



SUSTAINABILITY REPORT 2014

| Office of Environmental Sustainability



Table of Contents

INTRODUCTION 3

TOWARD A SUSTAINABLE FUTURE 4

WHO’S INVOLVED 6

WHAT WE’RE DOING 7

 Energy Conservation 8

 Waste Management / Recycling 18

 Water Conservation..... 25

 Materials / Resources 26

 Landscape / Habitat and diversity 28

WHERE WE’RE GOING 32

 Energy Conservation 33

 Transportation 33

 Waste Management / Recycling 34

AWARDS AND ACCOLADES..... 35

INTRODUCTION

Formed just two years ago in support of Camosun’s strategic plan, Inspiring Lives, the Office of Environmental Sustainability is tasked with increasing awareness, understanding and engagement in sustainability initiatives throughout the College and communicating achievements and efforts.

Camosun College has a lengthy history of sustainability and so, for the purposes of our first Sustainability Report, we’ve attempted to gather comprehensive information about the myriad of initiatives that have been spearheaded by members of our college community over the past few years.

Sustainability on campus has had a tremendous champion in Peter Lockie, Vice President of Administration and founding Chair of the Environmental Sustainability Council. Leadership has also been evident from individual faculty and staff members, the CCSS Sustainability Director and from the Camosun Students for Environmental Awareness.

Funding for environmental sustainability programs is often derived from carefully crafted partnerships with like-minded organizations. BC Hydro and the PSECA, among many others, have been critical to the implementation and success of key programs, and Camosun College President’s Funds provide financial support to some employee-promoted initiatives.

There are many opportunities to become involved, to lead or to support sustainability on campus. Whether you’re a student, a member of the faculty or on staff, we hope you’ll be inspired by the many projects and initiatives you’ll find on the following pages.



Kathryn Le Gros
Director, Ancillary Services



Lynn Bartle
Manager, Environmental Sustainability

TOWARD A SUSTAINABLE FUTURE

Sustainability is about integration; it recognizes that healthy communities, a thriving economy and environment are interdependent. Camosun's 2011-2014 Strategic Plan, establishes goals to build concepts of ecological sustainability and social responsibility into programs and courses and to be a leader in environmentally sustainable practices.



The college has been travelling down the path of environmental sustainability for a number of years. Camosun's Environmental Management Policy was drafted in 2005 and students, staff, and faculty formed a cross-campus "green" group in 2010. That group quickly transitioned into the Environmental Sustainability Council (ESC), an open forum for the discussion of college-wide environmental initiatives.

In 2009, Facilities Services partnered with BC Hydro and the Public Sector Energy Conservation Agreement (PSECA) in the execution of a 4-year energy management plan which facilitated building upgrades and retrofits to increase energy efficiency at both campuses. Also in 2009, Ancillary Services, with consultant Todd Litman, developed the College's first Transportation and Parking Management Plan.

President's Funds, a program designed to foster innovation and creativity in employees, was established in 2010 and offers up to \$5000 in support of employee-initiated projects in four areas including environmental sustainability. President's Funds' projects relating to environmental sustainability have included the development of solar power, bio-diesel from cafeteria waste, organic waste composting programs, waste water reclamation and rainwater harvesting, greenhouses, gardens, and the expansion of our recycling programs.

To further its commitment to sustainability, Camosun College established the Office of Environmental Sustainability in 2012 by hiring a Manager, Environmental Sustainability. The mandate of the office is to create and support a college Sustainability Plan; to support the work of the ESC and other sustainability initiatives; to increase understanding, awareness, and engagement in sustainability initiatives at the College for both employees and students; to communicate achievements and efforts on an annual basis; and to identify funding and research partnerships. The Manager, Environmental Sustainability, is also responsible for transportation and parking at the college with the mandate to manage parking services and to promote and support alternative modes of transportation in an effort to reduce single occupancy vehicles (SOV) on campus.

Camosun's first Sustainability Plan was developed by the Office of Environmental Sustainability in 2013/14. Ten months of extensive research and consultation were conducted with members of the campus community. This included creating an inventory of college sustainability initiatives, researching

sustainability best practices from the post-secondary education sector, facilitating workshops, surveying students and staff, establishing an Advisory Committee on *Integrating Sustainability into Teaching and Learning*, and hosting a student open-house and consultation session.

During the development of the Sustainability Plan, members of the campus community stressed the importance of integrating sustainability throughout campus life and student learning, to turn the campus into a "Living Lab". Thus the Sustainability Plan, supported by the *Integrating Sustainability into Operations and Governance* and *Integrating Sustainability into Teaching and Learning* sub-plans, has established goals to reduce the College's environmental impact, excel at innovation, and embed sustainability into the curriculum.

As a "Living Lab" college, Camosun will strive to combine education components with governance and operational needs, applied research, and partnerships. The college will showcase solutions and pilot new technologies, and act as a "test bed" for sustainability innovation, applied research and experimentation.

Although faculty has already begun incorporating concepts of sustainability into curriculum, the goal is to strengthen this process and integrate sustainability into all areas of learning. Students will be provided with an opportunity to gain a wealth of knowledge and experience, working across a variety of disciplines on real-life, hands-on projects on campus, empowering them to be contributors to a more sustainable future.

WHO'S INVOLVED

The “Living Lab” approach for the over-arching Sustainability Plan requires a joint commitment from students, faculty, and operational staff to design, implement, adapt and teach new approaches that address sustainability and result in more sustainable and innovative practices on campus.

Sustainability has been championed by various individuals, departments and schools for a number of years in almost every facet of the college. From student education and engagement, to college operations and management, to community innovation and partnerships, leaders from within the college community have inspired change that has led to real progress in achieving a sustainable campus and community.

Students are taking action, individual faculty members are leaders in areas of curriculum development and delivery, staff is actively engaged in sustainability initiatives, and opportunities for life-changing learning are offered to the entire College community. Leadership has been evident from Camosun’s Facilities Services, Ancillary Services, the Schools of Arts & Science and Trades & Technology, the Environmental Sustainability Council, the Camosun College Students Society (CCSS) Sustainability Director, and the Camosun Students for Environmental Awareness.



WHAT WE'RE DOING



Camosun has 2 campuses and 38 buildings with 800,000 square feet of work/study space spread over 120 acres. We have 85,000 light bulbs, 2,400 rooms, 12,000 students, 1,000 staff and faculty, 2 child care centres, countless Garry oaks, camas, deer and ducks. Camosun is like a small city. Its approach to sustainability in all of its operations and services has a great reach.



Applied teaching and learning initiatives– such as those related to waste reduction, solar energy and bio-digesters – have begun to shape the campus as a living laboratory.

The School of Trades & Technology offers leading-edge, practical trades and apprenticeship training that results in skilled individuals who are familiar with sustainable practices. Changing government legislation and regulations, combined with industry innovation, pushes the advancement of sustainability in trades and technology.

Within the School of Business there are a number of courses that are dedicated to business and sustainability. As well, the concepts of social responsibility and sustainability are woven throughout much of other business curricula.

Sustainability is a core component of the Environmental Technology Program offered in the School of Arts and Science. Projects are continuous so the students can study any area of the environment in collaboration with faculty and partners (i.e. Facilities Services). A project started by one group of students can be continued by another group, or by other collaborators including staff and faculty.

Several instructors have chosen to include sustainability topics in their curriculum by way of assigned readings, field trips, case studies etc. Wherever possible, students and their learning experience are placed at the heart of the college’s environmental efforts. In this document, student learning opportunities have been highlighted with a  and operations/governance initiatives are identified with a .

Initiatives with both symbols   are examples of sustainability initiatives on campus that represent Camosun College as a “Living Lab”.

Energy Conservation

Camosun’s five-year Energy Plan focused on increased energy efficiency and reduced consumption. It was about promoting a college-wide shift to more sustainable behaviour by students, staff and faculty and taking pride in being part of the larger movement to collectively curb climate change.

Carbon Neutral Campus

Facilities Services , BC Hydro

British Columbia’s Bill 44, Greenhouse Gas (GHG) Reduction Targets Act, requires all public sector organizations and institutions to become carbon neutral in their operations and to report out annually with the plans and actions they have taken to reduce GHG emissions. Camosun College has been committed to this goal and has made great strides to facilitate Carbon Neutrality.

Between 2008 and 2012, BC Hydro provided funding and an Energy Manager to help Camosun College’s Facilities Services better manage and optimize its resources. The college’s annual energy usage (Hydro and Gas) is now 17 GWh; 33% less than in 2005.

Between 2008 and 2012, Camosun also performed energy saving retrofits to both campuses. Retrofits to Interurban campus were completed in 2011. In 2012, the Lansdowne energy retrofit project was implemented,

including replacement of the entire lighting system in the Fisher Building.

The Energy Plan finished on a high note in March 2013, greatly exceeding its targets.

- Camosun achieved carbon offsets worth over \$48,500 each year; entirely compensating for its annual carbon tax of \$40,500.
- In 2012, over \$400,000 was saved in electricity and gas consumption combined (compared to the 2005 baseline).
- In 2012, Camosun’s two urban campuses reduced combined greenhouse gas emissions (GHG) by 12% from 2011 levels. The goal to save 200 tonnes of Greenhouse gas emissions by 2012 (5-year target) was more than quadrupled with an 828 tonne reduction.
- Over \$2.7 Million was contributed to the fiscal bottom line in avoided costs and new equipment/infrastructure.

(Source: 2012 Carbon Neutral Action Report)

Solar Powered Charging Station and Tools

School of Trades & Technology, Facilities Services

With funding from UPass proceeds and 2013 President’s Funds, the College installed a 4 KW Solar Photovoltaic (PV) array at the Interurban Campus to offset the charging of electric vehicles, bikes/scooters, grounds keeping golf carts, and battery powered hand tools. The energy provided by the array, which feeds power directly into Camosun’s electrical grid, along with

the energy consumed by the various charging stations is fully monitored. After a year of operation, the goal is to show that the sun’s energy provides more energy than is required by all the charging stations. The array was installed by Electrical Apprentice students under the guidance of Home Energy Solutions, the solar array provider. The array’s performance will be monitored by Electronics and Mechanical Engineering Technology students over the course of the year.



Continuous Optimization Program

Facilities Services, BC Hydro

The 2007-2012 Continuous Optimization Program developed by BC Hydro improved energy efficiency by granting access

to new tools and technologies, including smart meters and software systems that track and analyze electricity usage across all of Camosun’s buildings. This enables quick and accurate assessment and repair of energy inefficiencies and will continue to help identify opportunities for greater efficiency opportunities.

Public Sector Energy Conservation Agreement (PSECA)

Facilities Services

From 2009 through 2012, the PSECA funds for Camosun targeted energy efficiency, replacing gas burners with air-to-water heat pumps, installing a solar hot-water heating system and pioneering a solution for recycling welding exhaust gases to save on heating bills. Installation of high-efficiency lighting and heating and air conditioning system retrofits were conducted at both campuses.

Buildings were surveyed with a thermal camera and areas of excessive heat loss were identified which resulted in the installation of new doors in the Library Learning Commons and Fisher buildings. Heat pumps on the roof of the Paul Building (Lansdowne campus) were replaced and upgrades were made to the flow sensors and controls on the Variable Air Volume (VAV) systems in the Centre for Business & Access and Campus Centre buildings on Interurban campus.

Successful completion of the PSECA funded projects at Lansdowne and Interurban contributed to the excellent results noted in the Carbon Neutral Report of 2012.

Lighting upgrades

Lighting accounts for 27% of the College's hydro costs. By 2012, high efficiency lighting had replaced older tubes and incandescent bulbs on both campuses. The entire lighting system in the Fisher building was replaced (shift from fluorescent lighting to T5s and electronic ballasts), the Direct Digital Control (DDC) system was upgraded to include more buildings, and occupancy sensors (which turn off the lights when rooms are unoccupied) were installed in almost every building.



Welding Shop Ventilation System Improvements

An air filtration and recycling system at the Jack White welding shop, installed in 2010, is the first of its kind to be approved for use in a BC workplace. Sensor-activated fans installed on the 54 welding booths activate only when needed and a unique filtration system for the exhaust air provides clean, warm air to the welding shop, reducing the need to heat cold replacement air. The modifications to the welding shop have saved Camosun \$50,000 in annual heating costs, and reduced the College's Greenhouse Gas emissions by 200 tonnes each year.

LEED Gold Standard Buildings

Facilities Services

Leadership in Energy and Environmental Design (LEED) is a set of rating systems for the design, construction, operation, and maintenance of green buildings, homes and neighborhoods. Camosun complies with or exceeds environmental regulations and standards, including LEED Gold standard, in all new building construction.

The Pacific Institute for Sport Excellence (PISE) was constructed at the Interurban campus in 2008 to LEED Gold standard, and construction is now underway on the new Centre for Trades Education & Innovation at Interurban which will also be built to LEED Gold standard.

Carpentry Foundations

School of Trades & Technology

Camosun's Carpentry Foundations program began revising the curriculum in 2008, including the addition of practical experience in building to LEED certified standards. In 2011, an additional focus on emerging environmental standards within the construction industry was added.

Solar Saturday

School of Trades & Technology, Continuing Education

On October 22, 2011 Camosun hosted Solar Saturday – a renewable energy exposition. The free event attracted approximately 125 people and featured a series of workshops, special speakers, and exhibits. It was geared towards the local building community to help builders, installers, and homeowners learn more about solar and other renewable energies, and how they can access training courses and certification.

GoBEYOND Teach-In

Camosun College, CCSS

GoBEYOND Is a province-wide movement that educates, inspires, engages and supports post-secondary students to take action on climate change. In 2011 and 2012 over 1,000 students, guided by 21 Camosun instructors, joined thousands more BC college and university students to generate solutions to climate change and contribute to a sustainable future. The ideas generated in Camosun's classrooms were shared with leaders in education, policy development, and climate action to achieve carbon neutral schools and sustainable communities. Founding partners of GoBEYOND include the BC Campus Climate Network, UBC Sustainability, the Sierra Youth Coalition and Common Energy.

Solar Electrical: Intro to Photovoltaic (PV)

School of Trades & Technology: Electrical / Continuing Education

Introduced in 2012, this course is an introduction to solar generated electrical systems (photovoltaics).

Diploma in Electronics & Computer Engineering Technology – Renewable Energy

School of Trades & Technology

In 2008, Camosun revised the existing Electronics and Computer Engineering program to have a renewable energy focus. Students are introduced to a wide range of renewable energy technologies, including solar photovoltaic, solar thermal, wind, geothermal, wave, hydroelectric, tidal and bioenergy. Storage options such as hydrogen fuel cells and batteries are also studied. Students learn how to use power electronic devices to control renewable energy systems, how to create web applications that support environmental monitoring, and how to use sensors to make the best use of available solar or wind energy.

Solar Thermal Systems Demonstration

School of Trades & Technology: Plumbing & Pipe Trades, Facility Services

In 2011, six solar thermal systems were installed on the roof of the John Drysdale building on the Interurban campus and used for teaching. The solar thermal panels are connected to thermal storage tanks inside the solar lab. There is also a shower drain heat exchanger model in the lab, which demonstrates how heat can be recovered from grey hot water flowing through drain pipes that is then used to preheat the cold water coming into the tank thereby reducing energy costs. This equipment for this project was funded by various departments and donations. The President's Funds provided additional money to include solar thermal systems in the curriculum.

Solar Thermal Installation at Gordon Head Recreation Centre

School of Trades & Technology: Plumbing & Pipe Trades

When the municipality of Saanich received a donation of solar thermal collectors in 2011, Camosun College faculty and students stepped in to help with the installation. Now the Gordon Head Recreation Centre is using solar energy to heat thousands of gallons of water used in showers and sinks.



📖 Solar Thermal: Entry Level Course

School of Trades & Technology: Plumbing & Pipe Trades / Continuing Education

This course is based on North American Board of Certified Energy Practitioners' (NABCEP) Entry Level Learning Objectives and taught by NABCEP Certified Solar Installers. Successful completion prepares students to take the NABCEP Entry Level Exam. Camosun's Plumbing & Pipefitting program stands alone as the only program west of Ontario to have adapted its curriculum to meet the certification standards of the NABCEP.

🌱📖 Solar Power - Environmental Technology Field Project

School of Arts & Science: Environmental Technology, Facilities Services

In 2010, a solar power generator and solar panel were purchased to store solar energy for use at the Environmental Technology (ET) Spring Field camp as a charging station for student electronics and as a teaching tool. Some ET students proposed an idea to create laptop docking stations that would use solar power as their final sustainability project. The solar panel was set up on the roof of the Fisher Building and wires were connected down to the generator and a computer in Fisher 338. The students monitored how much energy was harvested from the sun, and how much energy was available for gadgets and the computer. At the end of the student project, the solar panel was left on the roof and is still partially powering the computer, and available for future projects. Funded through 2010 President's Fund.

📖 "CamoSun" Solar Heating Thermal System

School of Trades & Technology: Plumbing & Pipe Trades, Pacific Solar Smart Homes

In 2012, Camosun's Plumbing and Pipefitting program collaborated with Pacific Solar Smart Homes to develop an innovative "CamoSun" solar heating system for residential homes. The CamoSun project simplifies solar heating installations by removing the need for, and added expense of, traditional solar thermal system components. Unique features have been included that help avoid possibilities of freezing and overheating. Camosun hosts the data logging system that tracks performance and college staff monitors the system daily to ensure that the system is working correctly within specifications and staff assists Pacific Solar with installations.

🌱 Computers / Hardware Replacement *Information Technology Services*

Camosun's older computers & monitors have been replaced with ACER Energy Star energy-efficient computers and monitors that reduce energy costs and heat output. Energy Star copiers and printers and Virtual servers maximize physical hardware resources and reduce power and cooling needs. The new computers and monitors save over \$23,000 annually in energy costs.

🌱 Food Services Energy & Water Conservation

Food Services, Ancillary Services

Since 2008 a wide range of energy and water conservation programs have been applied to contracted food services through initiatives such as the use of energy efficient food equipment and tray-less dining (which conserves energy, water and detergents etc. used for washing trays).



Alternative Transportation

Transportation and Parking, Ancillary Services

Whether it's prime parking spots for carpoolers or providing resources and incentives for bike riding, transit or teleconferencing, Camosun is committed to reducing emissions by cutting trips made to Camosun by car. Between 2009 and 2013 a number of cross-campus initiatives were introduced:

Getting Here Green and Campus to Campus Green

The first iteration of the Alternate Transportation Campaign (ATC) wrapped up in April of 2013, and the second kicked off with CamFest in September 2013.

Posters, flyers and rack cards are displayed and events are held at both campuses to raise awareness and encourage the use of alternate transportation options such as cycling, walking, transit (including the Camosun Express) and carpooling. In addition, videoconferencing is promoted to employees as an alternative to intercampus travel.

Over the past five years campus sustainable transportation initiatives have included:

Camosun Community Bicycle Ride (2012)

As part of car-free day in 2012, a community bike ride occurred with various staff members along the galloping goose trail September 22nd.

Bike to Camosun Network (2009 onward)

A program to capture and take advantage of momentum created for Bike to Work Week which supports and encourages people to continue cycling to Camosun over the summer.

Bike to Work Week (2009 onward)

A province wide program to encourage more people to commute by bicycle through Bike to Work initiatives. Camosun Transportation and Parking has sponsored this event since 2009 and has seen the participation grow, events include celebration stations and prizes for commuting kilometers.

National Rideshare Week Car-Free Day 2012

In celebration of World Car Free Day & Ride Share week, Camosun College Transportation and Parking alongside the student society encouraged staff and students to re-think park(ing.) Spaces were reclaimed and instead people were offered a pancake breakfast, consequently drawing attention to the need to reduce the number of single occupancy vehicles on campus.

Camosun Rideshare/Carpool Month (2014)

Showcasing those who make carpooling or ride-sharing their mode choice during this month, participation in the Camosun Express Pilot project was highlighted with prizes.

Transit Appreciation Week (2013)

To celebrate those who make transit a part of their commute to Camosun College and to engage the college community about taking transit, issues and successes - celebration stations were held at both campuses with cookies and coffee, and a Instagram photo contest occurred in collaboration with BC Transit.



Nasty November Cycling Challenge and Bike to Camosun Week (2010 onward)

To recognize the college community who is cycling to Camosun during Bike to Camosun Week "bike valentines" were placed on bicycles with a free reflector and sticker.

Nasty November bike challenge, is an interdepartmental staff, faculty, student cycling challenge where for two weeks in November hard-core cyclists/teams commute to Camosun tracking kilometers with a chance to win a coveted trophy and prizes. The participation and kilometers cycled has increased greatly over the years.

Camosun Express pilot project.

From January through March 2014, direct shuttle bus service was provided from and to the West Shore and between campuses. The shuttle was free for students and employees.



Ongoing incentives to change travel habits include:

Carpool Incentive Program. Carpool registrants get prime parking spaces and share the cost of parking between the individuals. The College has allocated 35 priority parking spaces over both campuses to carpoolers if they arrive at the college before 9 am.

Cycling Incentive. There are over 450 bike racks at both campuses and two new (12 bike) covered bike parking areas were installed using UPass funds at Interurban in March 2014. Each campus also offers secure bike parking for \$5 per month, and Lansdowne campus has two individual bike lockers available to rent. Convenient Bike Fix-it Stations (installed in 2012) on each campus keep cyclists rolling with a basic repair stand, durable air pump, and basic tools.

Participation in the 2013 Nasty November cycling challenge was four times that of 2010, and commuting kilometre numbers were almost triple those of 2012.

Public Transit Incentive. Students purchase their college and BC Transit subsidized UPass through their student fees, which greatly reduces the cost of using the bus system. A self-serve UPass kiosk was installed at each campus in March 2014, to provide 24/7 easy access for students to update their cards at the start of each semester, quarter or apprentice study period.

Walking Incentive. The WalkSafe program is a volunteer patrol and accompaniment service at both campuses. Organized by the CCSS, the service operates from 6-10 pm during the Fall and Winter semesters.

Virtual Meetings. By 2011 seven rooms at each campus had been optimized for video conferencing and streaming, reducing the need for travel to meetings. "Collaborate", web conferencing software, has been installed on all campus computers. Over 100 meetings used video conferencing in 2011, 151 in 2012 and 181 in 2013.

The Transportation and Parking Department conducts a *Getting Here* survey every two years to determine how students, staff and faculty are getting to campus and what would motivate them to choose alternative modes of travel. On alternating years, the department conducts a Modal Split study which looks at the portion of travel made by single occupancy vehicles, walking, cycling, rideshare (carpooling), public transit, and other modes.

The 2013 *Getting Here* survey showed that fewer people are driving to campus. From 2010-13, vehicle counts dropped 7% (from 56% to 49%) as a proportion of total mode shares. This is even more significant when compared to 2008 vehicle use (63%). Most significantly, both Interurban and Lansdowne showed a decrease in single occupancy vehicle traffic (down 3.8% and 5.4% respectively from the 2010 to the 2012 mode split counts). Other positive trends point to more transit users and pedestrians.

(Source: Transportation & Parking Implementation Project: Three Year Working Plan Final Report, April 1, 2010 – March 31, 2013)

Distance courses and blended/hybrid courses

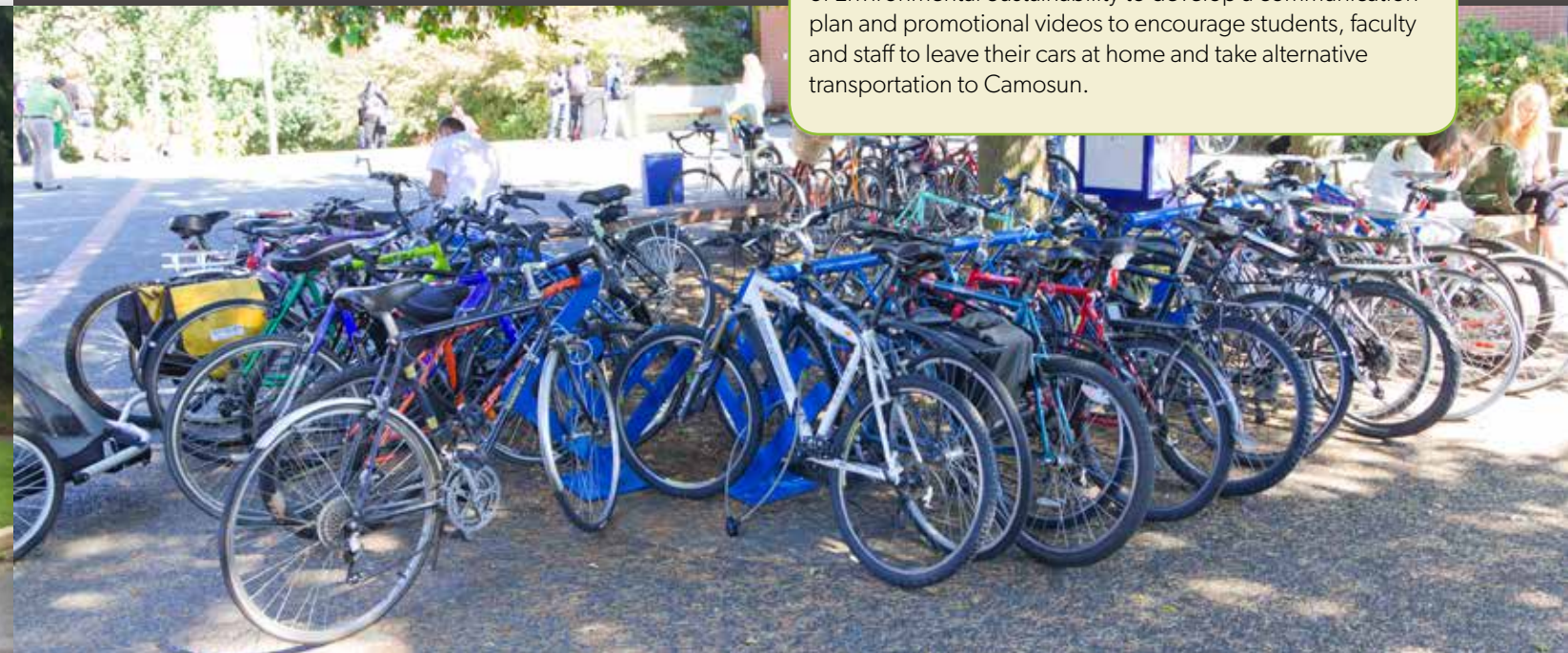
Schools of Business, Arts & Sciences, and Trades & Technology, Alternative Transportation

Camosun College has been offering distance courses for some time but in the fall of 2009, the college also began offering blended/hybrid courses in which students would be able to complete a portion of their course online. Students who enrol in distance or blended/hybrid delivered courses reduce their own carbon footprint as well as the College's by eliminating traffic to and from campus and reducing the space and equipment needed on campus for delivery of the program. 31 distance (on-line) and blended/hybrid programs and credit courses were offered in 2013.

Communication Strategy for Alternative Transportation

School of Business and Transportation and Parking, Ancillary Services

In 2012 and 2013, marketing students worked with the Office of Environmental Sustainability to develop a communication plan and promotional videos to encourage students, faculty and staff to leave their cars at home and take alternative transportation to Camosun.



Waste Management / Recycling

Camosun is composting and recycling more than ever. Composting in food service and preparation areas diverted 31,000 kg of waste from landfills last year. 33 additional composting stations were installed at Lansdowne campus and 15 additional recycling stations were installed on each campus in 2013.

100% Bio-Diesel from Cafeteria Waste

School of Arts and Science, Trades and Technology, Facilities Services

Facilities Services has been purchasing biodiesel since 2005. In 2010 with President's Funds, the School of Arts & Science (Environmental Technology program and Chemistry) and the School of Trades & Technology (Plumbing and Pipe Trades) began producing biodiesel on campus. Staff from Facilities Services assembled a bio-diesel generation plant that produces 100% bio-diesel from waste cooking oil from the Lansdowne and Interurban cafeterias and Dunlop House restaurant. The project concluded in the Fall of 2012 with the retirement of Brian Faught who had spearheaded the project. The bio-diesel plant served as a lab, demonstration tool, and teaching aid. The unit is ready to be put back into service and is portable so it may be used for demonstration in various locations. Facilities Services plans to put the plant back into operation during the 2014/2015 fiscal year.

Batteries

School of Trades and Technology, Facilities Services, Human Resources

Automotive/diesel batteries are recycled by the Automotive and Heavy Duty Mechanic programs. Lead-acid batteries are disposed of as hazardous materials through the Occupational Health and Safety Coordinator. Dry-cells, flashlight/cell phone, computer and camera batteries are shipped to "Call-2-Recycle". In 2013, Camosun diverted 160.85 kgs of batteries from the landfill.

Furniture

Facilities Services

Wherever practical, Camosun repairs and reuses furniture and equipment. When tables, chairs and desks are no longer needed, they are donated or sold if possible. If they have passed their useful life, they are sent to Ralmax Developments for deconstruction and recycling.

Camosun also accepts donations of furniture, which can result in sizeable savings, as well as a reduction in material and energy use for the manufacturing of new equipment. \$30,000 worth of furniture was donated in 2011 and placed in the Ewing building.



Recycling and Waste Reduction

Facilities Services

Facilities Services refreshed and updated recycling stations on campus in 2012. There are currently 10 recycling stations located in indoor common areas on each campus. Co-mingled recyclable materials such as paper, newsprint, cardboard, plastics #1 to #7, tin, and light metal, are collected and removed for processing from both campuses in significant quantities. Compost collection has also been added to the waste/recycle stations at both campuses. 30 compost stations were installed at Interurban campus in the summer of 2013.

According to the 2012/2013 waste audit, Camosun College produced 401.95 tonnes of waste and 211,20 tonnes of recycling resulting in a 34% diversion rate. Another waste audit was conducted in March 2014. Preliminary results from that audit indicate a 41% diversion rate. Camosun continually tries to address contamination (when non-recyclables are mixed in with the recyclables) through communication to increase success in diverting waste from the landfill.

Engagement & Awareness to Reduce Contamination/Increase Waste Diversion

School of Business, Office of Environmental Sustainability, Ancillary Services

With a goal to reduce solid waste and increase waste diversification rates, a Ready-Set-Solve student team was established in 2012 by the Office of Environmental Sustainability and Facilities Services. The student team designed a series of source separation flyers to educate, inform and communicate with the college community. These are now being utilized by the Camosun College Facilities Services team in the recycling, waste and composting areas.

🌱 Text Book Re-use and Recycling

Bookstore, Ancillary Services

The Bookstore buys back used textbooks from students 4 times per year. The Bookstore works with a third party buyer, Follett Higher Education, who purchases on behalf of the Bookstore and for their own wholesale inventory. From March 2013 to March 2014, 4,360 books were purchased, which reduced the number of new books purchased (printed and shipped) by the same amount.

Partnership with Better World Books allows us to distribute used and donated books to less fortunate people all over the world. When a textbook is no longer required for a class and has no resale value, students can donate the book to Better World Books for re-use. What is not suitable for use is recycled. Between March 2013 and March 2014, Camosun's donations preserved 33 trees and diverted 2,839 pounds of books from the landfill. This program has been in place since March 2005, and in that time – 27,773 books have been recycled or reused, 449 trees have been preserved and 38,013 pounds of books have been diverted from the landfill. Further savings can be deduced from recycling or reusing books. Since 2005, the Better World Books program at Camosun College has also saved 267,933 g of water, 59,351 lbs of GHG, and 91,688 kwh of electricity.

The Bookstore offers e-books through an affiliate relationship with CourseSmart, but the use of e-books is very small with just 48 transactions between March 2013 and March 2014.

🌱 Paper Use Reduction

Information Technology Services, Ancillary Services, Human Resources, Finance

Camosun encourages environmentally responsible printing by setting the default on most Camosun printers to double-sided, and gives a discount of .5¢ per page for printing double-sided. Employees are encouraged to hold paperless meetings and to distribute information through email and websites, or software such as SharePoint, a central storage and collaboration space for documents, information, and ideas.

Course materials are shared with students through D2L (Desire2Learn), reducing paper notes and handouts.

Camosun's Human Resources department has been using an electronic payroll notification system in place of paper pay stubs since 2009. All pay stubs, T4s, and T2202As are online and Collective Agreements and the New Employee handbook are also online.

🌱 Printers and Print Shop Recycling

Information Technology Services, Printshop, Ancillary Services

Camosun recycles all used toner bottles and soft plastics from printers throughout the college and any off-cuts or scrap paper produced in the Print Shops on both campuses. Camosun Print Services echo the commitment of Random House publishers: "We are committed to implementing policies that will facilitate the conservation of ancient forests around the world and ensure that we are not contributing to the destruction of irreplaceable natural treasures."

🌱 Wood & Shop Waste

School of Trades and Technology, Facilities Services

Wood waste from various carpentry programs at the Interurban campus is made available free to the Camosun community and general public to use as firewood. The Carpentry program also recycles nails. Wiring and metal scraps from the Electrical and Mechanical Trades programs are collected for recycling by Steel Pacific.

📖 Wood Reclamation Project

School of Trades and Technology

The Fine Furniture carpentry program at the Interurban campus works with Vancouver Island Woodworkers Guild wood recovery project to obtain materials for final projects reusing wood to reduce waste. This will often involve the milling and drying of non-commercial species such as local western cherry, arbutus, Garry oak as well as local commercial species such as Douglas fir, western maple and western red alder. Students are involved in loading the kiln and grading the materials after the material is dry and ready for use.

🌱 Cigarette Butts

Facilities Services

At each campus, cigarette butts are collected from smoking areas and recycled through TerraCycle. Cigarette butts are used to make industrial materials like low-grade plastics.

The program began in February 2014 and since then 5 lbs have been collected at Lansdowne. New ashtrays with recycling signage that promote the ease of collection will be installed at each smoking station.

🌱 Storm Water Management

Facilities Services

At the Interurban campus Trades compound, all shop catch basins drain into individual shop separators and then into a 3409 gallon underground oil separator before the water is released into Colquitz Creek. The 3-stage underground separator was installed in 2002. It is checked yearly and sludge (which is minimal) is removed as required. Oil and fluids have separate containment and recycling plans and each shop manages its own waste.

All parking lots at both campuses have catch basins and some have gravel surfaces to mitigate vehicle oil and fluid leaks from entering the storm drains.

📖 Brainy Drains

Camosun Centre for Applied Research & Innovation, Petro Barrier Systems, Royal Roads University

In 2013, Mechanical Engineering faculty at Camosun's Centre for Applied Research & Innovation (CARI) developed an oil sensor and wireless communication system as part of a hydrocarbon capture and remote monitoring system development project. The work was done in conjunction with Royal Roads University and Petro Barrier Systems Inc. (PBS). The drain system captures and immobilizes any oil, gasoline and solvents that come from large spills or that wash off roadways and parking lots, preventing them from entering storm water systems and polluting waterways and estuaries. The remote monitoring and alarm system provided by Camosun permits the monitoring of many drains simultaneously so that PBS can respond quickly to clogs.

Seven remotely monitored oil barrier systems have been installed into storm drains at Royal Roads University. Controlled lab tests and system development is ongoing at Camosun's CARI to challenge the system under a variety of real-world scenarios that mimic severe weather events. Over the course of the project three co-op students and a number of volunteer students have assisted in development and testing work. The project concludes in the summer of 2014.

📖 Environmental Chemistry

School of Arts and Science and Environmental Technology Program

Designed for students in the Environmental Technology program, Topics include: chemical toxicity, chemistry of the atmosphere and aquatic systems, organic and inorganic contaminants in the environment, and associated chemical instrumentation. Emphasis will be on laboratory work which will give students an introduction to chemical instrumentation and methodology.

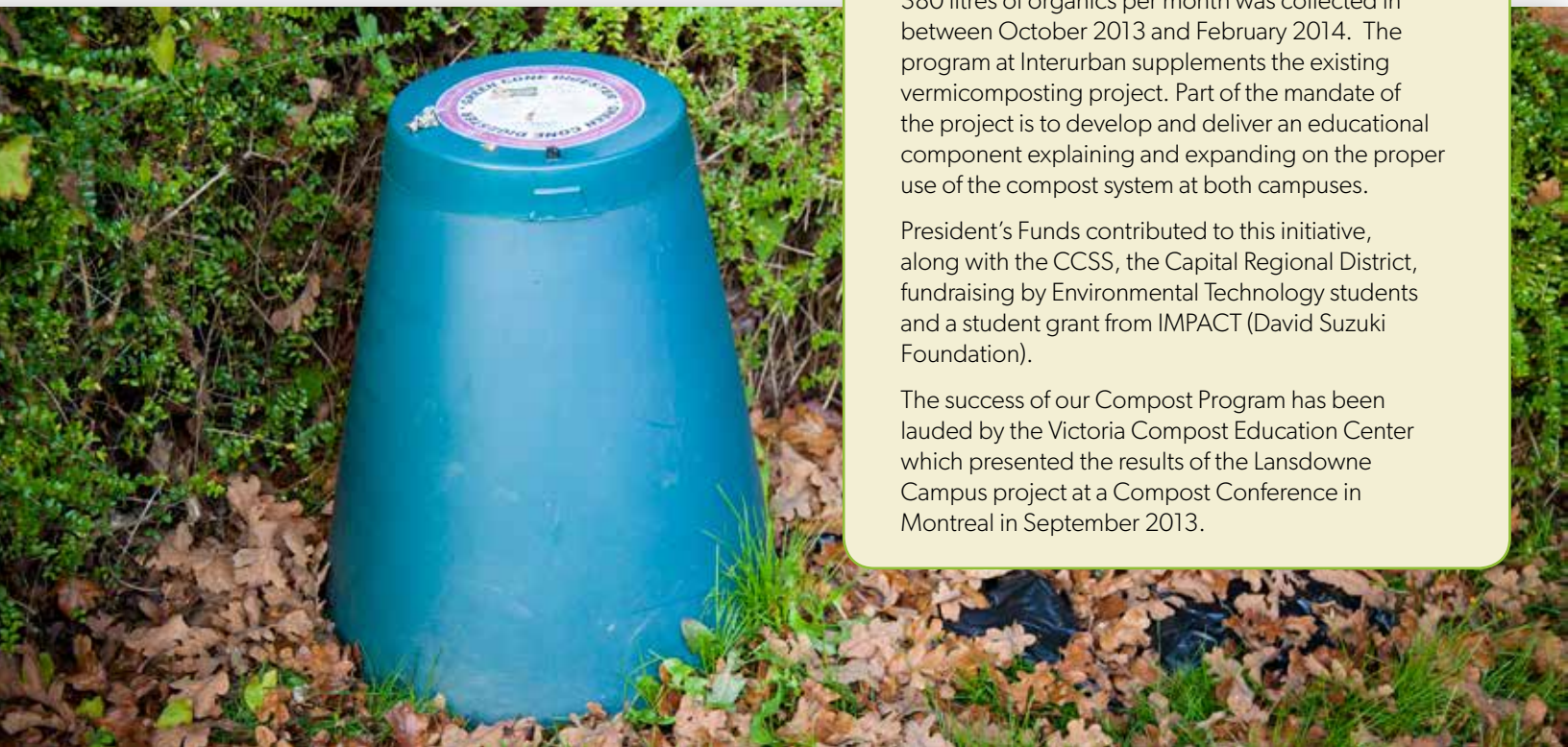
Plastic Water Bottle Avoidance

Facilities Services, Camosun College Student Society

Since 2007 Camosun has offered a water refill station vending machine at Lansdowne. Regular promotions are offered with the bookstore selling refillable stainless steel water bottles that can be used in the refill stations.

In 2011, the Environmental Sustainability Council suggested an initiative to reduce the number of plastic water bottles used on campus by installing more water fountains and filling stations for re-usable water bottles. With some support provided by the CCSS, every building at the Lansdowne Campus now has either a filling station or a filling tap. There are currently five filling stations at Interurban.

In an effort to raise awareness about the environmental impact of plastic water bottles, CUPE and CRD Water Services distributed free refillable stainless steel water bottles to students during Sustainability Day on March 15, 2012.



Organic Waste Diversion

Compost Program Initiative

School of Arts and Science, Facilities Services, CCSS, CRD, David Suzuki Foundation

A sustainable organic waste compost system has been developed at both campuses. 22 green cone digesters are installed at the Lansdowne campus resulting in the diversion of an average of 700 litres of organics per month from the waste stream in 2013. In addition, a Standard Operating Procedure Manual for On-site Compost Collection was developed. A similar program is in place at the Interurban Campus. 6 cone digesters were installed in October 2013 and compost collector bins are placed in all buildings except for Portable A and Campus Centre, where the organic waste is being collected for the vermicomposting project. An average of 380 litres of organics per month was collected in between October 2013 and February 2014. The program at Interurban supplements the existing vermicomposting project. Part of the mandate of the project is to develop and deliver an educational component explaining and expanding on the proper use of the compost system at both campuses.

President's Funds contributed to this initiative, along with the CCSS, the Capital Regional District, fundraising by Environmental Technology students and a student grant from IMPACT (David Suzuki Foundation).

The success of our Compost Program has been lauded by the Victoria Compost Education Center which presented the results of the Lansdowne Campus project at a Compost Conference in Montreal in September 2013.

Vermicomposting

School of Access

The Interurban campus vermicompost program diverts food waste from the Food and Customer Service Program in Portable A and from 8 admin offices and work areas around the Interurban Campus. From Oct. to Dec. 2013, 150 pounds of food waste was diverted and fed to worms. Through the raising and use of worms, the collection of compost, and the selling and use of the vermicompost in the student-project gardens and greenhouse, students in the EARTH Gardening and Employment Training and Preparation (ETP) programs gain skills in composting, gardening and customer service while generating some revenue. Vermicomposting teaches students to be responsible for their waste, generates discussion about stewardship, recycling, reusing and renewing and provides real experiences in seeing food being transformed into a nutritious soil amendment. This project received funding from the 2012 President's Funds but has been in operation since 2008.

Child Care Stewardship & Sustainability Initiatives

Child Care Services, Ancillary Services

The preschool centers engage with the Greater Victoria Compost Education Center as well as the Vermicomposting program at the College, learning about the importance of worms and composting.

At both campuses, the children are stewards of the natural systems around them. Educators carefully gather egg sacs of the Pacific Tree Frog for the child care facilities from the marsh at Interurban. Children nurture the eggs and tadpoles through their full life cycle. The frogs are then released back into the same environment, from which they came, to contribute their part to the ecosystem.

In a similar initiative, Child Care Services purchases monarch butterfly larvae so the young environmentalists can observe the full life cycle. The resulting butterflies are released in each centre's play yard so that they can contribute to the environment.

Often the Child Care facilities receive donations of paper products from the print shop or from other departments, including boxes from receiving. These items are reused in the centers and children are taught how to reduce their environmental footprint. By teaching children the importance of sustainability and how everything on this earth is interrelated, they can feel empowered, seeing how their behaviours and actions can affect the environment.

🌱 Food Services Waste Management

Food Services, Ancillary Services

Camosun’s Food Services contractor, Aramark, supports and participates fully in the compost and recycling programs on both campuses. Covered reusable containers for food storage are used whenever possible instead of plastic wrap. Leftovers are used appropriately and just-in-time cooking is balanced with batch to reduce waste. Level Ground picks up 100% of plastic vacuum bags from coffee for reuse in coffee-growing regions as small business supplies (women make bags and purses from them for sale to tourists).

Approximately 21,185 lbs per year of kitchen waste and coffee grounds are diverted each year from Aramark’s four outlets. Fryer oil and waste grease at Lansdowne is collected by GreaseCycle for conversion to bio-diesel.

Food is a great vehicle for education and creating awareness around health and sustainability issues. Since 2008, Aramark initiatives have included regular themed meals and events such as Locally Grown, Vegetarian and “Cool Planet” menu options, Dim the Lights dining days; providing information on menu options and ingredients (including their source) and information on the benefits of eating seasonally, locally and sustainably.

The manager of Aramark meets regularly with groups of Environmental Technology Program students to assist with class projects and to provide kitchen tours to review paper products, waste disposal methods, foods served, etc.

📖 Culinary Arts Recycling and Composting Program

School of Trades & Technology

Professional cook apprentices from the Professional Cook programs operate the Helmut Huber Culinary Arts Centre at Interurban and the Classroom at Lansdowne. Food use is maximized and any remaining kitchen waste and leftover food is composted via ReFUSE. Fats, oils and grease are collected and recycled through GreaseCycle. Take-out containers are made from recycled material and are compostable, with the exception of plastic cutlery. Food containers are often reused for other purposes, or go to the college’s gardeners or are recycled.

🌱 Paper Towel Composting

Facilities Services

In 2013, Facilities Services spearheaded a pilot project to compost paper towel waste from the washrooms at Fisher Building and PISE. An audit is currently being conducted to determine the benefits of the program.



Water Conservation

Camosun College is constantly exploring ways to minimize water use and have achieved reductions in building water use, outdoor water use and the amount of bottled water used on campus. Camosun is also helping to train future plumbers to conserve water and helping local businesses protect wetlands.

🌱 📖 Plumbing Lab Water Reclamation

School of Trades and Technology

In 2011, a grey water reclamation system was installed in the Plumbing shop’s Cross Connection lab. The system reclaims the water used in the lab and recycles it for re-use in the same lab, resulting in a completely self-contained lab with net zero water use. The system is included in the new BC Building Code, so students are training with the latest technology, giving them a competitive advantage.

📖 Clean Technology Integration with the Pipe Trades – A First Step

School of Trades & Technology and Camosun Technology Access Centre

This project started with a scan of industry to gauge the level of industry interest in Camosun incorporating more clean technology in the pipe-trades curriculum. Results showed that the greatest impact would be accomplished by influencing building inspectors, and the trades organizations that drive building code. Next, presentations were made on rainwater harvesting to provincial and regional building officials. This has led to on-going interest/discussion at the regional level on the inclusion of these technologies in buildings and the associated training. A final activity has been an initial scan of existing curriculum, and a gap analysis that will help direct Camosun’s curriculum development in this area. This project received support from the 2013 President’s Funds.

🌱 Plumbing Fixtures

Facilities Services

Waterless urinals, low-flow toilets and fixtures, and sensors/auto flush meters have been installed in a number of buildings on both campuses. This is an ongoing project with more buildings being retrofitted as funds become available.

Outdoor water consumption is reduced through the use of native and drought-tolerant plants, micro-irrigation systems, and minimized & select watering of lawns.

🌱 📖 Rainwater Harvesting

School of Trades and Technology

Rainwater that is currently entering the municipal storm water system is harvested and used by the Cross Connection lab in the Plumbing shop for washing floors and for plumbing mock-ups. Purchase of a storage tank and pumping and treatment equipment was supported by the 2012 President’s Funds.

Materials / Resources

🌱 Green Procurement/Purchasing and Energy Procurement Policies

Facilities Services

Camosun is committed to purchasing environmentally preferred and Energy Star rated products to assure minimal impact on the environment and on the College's energy usage while ensuring that product performance criteria and fiscal responsibility are met. Carpet tile, hard-surface tile, marmoleum and rubber are eco-friendly flooring options in use on both campuses. Environmentally friendly paints and adhesives are used as are non-toxic cleaners and microfiber cleaning technology.

🌱 Paper Supplies

Printshop, Ancillary Services

In August of 2006, the college—in collaboration with the Camosun College Student Society—switched from 30% recycled paper to 100% recycled, chlorine-free paper that is Forest Stewardship Council (FSC) certified in all copiers and printers. This change saves over one thousand trees a year and reduces the college's carbon footprint by 44 tons.

📖 Sustainable Food and Responsible Procurement

Food Services, Ancillary Services

Camosun aims to offer affordable and healthy food services options which minimize their impact on the environment and local community. A variety of food options are offered by food services partner Aramark, the Professional Cook programs, and the student-run Farm Box program.

In April of 2012, a group of students launched the Camosun Farm Box program; a student-run, not-for-profit initiative dedicated to providing Camosun students, staff and faculty members with affordable access to local, organic food. All of the produce is locally sourced from partner organic farms in the Victoria area. Scheduled pick-up markets are held at both Interurban and Lansdowne Campus, every two weeks.

Aramark's Green Thread Environmental Stewardship program dictates the purchase and provision of sustainable food and products, including locally grown/raised and socially responsible produce, baked goods, meats, dairy products and eggs... In 2011-2012 Aramark purchased between 80 - 100% of products/produce in BC, with an emphasis on Island-grown whenever possible. In addition, By the Books (Lansdowne) and Java Express (Interurban) also offer a selection of Fair Trade coffee, tea and chocolate bars.

📖 Certificate in EARTH (Environmental Approaches for a Resourceful, Thoughtful Humanity) Gardening

Employment Training & Preparation

Since 2010, students have been given the opportunity to learn skills to produce and preserve their own food.

📖 Food Production Gardening

School of Access

This course deals with the specifics of local, sustainable food production. Students study soils, pest control, plant and fruit propagation, native plants, composting, pruning, garden design, use of green houses and cold frames, waterless gardening, companion gardening, winter gardens and traditional and contemporary methods for preserving and drying foods.

📖 Business and Sustainability

School of Business

Business managers are faced with many social, ecological and economic pressures and in many instances traditional approaches to business are being challenged. First offered in 2012, this course explores current issues in sustainability and how these impact business, both in development and long-term operating practices. This course introduces students to strategies for improved sustainability in a number of business sectors.

🌱 Bookstore Merchandise

Bookstore, Ancillary Services

The Bookstore sells general merchandise sourced from vendors who provide recycled or sustainable products (pens, paper, notebooks, etc.), free trade goods (chocolate, etc.), and re-usable items such as water bottles, etc. They also rent textbooks online which saves print and paper costs.

📖 VICRA Island Local Food Security Project

Applied Research & Innovation

From 2010 – 2011, Camosun collaborated with UVIC, Royal Roads, Vancouver Island University, and North Island College on an initiative labelled the Vancouver Island Community Resource Alliance (VICRA) which received funding to study the issue of food security on Vancouver Island. The food security project was divided into sections with each institution working on select aspects. Two Camosun students were given part-time employment to create a land inventory and urban agriculture landscape on Vancouver Island. The overall report proposes a plan for producing and keeping food on the Island.

The College continues to reduce the use of paper through projects outlined under Waste Management / Recycling.

📖 Environmental Art

The School of Arts and Science

This course encourages a focused engagement with environmental issues through art. The landscape becomes the canvas and natural materials become the artist's tools and medium



Camosun Technology Access Centre (CTAC)

Applied Research and Innovation

CTAC, developed by Camosun College and supported by the Natural Sciences and Engineering Research Council (NSERC), delivers advanced manufacturing and prototyping services to local industry. The centre brings together the expertise, engineering technology and precision equipment to support innovation and development in a variety of sectors. With a dedicated, year-round staff, CTAC also provides industry with access to high tech knowledge resources, including database and library collections.

CTAC acts as a catalyst for innovation:

- connecting local companies with applied research funding;
- establishing synergies between industry and

Camosun to better serve future personnel requirements;

- helping to promote economic development and diversity on Vancouver Island.
- linking Industry to the technical resources of Camosun including faculty and students

GreenTech Exchange

Applied Research and Innovation

The GreenTech Exchange is an organization that brings together panels of clean-technology experts and business people in a forum that engages students, industry and the general public. Camosun Applied Research and Innovation and CTAC has supported the GreenTech Exchange on Vancouver Island for the past three years and has hosted two forums, the latest one in October 2013 focused on ocean energy.

Edible Herb Gardens

School of Trades and Technology, Facilities Services and the "Farmbox"

The Culinary Arts department, Grounds and Camosun's "Farmbox" worked in collaboration to plant a variety of edible plants around both campuses, particularly Interurban, but one has to know how to find and identify them. The Culinary Arts department continues to harvest herbs and plants for their program and is working to develop a map identifying where these plants can be found.

Bioswales

Facilities Services

Designed to mitigate pollution from surface runoff water, a bioswale is a landscaping technique consisting of a narrow, troughed drainage course with gently sloped sides filled with vegetation or gravel. Bioswales are in use at both campuses, originally developed to deal with sediments carried by rainwater runoff following the construction of new buildings. At Interurban, the bioswale, which was added in 2008, helps reduce the amount of silt and contaminants entering the Colquitz River watershed. As a result of the restored habitat, frogs, red-winged blackbirds and other wildlife have returned to live in the marshy area close to Interurban Road.

Landscape / Habitat and diversity

Environment & Stewardship

Indigenous Studies Program

This course explores Indigenous and non-Indigenous views of the environment, perspectives on traditional ecological knowledge and nature as a living system. Students examine contemporary Indigenous environmental issues including those related to forestry, fishing, wild species, protected areas, climate change, and resource planning and stewardship.

Grounds

Facilities Services

Camosun's Grounds keepers have adopted sustainable practices as a core principle and limit the college's environmental impact in the following ways:

- **Integrated Pest Management** – a proactive approach which prevents pest activity through the use of education, proper waste management, structural maintenance and biological and mechanical techniques.

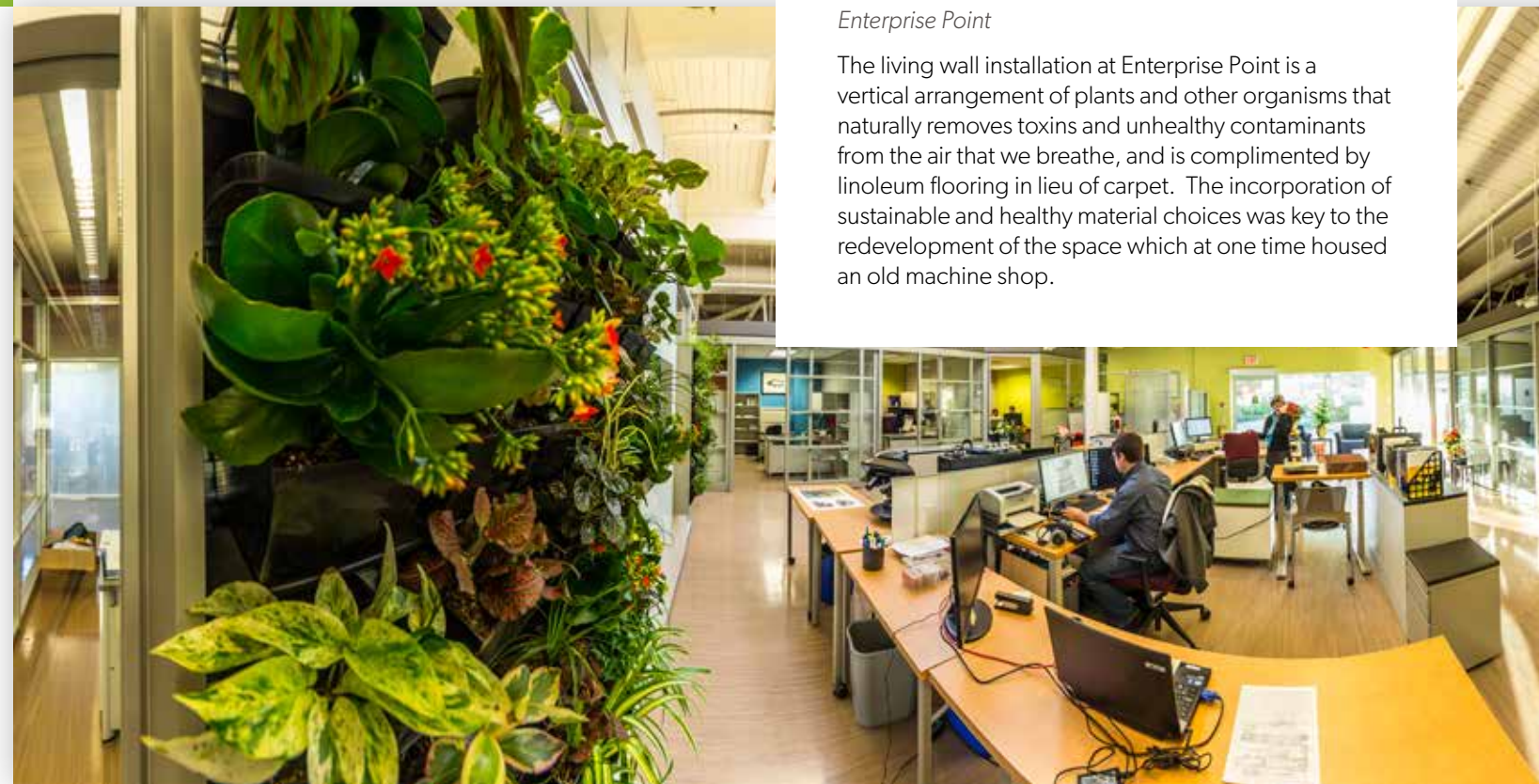
- **Right Plant, Right Place Policy** – managing plants to promote native species and eradicate invasive species.
- **Composting** – composting of leaves, grasses and cut-offs enriches the soil, reduces weeds and retains moisture, which reduces the need for watering.
- **Water conservation** – use of native and drought-tolerant plants that are adapted to Victoria's dry summers, including Dogwood trees and Labrador Tea, as well as the use of micro-irrigation systems and minimized and select watering of lawns.

Through these practices, and with the help of 4,000 ladybugs to fight pests, the college has been able to support a healthy ecosystem and almost eliminate the use of cosmetic chemicals on campus. These days the biggest "pest" problem at Camosun is deer, which are deterred through a combination of herbs and spices.

Breathing Wall

Enterprise Point

The living wall installation at Enterprise Point is a vertical arrangement of plants and other organisms that naturally removes toxins and unhealthy contaminants from the air that we breathe, and is complimented by linoleum flooring in lieu of carpet. The incorporation of sustainable and healthy material choices was key to the redevelopment of the space which at one time housed an old machine shop.



Na'tsa'maht Indigenous Plant Garden

Aboriginal Education & Community Connections

The Na'tsa'maht Indigenous Plant Garden began development in 2010 to create an educational and functional indigenous plant garden to compliment the Aboriginal Gathering Place. A variety of indigenous plants, trees and shrubs have been purchased, and beach rocks for pathways and drainage sites have been supplied. The garden provides an opportunity to enhance classroom learning with a variety of delivery methods through field education, applied research, and technology transfer for students in Indigenous Studies, Health and Human Services, Environmental Technology, and Horticulture programs and courses. The project is ongoing, and completion is dependent on weather and availability of resources. This project was funded by 2010 President's Funds.

Greenhouse Sustainability Project

Facilities Services

The Grounds Keeping Division installed a greenhouse in 2012 to propagate and grow plants for use on Camosun grounds and by Camosun programs. This project was funded by the 2012 President's Funds.

Garry Oak Ecosystem

School of Arts & Science, Garry Oak Ecosystem Recovery Project

Camosun is spread over a hundred acres and is home to the unique Garry Oak Ecosystem. The Native Plant Garden at the Lansdowne campus provides an opportunity to discover the rich biodiversity which is present on campus. The Native Plant Garden brochure, developed by a former Environmental Technology student, explains about the various species of trees, plants and grasses. The Garry Oak Ecosystem Recovery Project (GOERT) has selected Camosun Lansdowne as a site for restoration via GOERT.



Student Project Garden

VP Strategic Development, Facilities Services, School of Access and School of Trades & Technology

The Student Project Garden at Interurban Campus involved over 35 faculty, staff and students. The key partners in the development of the garden were the Women-in-the-Trades program (WITT) and the EARTH Gardening Program (ETP). Two arbours and five raised beds were built by students in the WITT program; ETP students planted the garden in May of 2012, and with the assistance of a student from Plumbing and Piping, framing structures were designed and installed on three of the beds to allow for fitting with deer fencing or plastic (to increase the growing season).

Sustainability Project

School of Arts & Science: Environmental Technology

Working in small groups, students identify, design, develop and complete a research project on a sustainable resource management problem under the supervision of a faculty member. Most students develop their own projects; however, increasingly off-campus clients have approached the program for volunteer collaborative research on specific topics.

Diploma in Environmental Technology

School of Arts & Science: Environmental Technology

Environmental Technology with optional co-op is a three-year diploma program that produces graduates able to work in the field, office or laboratory. By combining in-class learning, on-campus lab work and hands-on field trips, students earn a wide range of marketable skills and knowledge in the areas of: aquatic monitoring, geographical information systems (GIS), map and air photo interpretation, global positioning systems (GPS), field safety, soil classification, sustainable resource and waste management, horticulture and biodiversity, air quality, and environmental impact assessments.

Environmental Fitness

The Centre for Sport & Exercise Education

This course helps students understand how lifestyle choices affect the world around them by examining the relationship between climate, facilities, business practices, government policies, school programs, elite sport mandates and practices, worksite expectations, transportation, and social norms on exercise adoption and adherence. It also examines how sedentary lifestyles affect the ecology, food growth industry, energy consumption and preservation, pollution and human interaction.

Sustainability Day

CCSS Sustainability Director, Camosun Students for Environmental Awareness

An annual event hosted by the Camosun Students for Environmental Awareness and the Camosun College Student Society, the day is a province-wide initiative to share ideas, celebrate achievements and spark solutions for sustainable living. There is free food, guest speakers, interactive games, environmental displays and prizes. Several environmental groups and businesses based in Victoria attend and set up booths to display their products and services. Camosun has celebrated Sustainability Day since 2007.

WHERE WE'RE GOING

Camosun remains committed to developing and testing innovative real-world solutions on campus. Construction is underway on the new Centre for Trades Education & Innovation, slated for completion in 2015. Built to LEED Gold standards, this Centre will also be a living laboratory that meets the demand for green trades and technologies of the future.

Our road to environmental sustainability, mapped by the Sustainability Plan, is marked by 3 and 10-year milestones.

- By 2016/17, the college is successfully integrating the *Integrating Sustainability into Operations and Governance* and *Integrating Sustainability into Teaching & Learning* sub-plans with a high degree of faculty, employee and student engagement.
- By 2025, the college will excel in environmental sustainability innovation – governance, operations, educational practices, and applied research and technologies are a “test bed and showcase” that inspire sustainability innovation, engage employees, and provide on-site learning for students, employees, and partners (community, industry and government).

The Office of Environmental Sustainability is tasked with increasing awareness, understanding and engagement in sustainability initiatives throughout the College and communicating achievements and efforts. One of the short-term goals of the Department is to gather comprehensive information about the myriad of initiatives currently underway by faculty, staff and students.

As outlined in the *Integrating Sustainability into Operations and Governance* sub-plan, over the next year, designated departments and committees on campus will work together to:

- Review and revise Camosun’s Environmental Management Policy, and the membership and Terms of Reference of the Environmental Sustainability Council
- Assess new builds, renovations and retrofits to identify and implement green standards.
- Assess operations and services, identify and implement opportunities to further reduce the college’s environmental impact.
- Develop industry partnership sustainability projects that involve engagement with staff, students and faculty.
- Identify opportunities to include elements of “Campus as a Living Lab” in all of the above.

The *Integrating Sustainability into Teaching and Learning* sub-plan aims to:

- Establish sustainability outcomes as a common to learning across the college.
- Assess current curriculum by school or program, identify and implement opportunities to incorporate sustainability into the curriculum.
- Provide faculty with the knowledge and skills to integrate sustainability into curriculum.
- Identify curriculum projects which will incorporate elements of “Campus as a Living Lab.”



Energy Conservation

In 2014/15 Camosun will be looking for ways to proactively ingrain an energy conservation culture on campus. Camosun will continue a program of energy management, identifying energy performance, factors and trends and setting goals and targets for the future. The college will focus on identifying energy savings retrofit opportunities, new building developments (such as the LEED Gold Standard Centre for Trades Education and Innovation) and Power Smart incentive opportunities. Our Facilities Services team has just embarked on a collaborative partnership with FortisBC to further the Continuous Optimization Program for building energy use.

Transportation

About 51% of Camosun’s 12,000 students attend Lansdowne campus, 38% attend Interurban, and 11% attend both campuses. Modest growth of these numbers is expected. Interurban campus will face some particular parking and transportation challenges in the next three years with the construction of the new Centre of Trades Education and Innovation, and a planned relocation of the Health and Human Services program from Lansdowne to the Interurban Campus.

Building on the work from the first three-year plan (2010 – 2013), Camosun will continue with its transportation and parking demand management program. To achieve the 2009 goal of a 20 - 40% reduction in vehicles on campus by 2020, an overall annual reduction of 5 to 10% in Single Occupancy Vehicles (SOVs) is required. This work will include initiatives to greater promote and encourage alternative transportation mode choice, while decreasing the use of single occupancy vehicles. Transportation surveys and mode split counts will measure the success of these initiatives. Support and cooperation by stakeholders will be critical to the success of these efforts.

Targets for the coming year include:

- Greater engagement and awareness through events (e.g. CamFest, Nasty November Cycling Challenge, Bike to Work Week and Sustainability Day), contests, advertising, information and resources (e.g. route-maps, commuting and bike repair clinics, etc.).
- Offering options to the benefit of free employee parking.
- Increased use of biofuels on campus through staff/student training programs and regular production built into procedures.
- Develop emergency ride home program for carpoolers.

- Improve Campus to Campus Options: 1) Develop campus-to-campus shuttle implementation plan (2014 – 15), 2) develop Low Carbon Travel Policy for staff and fleet vehicles, and 3) Work with ITS to launch technology resources (e.g. an online ride-matching service).
- Work with ITS to provide training and promotion of web conferencing technology, and promote desktop web-conferencing (CNAR) and staff ride-share options.
- Develop Anti-idling Policy and/or raise anti-idling awareness for fleet and key general parking zones.

Waste Management / Recycling

The 2013 Waste Management Report highlights opportunities for Camosun to maximize the efficiency of the waste management program. The college generated 613.15 tonnes of waste and recyclables last year, with a total diversion rate of just 34%. Of the waste sent to landfill, 89% could have been diverted through our current recycling programs.

Recycling and reuse is the pillar of Camosun’s waste management efforts, whether referring to compostable organics, paper, old carpet, cooking grease, cigarette butts or construction materials. Compost and recycling programs will continue and expand, with additional cone digesters and outdoor recycling bins introduced at each campus.

Waste oil and cooking grease from food services will continue to be collected for conversion to bio-diesel, either by GreaseCycle, or by the College. The bio-diesel plant built by Camosun staff is ready to be put back into

service. The plant served as a lab, demonstration tool, and teaching aid and is portable so it may be used for demonstration in various locations.

Construction of the Centre for Trades Education & Innovation includes the demolition of Tillicum Lodge and the repurposing of existing trades shops. With the exception of toxic materials, most of the wood, metal and cement scraps from the aged facilities are being recycled. The wood is being ground into small chips that can be used as fill for road foundations or burning fuel for commercial facilities. Cement from the foundation is being crushed and recycled as road base. Metal and wiring is being recycled. The goal is to recycle 95-98% of all job site materials.

A supplementary audit to the 2013 Waste Management Report is currently underway and will provide a platform on which to build specific targets for 2014/15.



AWARDS AND ACCOLADES

Former Head Groundskeeper, Brian Faught, received a Municipality of Saanich **2005 Biodiversity Conservation Award.**

Office of Environmental Sustainability, Facilities Services and the School of Business received the Community Energy Association’s **2013 Climate & Energy Action Award – Honourable Mention**

