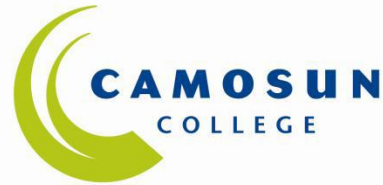


# Camosun College – 2010 Carbon Neutral Action Report

Camosun College is a comprehensive community college on the southwest coast of British Columbia's Vancouver Island. Since 1971, Camosun has helped more than 50,000 graduates on their way to amazing careers in every sector of our economy. Great instructors, small class sizes and comprehensive student support services make ensure our students successfully achieve their education and career goals. With two campuses in Victoria, and numerous community education partners, Camosun offers over 160 degree, diploma and certificate programs in arts, sciences, business, health and human services, trades, technologies, sport education, Aboriginal studies and adult upgrading. More than 10,000 full-time equivalent credit students, plus another 3,000 part-time and 7,000 continuing education students enrol each year, including over 500 International and 900 Aboriginal, Inuit and Métis students from 50 nations. Nearly 90% of our graduates remain on Vancouver Island to live and work. As the college has grown and diversified, so too has its interest in, and commitment to sustainability and reducing the environmental impact of its operations, locally and globally.



## Executive Summary

In 2010 Camosun College continued its planning and tactics to reduce greenhouse gas (GHG) emissions from its sizeable operations across two campuses in Victoria. This year marked the second full operating year of our new LEED Gold building, the Pacific Institute for Sport Excellence. Camosun continued its partnership with BC Hydro (BCH) in reducing energy consumption in the fourth year of the Energy Management project. The five major buildings at Camosun's Interurban campus are enrolled in the BC Hydro Continuous Optimization program to ensure ongoing efficiency of existing operations. In 2010 Camosun completed the Public Sector Energy Conservation Agreement (PSECA)-funded Interurban energy project, which has resulted in significant reduction of annual CO<sub>2</sub> emissions. The PSECA-funded Lansdowne energy project started in 2010, with a completion date in 2011. The college now ensures energy efficiency and sustainability criteria are included with every RFP/tender initiative, meaning new contract awards replace existing equipment with Energy Star-rated gear. Greater engagement/interest within all schools/departments at the college is helping to develop a conservation culture at Camosun, for example an active, cross-college Transportation and Parking Management steering committee which addresses sustainability issues in this area; a newly-created President's Environmental Sustainability Fund, which consist of five grants of up to \$5,000 each per annum in support of projects and initiatives that assist our environmental sustainability goals; and the college's Environmental Sustainability Council, formed in December 2010 to provide an open forum for the discussion of college-wide environmental initiatives, with the goal of improving and extending current environmental practices.



## 2010 Greenhouse Gas Emissions

Greenhouse gasses in Tonnes (tCO<sub>2</sub>e)

Direct Emissions	
Buildings	1931.85
mobile combustion fleet	27.48
Indirect Emissions	
buildings	74.53
Optional Emissions	
office supplies	0.00
Totals for 2010	2,033.86

### Offsets Applied to Become Carbon Neutral in 2010

Camosun has applied total emission offsets of 2032.84 tonnes of CO<sub>2</sub> equivalents by way of an investment in the Pacific Carbon Trust in the amount of \$50,821.00.

## Emissions Reductions Activities

### Actions Taken to Reduce Greenhouse Gas Emissions in 2010

Actions taken to reduce direct emissions from fuel consumption included reducing the Camosun fleet size, and purchasing an electric vehicle. The Transportation and Parking Management steering committee mandate is to implement the college's transportation and parking management plan which includes encouraging the use of alternate forms of transportation, advocating for better provisioning of public transit, and seeking to address other transportation issues for students and employees. One of the outcomes has been the establishment of the "Bike to Camosun Network," an initiative aimed at encouraging cycling to work.



GHG emission reductions through actions taken in the fourth consecutive year of the Energy Management program amounted to about 400 tonnes in 2009, and have more than doubled with the completion of the PSECA-funded Interurban energy project to nearly 1000 tonnes. Implementation of the PSECA-funded Lansdowne energy project is expected to add an additional 260 tonnes of GHG emissions reduction.

Actions taken to reduce the consumption of paper and other goods and services include the continued use of 100% recycled paper; increasing the use of online activities; the use of green products in our operations; and procurement of "cradle to cradle" goods in our purchasing practices.

Other actions taken to reduce GHG emissions and promote sustainability in 2010 included the formation of a cross-college (staff, students, faculty) Environmental Sustainability Council; renewing recycling stations at both campuses to encourage increased use; further improved/expanded recycling measures; an expanded composting program; and the application of "triple bottom line" evaluation in vendor tender/RFP responses.

## Plans to Continue Reducing Greenhouse Gas Emissions 2011-2013

Camosun College continues to add sustainable business practices into operations, from expanded recycling programs to the implementation of producing bio-diesel on campus using inputs from campus operations (cafeteria waste oil and grease) for use in Camosun diesel vehicles and equipment. Meeting the requirements for LEED Gold status qualification for Camosun's latest building, the Pacific Institute for Sport Excellence, continues in 2011 through such actions as LEED-commissioned training for PISE building operators. As a Power Smart partner, Camosun will continue its partnership with BC Hydro in further developing its energy management program by completing a fourth consecutive year of the Energy Management project. Camosun successfully received Public Sector Energy Conservation Agreement (PSECA) funding for its Lansdowne campus in 2010. Completion of this project in 2011 will result in additional significant reductions of CO<sub>2</sub> emissions.



Camosun has purchased and implemented full videoconferencing capability between campuses to reduce the amount of intercampus travel for meetings and will continue to look for ways to improve the technology as well as increase its use. Completion of the PSECA funded Lansdowne energy project is expected to result in CO<sub>2</sub> emission reductions of approximately 260 tonnes. Professional development and training will be supported via targeted energy opportunity training for maintenance staff and through attendance at training sessions and education series.

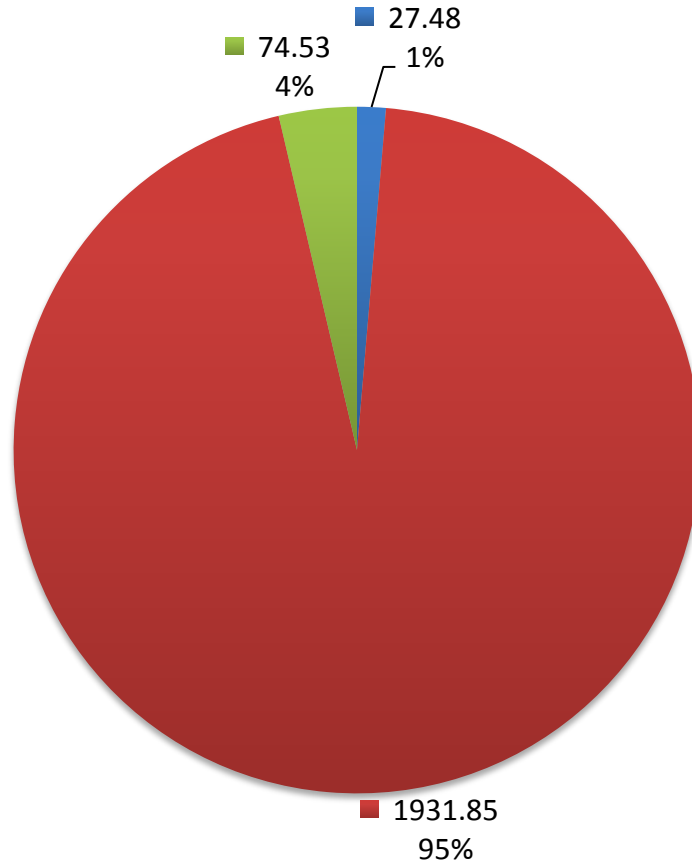
Camosun College is currently developing a new strategic plan, the foundation document driving our vision and operations for the next three years; a founding pillar of the document is a focus on sustainability.

Peter Lockie

Vice President, Administration & Chief Financial Officer

# Camosun College

## Greenhouse Gas Emissions by Source for the 2010 Calendar Year (tCO<sub>2</sub>e\*)



**Total Emissions: 2033.86**

- 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: **2032.84**. Total offset investment: **\$50,821.00**. Emissions which do not require offsets: **1.02** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) 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.

# Camosun College - 2010 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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	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			One electric vehicle purchased. One older 1984 van replaced with newer more efficient 2006 van.	As vehicles require replacement, more fuel efficient and where appropriate smaller vehicles are considered.	2007	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	All vehicles receive regular maintenance	Ongoing regular maintenance for all vehicles	2009	No End Date (Continuous)
Replace small maintenance vehicles with more fuel-efficient models	Ongoing/In Progress	75	% of small maintenance vehicles are fuel-efficient	No specific steps taken in 2010	As vehicles require replacement, more fuel efficient vehicles are considered.	2006	No End Date (Continuous)
<b>Other Mobile Fuel Combustion Actions</b>							
Manufacture & use of bio-diesel	Ongoing/In Progress			Although biodiesel has been used for many years in our grounds maintenance vehicles, in 2010 we started the manufacture of our own bio-diesel generator. Waste fats from our cafeteria operations will be used as raw materials. The resulting bio diesel output will be used in college vehicles & equipment	Complete the manufacture of the generator and begin using the produced bio diesel. The bio diesel plan will also be used as a demonstration & teaching tool for students in programs such as Environmental Technology, Chemistry and Trades & Technology.	2010	2011
<b>Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)</b>							
<b>Planning/management</b>							
Enrol in a building energy benchmarking program (e.g., GREEN UP)	Ongoing/In Progress			Camosun is in it's 4th year of BC Hydro sponsored Energy Manager program.	2011: Complete 4th year Energy Manager program requirements 2012: Continue partnership with BC Hydro Energy Manager program	2007	2012
Reduce office space (square meters) per employee	Ongoing/In Progress			A Space Mining committee was established to explore maximizing the utilization of existing general purpose classroom space, labs and faculty office spaces	Continue the work of the Space Mining committee to maximize space use. Mandate of committee may be expanded to consider all space.	2009	No End Date (Continuous)
<b>Owned buildings</b>							
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	Ongoing/In Progress	2	% of owned buildings are certified LEED NC Gold or LEED NC Platinum	Camosun's newest building, The Pacific Institute for Sport Excellence (PISE), has been constructed to LEED Gold.	2011: Complete LEED Gold application for PISE All new construction of commercial buildings will be to minimum LEED gold standard	2008	No End Date (Continuous)
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	2	% of buildings built or renovated since start year indicated used the integrated design process	Integrated design process was used in the construction of PISE	All new construction of commercial buildings will use the integrated design process	2005	No End Date (Continuous)
Incorporate a refrigerant management strategy into regular building management/maintenance to reduce fugitive emissions	Ongoing/In Progress			Refridgeration systems are upgraded on an ongoing basis to newer less harmful refrigerants.	Continuation of upgrades & replacement of outdated equipment where applicable.	2003	No End Date (Continuous)
Complete energy retrofits on existing, owned buildings	Ongoing/In Progress	70	% of owned buildings have undergone energy retrofits since start year indicated	Implementation of the Energy Study through PSECA funding for buildings on Lansdowne campus was started in 2010.	2011: Complete energy retrofits on Lansdowne campus	2010	2011

## Camosun College - 2010 Carbon Neutral Action Report

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
<b>Retrofitting owned buildings</b>							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Ongoing/In Progress			Implementation of above noted Energy Study for buildings on Lansdowne campus includes boiler & heat pump replacements, expansion of DDC controls and commissioning.	2011: Complete implentation of mechanical systems upgrade portion of Energy Study.	2010	2011
Upgrade lighting systems during retrofits	Ongoing/In Progress			Implementation of above noted Energy Study for buildings on Lansdowne campus includes lighting system upgrades.	2011: Complete implentation of lighting systems upgrade portion of Energy Study.	2010	2011
Upgrade/adjust control systems during retrofits	Ongoing/In Progress			Implementation of above noted Energy Study for buildings on Lansdowne campus include expansion of DDC control and commissioning.	2011: Complete implentation of control systems upgrade and adjustment portion of Energy Study.	2010	2011
Improve building insulation (including windows) during retrofits	Ongoing/In Progress			Implementation of above captured Energy Study for buildings on Lansdowne campus include mechanical & architectural insulation upgrades and door & window sealing.	2011: Complete implentation of insultation improvement portions of Energy Study.	2010	2011
Install an on-site renewable energy demonstration project	Completed in 2010			A solar renewal energy demonstartion project was completed in 2010. This will be a learning tool for trades students as well as a demonstration project for students, faculty, staff & visitors. The project is developed in cooperation with Industry Canada.		2009	2010
<b>IT power management</b>							
Install power management software which shuts down computers outside of regular business hours	Completed in 2010	95	% of computers shut down automatically outside of regular business hours	Windows OS powersave software is acticve and used on all Camosun computers	No further actions are planned.	2009	2010
Implement server virtualization	Ongoing/In Progress			146 college servers are "virtual" on three pieces of hardware. With support form BC Hydro, Camosun undertook a Server Virtualization Energy Study in 2010.	Default for new servers is to virtualize unless specific requirements demand hardware. Evaluate results of the Server Virtualizatuion Energy Study and implement recommendations that meet the energy savings threshold.	2006	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			All new equipment purchases have been Energy Star where applicable.	Source Energy Star models for future purchases where available.	2008	No End Date (Continuous)
<b>Supplies (Paper)</b>							
<b>Printer/document settings</b>							
Switch networked printers and photocopiers to automatic double-sided	Completed in 2010	98	% of network printers or photocopiers are set to automatic double-sided	new equipment enabled virtually all printers to be set to default to double sided. Jamming in some printers has caused us to temporarily default back to single sided in some printers only		2009	2010
<b>Electronic media in place of paper</b>							
Install collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress			Most editing is done on-line. A SharePoint Pilot was completed in 2010. Currently 60 individual SharePoint site are supported.	Increase the number of SharePoint sites and market its use to support a broad roll out of the software.	2010	2011
Use electronic document library for filing common documents	Ongoing/In Progress			Most large documents are filed electronically	Increase file storage space for staff	2002	No End Date (Continuous)
Post materials online that were previously printed	Ongoing/In Progress			Increasing numbers of departments distribrute newsletters electronically	Continue to expand use of on-line distribution of materials	2008	No End Date (Continuous)



## Camosun College - 2010 Carbon Neutral Action Report

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
<b>Behaviour change program</b>							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	5	% of staff currently have received collaborative software training	Pilot project was started in 2010 around the use of Sharepoint.	Complete Sharepoint pilot and evaluate results for broader roll out.	2010	2011
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			A process has been implemented that limits use of handouts at high attendance meetings	Encourage paperless meetings and use of electronic distribution of information for all meetings & presentations.	2007	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			The Camosun printshop makes note pads from collected single sided paper. Pads are distributed to college departments.	Continue practice of re-purposing scrap paper into note pads	2005	No End Date (Continuous)
<b>Other Paper Supplies Actions</b>							
Print reduction strategy using centralized printing and on line print job submission software to reduce costs and promote reduced printing.	Ongoing/In Progress	6	% reduction in total print impressions	The print reduction strategy has resulted in a total of 1 million reduction in print impressions.	Continue the promotion and implementation of the print reduction strategy.	2010	No End Date (Continuous)

# Camosun College - 2010 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 12/31/10)	Performance to Date (as of 12/31/10)		Steps Taken in 2010	Steps Planned for 2011 -2013	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			Intercampus/local travel has been identified as an opportunity for reductions to meet objectives of the TPM plan. This travel is being tracked. Options have been explored for policy and goal setting	Finalize goals & polices.	2009	2012
<b>Virtual meeting technology</b>							
Install web-conferencing software (e.g., Live Meeting, Elluminate, etc.)	Ongoing/In Progress			The college has introduced a desktop solution (Elluminate) which will allow meetings and collaboration from individual desks and multiple locations. In 2010 Elluminate was used in 473 sessions.	Continue to roll out and expand the use of Elluminate as a desktop solution for holding web conferences.	2009	No End Date (Continuous)
Make desktop web-cameras available to staff	Ongoing/In Progress	30	% of staff have access to a desktop web-camera	All new laptops have built in web-cameras.	As part of the technology refresh & replacement program approximately 20% of lap top users will gain access to web-cameras each year.	2009	2013
Install video-conferencing units in meeting rooms or provide mobile video-conferencing units	Ongoing/In Progress			Camosun College has full utilization of two high definition mobile videoconferencing units. One unit is available at each campus, with fairly wide flexibility to connect in a variety of spaces.	Find opportunities to expand the use of existing video conferencing equipment. Expand to two additional units to increase availability.	2009	2012
<b>Behaviour change program</b>							
Train staff in video-conferencing or provide technical support for video-conferencing set-up	Completed in 2010	100	% of staff are trained in video-conferencing or have access to technical support	The set-up and use of Camosun's mobile video conferencing units is fully supported by on site technical staff.		2009	2010
Encourage staff to consider virtual attendance/presentation at events where possible	Ongoing/In Progress			Mobile video conferencing units are availabel at each campus. For meetings that are supported by video conferencing staff are encouraged to attend the meeting at their campus location to avoid inter camous travel.	Expand the availability and use of video conferencing equipment for meetings to encourage use.	2009	No End Date (Continuous)
Encourage carpooling to meetings	Ongoing/In Progress			informal process of carpooling to meetings in place	more formalized process to be introduced	2009	2013
<b>Education, Awareness, and Engagement</b>							
<b>Team-building</b>							
Create Green, Sustainability, Energy Conservation, or Climate Action Teams with executive endorsement	Ongoing/In Progress			An Environmental Sustainability Council was formed in December of 2010 to provide an open forum for the discussion of college-wide environmental initiatives with a goal of improving and extending current environmental practices.	Further define and develop the role of the Environmental Sustainability Council as a body to identify, research and make recommendations on specific initiatives.	2010	No End Date (Continuous)
<b>Staff Professional Development</b>							
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress			The college supports training of staff to allow professional & personal development in sustainabilty and other areas.	The college wil lcontinue to support training and professional development which will include green topics	Started before 1995	No End Date (Continuous)
<b>Staff awareness/education</b>							



## Camosun College - 2010 Carbon Neutral Action Report

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 green tips on staff website or in newsletters	Ongoing/In Progress		Tips and FAQ's are listed on the Camosun Green/Energy Management website.	Continue to update the information on these sites.	2008	No End Date (Continuous)
Provide sustainability education during new staff orientation	Ongoing/In Progress		New staff orientations included education about sustainability activities undertaken at Camosun College.	Sustainability is planned to continue to be a part of the new employee orientation activities	2008	No End Date (Continuous)
<b>Client/public awareness/education</b>						
Provide green tips on client/public website or in newsletters	Ongoing/In Progress		Tips and FAQ's are listed on the Camosun Green/Energy Management website.	Continue to update the information on these sites.	2008	No End Date (Continuous)
<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		All showerheads are low flow heads. Water fixtures are replaced with water efficient models on life cycle replacement.	Develop a policy and technical specification that defines use of specific water efficient models and develop a plan for water fixture replacement.	Started before 1995	2012
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	Ongoing/In Progress		Use of drought tolerant & native species in landscaping, use of drip & micro irrigation systems, selective lawn irrigation to high priority areas only. Replacement of toilet fixtures is done with low flow fixtures	Continue to look for opportunities to reduce building level potable water demand	Started before 1995	No End Date (Continuous)
Introduce a stormwater management landscape strategy (e.g., vegetated roofs, permeable paving, rain gardens, bioswales)	Ongoing/In Progress		Permeable (gravel) parking lots exist on both campuses. Interurban campus has a bioswale as a result of new construction completed in 2008. In 2010 a bioswale was added to Lansdowne campus as part of the construction of the Aboriginal Gathering Place.	Introduce stormwater management landscape strategies where applicable	Started before 1995	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	Ongoing/In Progress		Waste reduction and diversion programs continue to expand and develop. Composting programs were expanded; including addition of 10 CRD provided digesters at Lansdowne campus and discussions started with Student Society over a program to expand the composting program. A recycle station renewal program was started to upgrade existing stations, improve signage and increase use of available recycling programs. E-waste is diverted separately	Continue to prepare for the eventual planned ban of wood waste from landfill. Finalize discussion & agreement with Student Society regarding expansion of the composting program. As technologies and practices change we adjust our practices.	Started before 1995	No End Date (Continuous)
<b>Procurement (non-paper supplies)</b>						
Incorporate minimum recycled content standards into procurement policy for consumable, non-paper supplies (e.g., writing instruments, binders, toner cartridges, etc.)	In Development		Supplier agreement includes requirement to provide a "green" list of office supply consumable items. No minimum recycled content is listed.	Consider including the requirement for use of a minimum recycled content.	2009	2012
Establish green standards for goods that are replaced infrequently and/or may require capital funds to purchase (e.g., office furniture, carpeting, etc.)	Ongoing/In Progress		The most recent RFP for furniture included a large (19%) energy/green component as part of the evaluation and all products selected have their own green standards for manufacturing, packaging and shipping. Carpeting specifications include requirements for low VOC, use of carpet tile where possible, and recycling of removed product.	Continue to expand energy/green components into other applicable areas of purchasing.	2008	No End Date (Continuous)
<b>Indoor air quality</b>						
Enforce a scent-free policy (e.g., no strong perfumes, deodorants, etc.)	Ongoing/In Progress		Scent free handsoaps are use throughout our facilities. Use of deodorizers in custodial have been eliminated.	Continue to evaluate other opportunities for elimination of scented products	2008	No End Date (Continuous)

## Camosun College - 2010 Carbon Neutral Action Report

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
<b>Commuting to and from home</b>						
Introduce telework/work from home policy	In Development		policy is in development	included in bargaining agenda	2010	2011
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress		awareness campaign took place to students and employees. The number of people reportedly using these alternatives is measured bi-annually with targets in place	options for employees are being negotiated with employee groups, promotion and support for alternate modes is ongoing	2009	No End Date (Continuous)
Provide secure bicycle storage	Ongoing/In Progress		secure bicycle storage is provided on one campus	funding for secured bicycle storage on 2nd campus is pending	2004	2012
Modify parking fees or parking availability for staff/students	Ongoing/In Progress		3 year parking rate strategy underway for students, parking availability is measured with targets	review and increase rates, regularly monitor availability	2008	No End Date (Continuous)
<b>Other Sustainability Actions</b>						
President's Environmental Sustainability Fund	Ongoing/In Progress		In 2010 five grants of up to \$5,000 each per annum were awarded in support of projects and initiatives that assist our environmental sustainability goals. Projects may relate to administrative, educational, or applied research initiatives with planned outcomes that will advance the College's sustainability profile.	The President's Environmental Sustainability Fund grants will be awarded again in 2011.	2010	2013