integrated Transportation Strategy will take place in 2011 and beyond.	2010	No End Date (Continuous)
Provide shower or locker facilities for staff/students who commute by foot or by bicycle	In Development			All campuses and sites have bike storage and after trip facilities (except for Powell River Campus)	Implementation of bike related recommendations from Integrated Transportation Strategy will take place in 2011 and beyond.	2010	No End Date (Continuous)

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Action	Status (as of 12/31/10)	Performance to Date (as of 12/31/10)	Steps Taken in 2010	Steps Planned for 2011 -2013	Start Year	End Year
Provide secure bicycle storage	In Development		Nanaimo Campus has bike lockers. Other campuses have bike racks.	Implementation of bike related recommendations (including for secure bike storage) from Integrated Transportation Strategy will take place in 2011 and beyond.	2010	No End Date (Continuous)
Modify parking fees or parking availability for staff/students	In Development		Integrated Transportation Strategy report completed that includes recommendations to guide future parking fees	Implementation of parking fee related recommendations from Integrated Transportation Strategy will take place in 2011 and beyond	2010	No End Date (Continuous)
Other Sustainability Actions						
New Sustainability Advisory Committee is working on development of a 5-year Sustainability Plan for VIU	In Development		Sustainability Committee has begun working on development of a 5-year Sustainability Plan for VIU	Creation of draft Sustainability Plan will be completed in 2011	2010	No End Date (Continuous)
As part of the transition from a college to a special purpose teaching university, VIU completed our new Academic Plan which highlights sustainability as part of our university vision, a key element of our engagement with the communities we serve, and as an operational function through the upcoming development of a sustainability plan.	Completed in 2010		VIU completed our new Academic Plan which highlights sustainability as part of our university vision, a key element of our engagement with the communities we serve, and as an operational function through the upcoming development of a sustainability plan.	Implementation of the Academic plan continues	2009	No End Date (Continuous)