

## THANK YOU







## The UBC Sustainability Report 2006-2007

Udlike Scholl
Message from the Sustainability Office Team
It's so simple really. Thank-you UBC!
We thank our students whose fresh perspectives, enthusiastic leadership and passionate service brings irreplaceable value to our campus-wide efforts.
We thank the Deans, the faculty and researchers in their tireless work to incorporate sustainability into new ways of teaching, and learning, and into innovations that will support society in its adaptation to change.
We thank our fellow employees whose creative ideas and diligent dedication is shifting how we view sustainability in our work.
We thank our community of friends and supporters whose belief in us and the investment in what was at one time just 'a good idea' have enabled us to innovate and achieve real and measurable results.
We thank our alumni and other community partners who bring a connection to the world beyond campus enriching our experience and ability to leverage up sustainability beyond the campus gates.
We thank the campus community of business and residents for adopting sustainable practices into their every day routines.
We thank our leaders without whose vision, commitment and support we could not have led the world in campus sustainability.
One by one we are making a difference. Collectively we are creating the shift towards a more sustainable future.

### **TABLE OF CONTENTS** Letter from the President .

Letter from the President2
Executive Summary4
About the University of British Columbia
Our Commitment to Sustainability
Talloires Declaration (1990)
Halifax Declaration (1991)
UBC Policy on Sustainable Development (1997) 16
Sustainability Office (1998)
TREK 2010 (2005)
Sustainability Strategy (2006)
About the Sustainability Report (2006-2007) 18
Scope
Reporting Year
Reporting Guidelines
Report Quality Assurance
Social Performance
Overall Social Performance
Improve Human Health and Safety
Make UBC a Model Sustainable Community 22
Increase Understanding of Sustainability Inside
and Outside the University 24

Economic Performance 30
Overall Economic Performance
Ensure Ongoing Economic Viability
Maintain and Enhance the Asset Base
Maintain and Maximize the Utilization of the Physical Infrastructure
Environmental Performance
Overall Environmental Performance
Reduce Pollution
Conserve Resources
Protect Biodiversity
Appendix A: Performance Charts
Social Targets
Economic Targets
Environmental Targets
Appendix B: Sustainability and the Academic Enterprise64



## **Message from the President**

Universities have a critical role to play in advancing the sustainability agenda—as stewards of large public institutions, as educators of future leaders, and as active participants in the search for ideas and solutions that will shape our common future. At the University of British Columbia (UBC), our students, faculty and staff, are committed to helping our alumni, the public, and society more broadly to build a sustainable society by leading the way in campus sustainability. Over the last decade, UBC staff, students, and faculty have sought out bold new approaches and pioneered solutions in campus sustainability, and for these efforts, we thank you. It is on the foundations of these efforts that we have built so many of the successes that we celebrate in this report.

Early in 2006, we published the first-ever campus-wide sustainability strategy *Inspirations & Aspirations: The Vancouver Campus Sustainability Strategy, 2006-2010.* This five-year strategy represents a university-wide commitment to sustainability. It sets out social, ecological, and economic goals with specific targets and action commitments to sustainability in our teaching and research, as well as in our operations.

This year, we are proud to communicate our one-year performance against our sustainability strategy in the *UBC Sustainability Report, 2006-2007.* We view this report as a step forward in tracking our commitment to integration of sustainability values into the University's operations and programs, in providing information to the public on numerous campus-wide achievements, and in celebrating the important contributions of individuals and units across our campuses.

Universities must exercise exceptional leadership and UBC will remain focused on climate action. We will do this both on our own campuses as well as through new leadership alliances that will lend diversity and number to solutions for some of the social and environmental problems arising from climate change. Our social sustainability agenda focuses on scaling up beyond campus the university's solution-oriented efforts to work alongside nations, communities, businesses and municipalities to facilitate the transition to a sustainable future. This includes a focus on Aboriginal peoples and links to the needs of First Nations, Métis, and Inuit and the sustainable development of their communities. We are also pleased that *Focus on People: Workplace Practices at UBC* will be launched in the coming months. This plan is part of our commitment to make UBC one of Canada's leading employers.

Sustainability is fundamentally a social value that gets played out in our conversations, our interactions and our actions. We look forward to the year ahead and engaging with our community of students, staff, faculty, alumni and friends in sustainability dialogue, learning and action.

> **STEPHEN TOOPE** *PRESIDENT*

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## **Executive Summary**

Our performance this year was marked by excellent achievement against our *Sustainability Strategy 2006-10.* This *Sustainability Report 2006/07* shows our progress on the 68 five-year goals we have for campus sustainability. We achieved 23 of the 38 goals set for completion in 2006, and another 9 were completed ahead of schedule. The Executive Summary is a brief overview of our accomplishments to entice you to read the details of the report that follows. UBC's targets were established to advance our nine goals for sustainability:

- A) Improve Human Health & Safety
- **B)** Make UBC a Model Sustainable Community

C) Increase the Understanding of Sustainability Inside and Outside the University ECONOMIC

- **D)** Ensure Ongoing Economic Viability
- E) Maintain and Enhance the Asset Base

F) Maintain and Maximize the Utilization of the Physical Infrastructure ENVIRONMENTAL

- **G)** Reduce Pollution
- H) Conserve Resources
- I) Protect Biodiversity

#### Educational Achievements ACADEMIC EXCELLENCE

The University strives to create a learning environment that can bring the world's brightest minds to bear on sustainability issues. As of 2006, UBC offered more than 400 courses related to sustainability across its twelve faculties at UBC Vancouver and seven faculties at UBC Okanagan. In addition, in 2006 UBC had over 400 research projects addressing some aspect of sustainability. UBC hosts research centres that focus on this topic, plus sustainability is becoming a specialization within many faculties. The Sauder School of Business is now offering an MBA specialization in Sustainability. Also, the Okanagan Sustainability Institute will address sustainability issues related to urban sprawl in the Okanagan region. As well, UBC Okanagan has proudly partnered with the Indigenous people in the southern interior of BC in order to develop programs and courses on Okanagan Indigenous culture, history, philosophy, and knowledge.

#### STUDENT ENGAGEMENT

More and more, students choose to study, work or volunteer in order to build sustainability skills and knowledge. UBC Social, Ecological, Economic Development Studies (SEEDS), now in its seventh year, is the first academic program in Western Canada that brings together students, faculty, and staff to address sustainability issues. In 2006-2007, SEEDS engaged 398 individuals–45 instructors, 318 students and 45 staff—who were focused on finding solutions to sustainability issues. SEEDS initiatives consistently contribute to the development and implementation of valuable sustainability projects on campus. Increased student engagement in sustainability is reflected in 543 new students signing the Sustainability Pledge, obliging them to use the knowledge they gain at UBC to improve the sustainability of the communities in which they live, work and learn. 900 new students learned about global citizenship through Go Global, which places students abroad for academic credit or volunteer opportunities. Another 853 students took part in Community Service Learning projects, helping and learning in our very own Metro Vancouver community.

In addition to what is clearly counted in the Sustainability Strategy, we also celebrate the many and varied student activities that relate to sustainability such as the work of the AMS and GSS (Bike Coop, Student Environment Centre), Sprouts (a cooperative that features organic and fair trade foods), and the Student Leadership program to name just a few.

#### Social Achievements PEOPLE'S HEATH, SAFETY AND WELL-BEING

UBC strives to ensure the health, safety and well-being of people on campus. Our efforts over the last five years have resulted in dramatically reducing the frequency of time loss accidents. This year we are pleased to report the frequency of time loss accidents decreased by 15%, contributing an overall decrease of 44% since 2002. In addition, a survey of campus community showed there was improved awareness of the many new programs at Campus Security. Our safety management system, annual Health Symposiums for employees, and coaching programs helped us rank in the top 30 employers in British Columbia?

<sup>1</sup> Will increase to 89 with the publication of new Sustainability Strategy in 2007 with UBC Okanagan campus targets included.
<sup>2</sup> Awarded in October 2006 by Mediacorp

#### SUSTAINABLE COMMUNITY

UBC and UBC Properties Trust, in collaboration with developers, architects, engineers, and other campus units and groups, are incorporating innovative and sustainable design features into our new neighborhoods. The target is to transform UBC from a cardependent commuter campus into a more compact and intensified, environmentally friendly, live-work community with better amenities for students, faculty, staff and residents. This year we exceeded our target of 50% of households being connected to the campus with 68% of the University Town households having one or more member who either works or studies on campus<sup>3</sup>. In addition, on-campus housing is made available to nearly 28% of the full time undergraduate students.

Another achievement of note is the Residential Environmental Assessment Program (REAP) Version 2.0 which was released in June 2006. These sustainable building guidelines were developed at UBC specifically for the residential development in the University Town. Fully embraced by developers, it is now a requirement for new construction of residential units in the University Town, ensuring that this housing meets higher performance standards than conventional units built to the BC Building Code.

#### SUSTAINABILITY PURCHASING

Recognizing that our purchasing power can impact social and environmental benefits, over two thirds of our supplier requests for proposals include criteria on sustainability. In 2006/07 this included the contract for scientific equipment and chemicals. As of September 2006, Pura Vida coffee, which is 100% organic, shade grown, fair trade certified, became the house brand for all Food Services' nonfranchise venues on campus, including the Sage Bistro and UBC Catering. Purchasing policies were implemented for seven seafood categories. Some seafood was deleted from the purchase list and others became resourced based on sustainability considerations. In a commitment to continuous improvement, UBC's Food Services department is continually evaluating and reviewing its criteria for sourcing food that is local, sustainably harvested, raised humanely, and features environmentally preferable packaging.

#### Economic Achievements ECONOMIC VIABILITY

As a research-intensive institution, we recognize our role in the creation and growth of knowledge intensive, innovation-based economy. Our ability to contribute through innovation and research is in turn impacted by our ability to attract research investments. Home to exceptional world-class scholars and researchers, UBC's average research revenue growth rate has been 13.1% per year over the past five years, with research funding in 2006 totaling \$399.5 million, up \$139 million from five years ago.

UBC is developing a \$36.1 million Centre for Interactive Research in Sustainability (CIRS) and the \$11 million Clean Energy Research Centre (CERC) opened in 2007. Each was supported through grants from the CFI BCKDF and private sponsors.

#### **ENHANCING OUR ASSET BASE**

Intergenerational equity is at the heart of a definition of sustainability, and our Endowment Fund is key to ensuring successive generations' access to world-class university education that today's generation enjoys. During 2006/2007, UBC increased its endowment fund by \$184 million. The fund now contains \$1.01 billion, and we have met our endowment fund target of \$1.0 billion three years ahead of schedule.

#### RESPONSIBLE MANAGEMENT OF PUBLIC INFRASTRUCTURE

UBC Vancouver has over 400 buildings. Nearly 70% of the core academic space (which is 255 of the buildings) at UBC Vancouver is more than 30 years old. Launched in 2002, UBC Renew program renovates buildings rather than demolishing them and rebuilding. The benefits of renewing buildings, rather than replacing them, are more efficient completion times, cost savings resulting in every third building being free, and the preservation of cultural and heritage values.

Phase I of UBC Renew aims to renovate ten buildings between 2005-2010, extending the life of more than 36,000 square metres of buildings by 40 years or longer. The ten buildings would have cost \$209 million to build new compared to renovating them for \$120 million, a savings of \$89 million. Going forward, UBC will work with the B.C. government to finalize arrangements for Phase 2 of UBC Renew.

#### Environmental Achievements CLEAN AIR

In our role as a steward of a large public institution, we seek to continuously reduce our greenhouse gas emissions. In 2006, we wrapped up the largest energy and water infrastructure upgrade ever to take place on a Canadian campus. Known as ECOTrek, this program involved rebuilding and retrofitting the infrastructure of nearly 300 core buildings. This means that our emissions are 25% below 2000 levels on a square metre basis, which results in financial savings of \$2.6 million annually.

At our UBC Okanagan campus, we have commenced construction of a geo-exchange heating and cooling system which, using groundwater as an energy source, will prevent the emission of more than 38,000 tonnes of  $CO_2$  into the atmosphere over two decades – equivalent to removing 8,000 cars from the road.

Our transportation management office, TREK, is responsible for implementation of the mandatory U-Pass (universal transportation pass) program that was launched at UBC Vancouver in 2003. As of 2006, this program has reduced overall automobile levels by 22% below 1997 levels despite a 28% growth in population since then. This represents an estimated total of 12,000 tonnes of  $CO_2$  per year. We are pleased to announce thanks to the efforts of committed students, that a U-pass program was launched at our Okanagan campus in September of 2007.

#### WASTE MANAGEMENT

Our waste reduction strategies, and recycling and composting practices, minimize the volume of waste going to landfill, conserve resources, and make good business sense.

Hundreds of units across campus are working imaginatively to come up with innovative waste solutions. In 2006, we diverted 46% of our total overall waste stream from land fill. UBC also boasts Canada's first university in-vessel composter. Since its installation in 2004, it has digested almost 300 tonnes of waste. Collection is now done from more than 46 sites on campus, including all food service outlets, private housing developments, and institutional buildings. We aim to increase the tonnage collected and sent to the composter by at least 10 to 15 percent in 2007/2008.

This year, the Research Office created the Chemical Inventory Database. This has led to 1,497 kilograms of chemicals being diverted from disposal and redirected for use by labs in need of a particular substance. In this way, one person's waste becomes a valuable part of another person's new experiment, and expensive disposal costs to the university are avoided.

#### **PROTECTING BIODIVERSITY**

Since 2006, UBC Vancouver no longer uses any pesticides for cosmetic purposes on the campus grounds. Now UBC employs more seasonal gardeners for weeding, and is trying out a product that uses steam to control weeds. Since 1997, the Grounds Maintenance and Waste Management team have steadily decreased the number and amount of pesticide used, down from the 12 pesticides used in 1997 to none in 2007. Pesticides may only be used in future if a particular product is necessary to preserve the health of old trees or plants, such as the 100 year-old oak trees along Main Mall.

In early 2005, UBC's Custodial Services began a six-month project at the Life Sciences Centre using certified green cleaning products. By early 2006, this had expanded to eight more buildings on campus. Green cleaning products are now used in 36 buildings across campus. These products are not only safer for the environment; they are also less hazardous for the custodians using them.

#### **Awards**

In the past year, our sustainability efforts have received recognition through awards and honourable mentions including:

- Association for the Advancement of Sustainability in Higher Education (AASHE) Campus Sustainability Leadership Award 2006;
- National Resources Canada (NRCan) Award for highest energy savings in the Western Region;
- Honorable Mention, 2006 APEGBC (Association of Professional Engineers and Geoscientists of BC) Sustainability Award for UBC Geoexchange Project;
- Awarded Second Place, 2007, The Canadian Association of University Business Officers (CAUBO) for the Social, Ecological, Economic Studies (SEEDS) Program;
- National Wildlife Federation Campus Recognition in 2006, for third year in a row, for exemplary work in demonstrating wildlife and climate-friendly practices.

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## **About the University of British Columbia**

Incorporated by the British Columbia government in 1908, the University of British Columbia, Canada, attracts over 45,000 students each year and retains nearly 11,000 faculty and staff. The student population comprises approximately 82% undergraduates, of which 11% are international students. In 2006/07, most of the latter were citizens of USA, China, South Korea, Japan, and Hong Kong.

Source: Office of Planning and Institutional Research (PAIR)

UBC is amongst Canada's top five research-intensive universities and, through our commitment to excellence, has been rewarded by being consistently ranked as one of the world's top 40 universities.

Our UBC Vancouver (UBC V) campus lies a few kilometres from downtown Vancouver at the tip of the Point Grey peninsula, surrounded by 763 hectares of forested parkland that provides a greenbelt between the campus and the city. Looking out to the north, the west, and the south, we are surrounded by the vast Pacific Ocean.

UBC Vancouver students enjoy popular intramurals, the worldfamous Museum of Anthropology, and Pacific Spirit Park, as well as performances at the Chan Centre for the Performing Arts and the Frederic Wood Theatre, and exhibitions at the Morris and Helen Belkin Art Gallery. Students also have access to an authentic Japanese garden, fine athletics facilities (including indoor and outdoor pools), and forest trails.

Our UBC Okanagan (UBC O) campus, located in Kelowna, was opened in September 2005. With the goal of being a relatively small, intimate campus, UBC Okanagan is currently expanding facilities and staff as it moves toward a total enrolment of 7,500 students. The campus provides local access to Okanagan students as well as an alternate academic and campus environment for students from Canada and abroad who want the internationally recognized UBC degree. Our Robson Square site provides us with a downtown presence in Vancouver. Our most recent addition, the Great Northern Way Campus (GNWC), located just southeast of the downtown core, is a collaboration between UBC, Simon Fraser University, Emily Carr Institute of Art and Design, and the B.C. Institute of Technology. The aim of the Great Northern Way Campus is to provide a learning environment that is specifically designed to tackle the issues and opportunities presented by an emergent new economy, based on the pillars of arts and culture, digital media, and sustainability.

The UBC Hospital is one of two acute care facilities that are part of Vancouver Hospital & Health Sciences Centre. It is one of British Columbia's foremost teaching and research facilities and is located on campus. UBC has a further three affiliated hospital sites with long standing associations as teaching hospitals. They are BC Children's Hospital & Women's Hospital & Health Centre, Providence Health Care and Vancouver Coastal Health. Below are some key facts about our two campuses that provide a basis for comparison in this report.

Facts About UBC Vancouver				
Academic Programs	500+			
Annual research funding	\$399 million			
Students	43,500			
Faculty & staff	10,380			
Number of alumni	240,000			
Number of campus buildings	412			
Square metres of buildings (gross)	1,381,678			
Number of residence beds on campus	8,300			
Spin-off companies created	120			
Economic impact on B.C. economy	\$3.60 billion			

Facts About UBC Okanagan Academic Programs 22 Annual research funding \$6.9 million 4,000 Students Faculty & staff 450 Number of alumni 490 Number of campus buildings 14 Square metres of buildings (gross) 56,000 Number of residence beds on campus 781 Economic impact on Okanagan Economy \$300 million

Source: Office of Planning and Institutional Research (PAIR)

Material also to this report is the fact that UBC is actively developing residential communities on the endowment lands surrounding the Vancouver campus. This unique opportunity to plan, design, and build sustainable communities, under the management of the UBC Properties Trust, follows from the vision of UBC's founding architects who, in 1914, realized the potential of the Vancouver campus as a "university city in an idyllic setting."

University Town is UBC's answer to sustainable community development and directly supports the Metro Vancouver's<sup>5</sup> Livable Region Strategic Plan. It calls for the development of five residential neighbourhoods on campus and also includes Hampton Place, which was completed prior to the creation of the UBC Official Community Plan (OCP).



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## **Our Commitment to Sustainability**

Our commitment to excellence extends to our work in sustainability. With heart and foresight, our leaders become signatories to early international declarations on sustainability. With the spirit and commitment of our students, faculty, and staff, we have pioneered policy, program and individual leadership initiatives. This report is in part, testimony to our pursuit of excellence in sustainability.

#### TALLOIRES DECLARATION (1990)

In 1990, UBC became a signatory to the Talloires Declaration, a 10-point action plan for incorporating sustainability into university teaching, research, operations, and outreach. This Declaration represents a commitment signed by university presidents, rectors, and vice-chancellors from all regions of the world to support and mobilize internal and external resources so that their institutions respond to the challenges of sustainability faced locally, regionally, and globally.

#### Talloires Declaration 10-point Action

- Raise public, government, industry, foundation, and university awareness by publicly addressing the urgent need to move toward an environmentally sustainable future.
- Engage in education, research, policy formation, and information exchange on population, environment, and development to move toward a sustainable future.
- Establish programs to produce expertise in environmental management, sustainable economic development, population, and related fields to ensure that all university graduates are environmentally literate and responsible citizens.
- 4. Develop the capability of university faculty to teach environmental literacy.
- Set an example of environmental responsibility by establishing programs of resource conservation, recycling, and waste reduction at the universities.

- 6. Encourage the involvement of government (at all levels), foundations, and industry in supporting university research, education, policy formation, and information exchange in environmentally sustainable development. Expand work with nongovernmental organizations to assist in finding solutions to environmental problems.
- Convene school deans and environmental practitioners to develop research, policy, information exchange programs, and curricula for an environmentally sustainable future.
- Establish partnerships with primary and secondary schools to help develop the capability of their faculty to teach about population, environment, and sustainable development issues.
- 9. Work with the UN Conference on Environmental and Development, the UN Environment Programme, and other national and international organizations.
  10. Establish a steering committee and a secretariat to continue this momentum and inform and support each other's efforts in carrying out this declaration.

http://www.ulsf.org/programs\_talloires.html

#### HALIFAX DECLARATION (1991)

UBC is signatory to the Halifax Declaration (1991), a common framework for university action on sustainable development.

As signatories to the Halifax Declaration, we take responsibility for being "*entrusted with the major responsibility to help societies shape their present and future development policies into the sustainable and equitable forms necessary for an environmentally secure and civilized world.*" *http://senate.dal.ca/Files/policies/HalifaxDeclaration.pdf* 

#### UBC POLICY ON SUSTAINABLE DEVELOPMENT (1997)

In 1997, UBC became Canada's first university to adopt a sustainable development policy. Policy #5, Sustainable Development (May 1997: June 2005), sets the framework for UBC's code of business, environmental, and social practice. It states that UBC will implement its activities "*mindful of the need to balance ecological, social, and economic imperatives, and to do so, in an open and transparent way with the involvement of all stakeholders.*"

Accountability for sustainability starts at the top, and our policy requires that all Vice-Presidents take responsibility for the continuous improvement of the sustainability performance of their various portfolios.

Accountability also includes the systematic recording and reporting of progress, and our policy requires that the UBC Director of Sustainability "*coordinate reporting on all related University*  *efforts, including progress (and lack of progress) and plans for long-term development.*" In years gone by, the Sustainability Office has reported annual progress to the Board.

A Sustainability Advisory Committee of faculty, students, and staff advises on strategy and actions to achieve the broad goals set by Policy #5. It also has responsibility for monitoring university-wide sustainability performance.

Since 1997, numerous operational/functional policies have incorporated sustainability as a core value. These are referred to elsewhere in this report as appropriate.

http://www.universitycounsel.ubc.ca/policies/policy5.pdf

#### SUSTAINABILITY OFFICE (1998)

In 1998, under the auspices of Policy #5, UBC became Canada's first university to open a Sustainability Office. Initially, this office consisted of a Director and an Energy Manager. The early focus was on the "Green Campus" program, now known as Social, Ecological, Economic Development Studies (SEEDS), and the ECOTrek Program, Canada's largest energy and water retrofit program. Funding for the Office is generated through energy savings.

In 2006/07, the Office has grown to include three full-time, four part-time, and a number of occasional student and staff positions. Its programs have campus-wide reach, working towards systematically institutionalizing sustainability in every aspect of campus life, including learning, teaching, research, operations, living, working, and external alliances.

#### TREK 2010 (2005)

In 2005, sustainability was confirmed as a core value at UBC when it became integral to the University's highest-level vision document, known as TREK 2010. It recognizes that, as educational institutions, universities are in a unique position to influence and shape a sustainable future.

"The University of British Columbia, aspiring to be one of the world's best universities, will prepare students to become exceptional global citizens, promote the values of a civil and sustainable society, and conduct outstanding research to serve the people of British Columbia, Canada, and the world." (Trek 2010 Vision Statement, 2005)

Goals and strategies in TREK 2010:

- Model UBC as a responsible, engaged, and sustainable community, dedicated to the principles of inclusivity and global citizenship;
- Ensure that the principles of sustainability as expressed in UBC Policy #5 (Sustainable Development) are incorporated into all levels of strategic planning and University operations;
- Through the faculty-directed creation of new courses, the augmentation of existing courses, modified promotion/graduation requirements, and expanded co-curricular opportunities; ensure that all students develop a greater awareness of their responsibilities as global citizens and of the issues surrounding social, environmental, and economic sustainability;
- Collaborate with local, national, and international communities on problems of global interest in such areas as sustainability;

health care, law, transportation, alternate energies, education, immigration, culture, and social and economic development.

• Establish working partnerships with groups in emerging countries to address local problems in health, agriculture, social infrastructure, education, and sustainable development.

#### SUSTAINABILITY STRATEGY (2006)

In 2006, UBC launched the first-ever Canadian university campus-wide sustainability strategy, known as *Inspirations & Aspirations: The Vancouver Campus Sustainability Strategy, 2006-2010.* The UBC Sustainability Office developed the strategy through a consultation process that involved 20 departments, all faculties, all major student organizations, and over 100 individuals. Organized around nine social, ecological, and economic outcomes, this strategy forms the basis for this report, with outcomes specific to each area appearing at the beginning of each performance section. Included within the context of the nine goals, are 68 social, ecological, and economic targets and the allocation of roles and responsibilities across UBC Vancouver units and faculties. In 2007, we will amend the strategy with a further 21 targets, representing UBC Okanagan's commitments to sustainability.

http://www.sustain.ubc.ca/pdfs/ia/51059\_iatarg\_april3\_rv2.pdf

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About the Sustainability Report (2006-2007) This year we bring to you our first comprehensive Sustainability Report 2006/07. The report that follows describes our one-year performance against Inspirations & Aspirations: The Vancouver Campus Sustainability Strategy, 20006-2010. This report represents an important milestone in our sustainability performance tracking and monitoring history.

#### **REPORT SCOPE**

The scope of this report is specific to UBC Vancouver Campus, tracking the original 68 UBC Vancouver specific targets. Although UBC Okanagan is not included in the target tracking, we have noted some pertinent highlights for the year. Future sustainability reports will include both UBC Vancouver and UBC Okanagan.

This report is not intended to be a comprehensive review of the economic, ecological or social performance of UBC. It is intended as a reporting mechanism against the key goals and targets that were considered by the community in measuring the progress of sustainability at UBC.

#### **REPORT YEAR**

This report covers fiscal year 2006/07 (2006/07) which is April 1, 2006 through March 31, 2007. Trend data and analysis prior to 2006 is included, where material.

#### **REPORT GUIDELINES**

Relevant content and performance metrics were set using guidelines produced by the University at a time when there were no reporting guidelines specific to university sustainability. Going forward, it is our hope to participate in international dialogue to establish comparable international benchmarks specific to university sustainability. These will enable greater rigor and transparency in campus sustainability performance target setting and reporting. We anticipate that the efforts documented in this report will contribute to these discussions. We monitor and benchmark our work against international best practices through participation in the Association for the Advancement of Sustainability in Higher Education (AASHE), the Canadian Association of University Business Officers (CAUBO), and many other professional groups.

#### **REPORT QUALITY ASSURANCE**

Performance data has been collected by the UBC Sustainability Office through each of the unit heads (managers, directors, Associate Vice Presidents) responsible for specific targets. VPs are involved in sign-off on final tracking data.

### **Social Performance**

At UBC, our value is built by people-our students, our faculty, our staff, and our vast community of alumni and friends. Whether it is taking steps to increase the health and safety of our employees, enhancing the learning experience of our students, or providing service to our communities, we are committed to creating the best possible environment in which the UBC community of people can live, work, and learn. Our *Sustainability Strategy* outlines three social sustainability goals:

- A) Improve Human Health and Safety
- B) Make UBC a Model Sustainability Community
- C) Increase Understanding of Sustainability Inside and Outside the University

#### **OVERALL SOCIAL PERFORMANCE**

This year marked many positive achievements related to our social sustainability goals. In the academic enterprise, curriculum development around sustainability continues to grow, and in the 2006/07 school year we offered students a selection of over 400 related courses. In the workplace, the frequency of time-loss accidents decreased by 15%, contributing an overall decrease of 44% since 2002. In the campus community, we have increased housing available to full-time undergraduate students to 27.8%. In the business place, we are now serving 100%, shade grown, fair trade coffee at all non-franchise Food Services outlets on campus. These are just a few examples of our proud achievements in 2006.

#### A) IMPROVE HUMAN HEALTH AND SAFETY Health & Wellness

Guided by Policy #7 University Safety, "UBC strives to ensure the health, safety, and well-being of people on campus." Our efforts over the last five years have resulted in dramatically reducing the frequency of time-loss accidents. From 2005 to 2006, the frequency of time-loss accidents decreased by 15%, contributing to an overall decrease of 44% since 2002, as outlined in the table below. Also from 2005 to 2006, and the average severity of each time-loss claim decreased by two days.

The following table outlines the five-year trend for the frequency and severity of injury-related claims at the University. Note that both severity and frequency are based on time-loss claims approved by WorkSafeBC and are subject to retroactive amendment from time to time as claim data is reviewed.

	2002	2003	2004	2005	2006
Frequency **	1.51	1.10	1.01	1.00	0.85
Severity*	22	23	23	25	23

\* Severity refers to the average number of lost days per WCB claim in the injury year.
 \*\* Frequency refers to the frequency of time loss accidents per 100 employees.

Our safety management system, annual health symposiums for employees, and our coaching programs helped us rank in the top 30 employers in British Columbia.<sup>96</sup>

UBC's Health Safety and Environment (HSE) Department is currently establishing a new framework for health and wellness on campus. This will include health baseline data, trends and other measurements to inform continuous program improvement. Project delays shifted the completion date to December 2007 (from Fall 2006) with tracking and reporting beginning in 2008.

#### Safety & Security

In 2006, Campus Security implemented a number of programs to increase the recovery of stolen items on campus, including Key Watch, Book Watch, Property Cop (in cooperation with the Vancouver Police Department and other security services), and the Bait Bike program. A 3.5% increase was recorded in reported property thefts over the 2006 year, which may be an increase in reported thefts (new reporting system and greater awareness of where to report thefts) rather than an increase in actual thefts. During this same period, Campus Security increased campus awareness of their services by 15%? Steps are currently being taken to have the Vancouver campus designated a "Safe Community" by the Safe Community Foundation of Canada. It considers a safe community to be one in which people and organizations have come together to reduce injury and promote the safety and well-being of all its citizens. The Safe Community Foundation is currently reviewing its application process; however, once that is completed, UBC will actively pursue a "Safe Community" designation.

#### B) MAKE UBC A MODEL SUSTAINABLE COMMUNITY

#### **Work Place**

We strive to create an environment and work experience dedicated to retaining and attracting outstanding people. Accordingly, next year, we will launch *Focus on People: Workplace Practices at UBC* a framework (based on the "People Plan Discussion Paper") that aims to create an extraordinary work environment that retains outstanding faculty and staff. This framework document has been written following consultation with the UBC community and other organizations between 2002 and 2005.

The five key strategies are:

- Develop a sustainable, healthy workplace;
- Retain faculty and staff through positive opportunities and incentives;
- Cultivate sound core leadership and management practices.
- Attract outstanding faculty and staff;
- Identify and share institution-wide goals.

The *Focus on People: Workplace Practices at UBC* plan will be presented for approval at the November 2007 Board of Governors meeting. Implementation and review of the plan will commence once Board approval has been granted.

#### **Living Space**

The high cost of housing in our region has impacts on UBC students, and employees and their families. Therefore, UBC is taking steps to develop an adequate and diverse supply of housing on campus.

Our target is to ensure that on-campus beds are available to 25% of the full-time undergraduate students at UBC Vancouver. During the 2006/07, the ratio of beds to undergraduate students increased to 27.8% (6,531: 23,464). This increase is due to the addition of 811 new student beds.

The Official Community Plan specifies that 50% of new market and non-market households have one or more members who work or study on campus. Looking at households built after the Official Community Plan was put into place (which excludes Hampton Place) 68% of households have someone who works or studies at UBC.

The provision of rental accommodation and non-market housing is a component of UBC's housing supply strategy. In 2006/07 28% of built and planned dwellings were rental housing (exceeding our 20% target), and of these 60% were non-market (exceeding the target of 50%). We also met the target that 40% of our new residential developments have ground access. Looking forward, we continue to monitor the regional trends and housing access issues. As a university, we will play our role in ensuring access to affordable housing, in particular for our students.

#### **Sustainability Purchasing**

Our aim is to use our purchasing power to leverage social, ethical, and environmental benefits. Therefore our strategy calls for triple bottom-line procurement. Purchasing practice is guided by Policy #122 (2003), which states that decision-making factors may be weighted to acknowledge local business development and the University's role in environmental leadership. Supply Management also ensures that procurement is guided by ethical practices. Purchasing considerations include probity, performance measurement, best value, open and fair access, and community and environmental leadership. By 2006, almost two-thirds of the Request for Proposals issued by Supply Management included a sustainability component.

In 2006/07, the University spent over \$270 million on goods and services managed or overseen by Supply Management. This year, a major contract was issued for scientific equipment and supplies, chemicals, and supporting service. Sustainability and environmental considerations were made part of this agreement, wherein the successful Vendor agreed to consider more environmentally friendly packaging, pop-up messages encouraging people to first look at UBC's Chemical Exchange database for chemical availability, and to advise users of environmentally preferable options. Supply Management also continuously investigates options that would see goods recycled when UBC declares them surplus to needs. Current initiatives include the possibility of an on-line recycling facility for the campus community, leasing arrangements with manufacturers, and agreements to refurbish and remarket surplus equipment.

As of September 2006 Pura Vida, 100% organic, shade grown, fair trade certified coffee is Food Services' house brand coffee at all non-franchise outlets, including Sage Bistro and UBC Catering. Pura Vida is a 100% charitable-owned coffee company with a unique approach to business. All of Pura Vida's resources go to help at-risk children and families in coffee-growing countries to help them build more hopeful futures.

UBC is demonstrating leadership in sourcing sustainably harvested seafood. In January 2006, the Sustainable Seafood Project was started, a collaborative effort facilitated by the Sustainability Office's SEEDS program. UBC Food Services providers, faculty from Project Seahorse (Fisheries Centre) and the Faculty of Land and Food Systems, student researchers and analysts provided their first recommendations in spring 2006. UBC Food Services, AMS Food and Beverage, and Green College embraced the ideas and removed five threatened seafood species from their menus and catering options: monkfish, snapper (rockfish), long-line caught tuna, sevruga caviar, and swordfish. The project expanded in fall 2006 to include recommendations on the sustainability of shellfish, steelhead trout/rainbow trout, and shrimp.

#### C) INCREASE UNDERSTANDING OF SUSTAINABILITY INSIDE AND OUTSIDE THE UNIVERSITY

#### **Academic Programs**

Many programs at UBC incorporate the tenets of sustainability, exposing students in different disciplines to the knowledge, skills, and experiences to prepare them to be responsible global citizens in a more sustainable world. Curriculum development around sustainability continues to grow at UBC, and in the 2006/07 school year UBC offered over 400 courses that relate to sustainability (over 300 at UBC Vancouver and over 100 at UBC Okanagan).

In addition to the individual course offerings, distinguished new programs are being created. For example, the Sauder MBA specialization in Sustainability and Business was launched in January 2007. It offers business education in the realms of environmental economics, sustainable development, and corporate social responsibility. Also in 2007, Dr. Carl Wieman, a Nobel laureate with a passion for science education, came to UBC to lead the Carl Wieman Science Education Initiative, an innovative \$12 million program to reshape science education at UBC. Several other noteworthy programs have joined the many already in existence. Our newly created Okanagan Sustainability Institute addresses sustainability issues related to urban sprawl in the Okanagan region. As well, through the En'Owkin Centre, UBC Okanagan, in collaboration with the Aborginal groups of the Southern Interior of BC, is developing programs and courses on Okanagan Aboriginal culture, history, philosophy, and knowledge. Appendix B "Sustainability and the Academic Enterprise" summarizes programs related to sustainability offered in UBC's faculties.

The Sustainability Office aims to create an enabling environment supporting the expansion of sustainability teaching and research. A committee of faculty members was awarded \$35,000 in TLEF funding<sup>8</sup> in 2006/07 and has advanced a number of initiatives that integrate sustainability into the curriculum. These included:

- Participation of three UBC faculty in the *Sustainability Across* the Curriculum Leadership Workshop in Atlanta, Georgia in January 2007;
- Offered two in-house workshops and networking discussions on integrating sustainability into teaching practice;
- Supported five student-led events featuring sustainability in March 2007;
- Worked with the Faculty of Medicine to weave sustainability into problem-based learning cases;
- Collected case studies related to sustainability for faculty use in class lectures and assignments.





## The biggest challenge here is making people aware, giving them an understanding of why and improving accountability."

ANDREW PARR, Director of UBC Food Services

#### **Student Engagement**

Our students are actively engaged in sustainability in many ways. Some key indicators of student engagement are participation in the Sustainability Pledge program, the Learning Exchange, and student mobility programs.

The Sustainability Pledge was created in 2002. The Pledge is an official commitment students make to use the knowledge they gain at UBC to improve the sustainability of the world into which they are venturing forth. During 2006/07, 543 new students signed the Pledge, increasing the number of signees to 4% of the total student population (1,809 total signatories). The Pledge is coordinated by Student Services with an aim to inspire at least 20% of the total student population to sign by 2010.

UBC's Learning Exchange is a community engagement initiative based in the Downtown Eastside area of Vancouver. Through its Trek Program, the Learning Exchange brings volunteers from the UBC community—students, staff, faculty, and alumni—to inner city schools and non-profit organizations where they contribute to community programs while learning about inner city issues.

#### I pledge to EXPLORE and take into account the social, economic and ecological consequences of my decisions. Furthermore, I pledge to use

the knowledge I gain at UBC to IMPROVE THE SUSTAINABILITY of the communities in which I live, learn, and work.

sign the pledge.

As much as possible, the volunteer work of students is integrated into academic course work—an approach called Community Service-Learning that is new to Canada. This past year 853 students participated in Community Service Learning programs, which represents 2% of our student population. With the help of a \$1 million funding grant received in 2006/07<sup>9</sup>, the program

aims to include 10% of students in Learning Exchange activities by 2010. The Learning Exchange model is being adapted for the UBC Okanagan campus designed to meet the needs of the Okanagan community.

This year there was a 25% increase in the number of students placed in Go Global: Student Mobility Programs. In 2006/07, 600 graduate and undergraduate students received academic credit in study/work opportunities, and 300 were part of a new volunteer placement program. Mobility Programs help students build global citizenship skills and knowledge, live their discipline, and take advantage of academic excellence at our partner institutions. This program is an important aspect of TREK 2010's internationalization goal of enhanced student mobility and study abroad programs. The chart below outlines the regions that offer student exchange programs with UBC; 144 universities participate in this program worldwide.



The Sustainability Office has also reached out to students in residence with a Sustainability Coordinator program designed specifically for them, now in its fourth year. In September 2006, 42 Residence Sustainability Coordinators (Rez SCs) were recruited, more than double the previous year's number. The Rez SCs engage and motivate fellow students, acting as examples, leaders, and information sharers.

The Social, Ecological, Economic Development Studies (SEEDS) program helps create and facilitate the collaboration between students, staff, and faculty a partnership to address sustainability issues on campus. In 2006/07, SEEDS engaged 398 people--318 students, 45 instructors, and 45 staff. To date, SEEDS projects have benefited the University in a variety of way, including:

- Creating the biodiesel project that in 2006 led UBC Vancouver; Plant Operations to use 20% biodiesel fuel in all its diesel fleet vehicles;
- Providing research that led to UBC becoming a pesticide-free campus this year;
- Sparking a reassessment of landscape techniques to reduce heavy metal contaminants in stormwater;
- Coordinating a group of interdisciplinary students in investigating how the world can use its seafood resources in wise and sustainable ways which led to UBC's new seafood purchasing policies.

#### Faculty & Staff Engagement

The Sustainability Coordinator program continues to establish its influence on inspiring sustainability culture throughout the university. 145 faculty and staff demonstrate how the collective impact of individual actions can make a big difference. Sustainability Coordinators inspire positive changes in energy use, waste generation, transportation, and social sustainability. For example, in 2006/07, the Sustainability Coordinators helped to save UBC approximately \$79,000 worth of electricity. Specific tools have been developed for the Sustainability Coordinators that break down how to make a difference into small, manageable steps. An example is the double-siding paper tool that has contributed to UBC's 41% reduction in per capita paper use since 2000. The table below shows the increase in the number of Sustainability Coordinators since the program's inception in 1999:



#### **Aboriginal Engagement**

UBC is dedicated to supporting Aboriginal student academic success and leadership. At UBC Vancouver this is largely done through the First Nations House of Learning, a unit within the President's Office, and at UBC Okanagan through Aboriginal Services and Programs. The mandate of the First Nations House of Learning and Aboriginal Services and Programs is to make the University's vast resources more accessible to Aboriginal peoples and to improve the University's ability to meet the needs of First Nations, Métis, and Inuit.

The Vancouver First Nations House of Learning is guided by a President's Advisory Committee, and includes Elders and representatives from Aboriginal communities, UBC faculty, First Nations, Métis, and Inuit students, and Government. In the fall of 2006, the Director of the House of Learning was also appointed as the Senior Advisor to the President.

This past year, UBC Okanagan piloted an Aboriginal Access Program where 20 students were admitted to a special first year program that, upon successful completion, will enable these Aboriginal students to enter mainstream by second year. UBC Okanagan also developed an Aboriginal Research Protocol.

The University's current goal is to increase the number of Aboriginal students, staff, and faculty, as well as to increase the number of courses and enrollments on Aboriginal issues and perspective by 2010. The Aboriginal Strategic Planning Group (which has representation from the First Nations House of Learning and Aboriginal Services and Programs) is currently moving towards this goal by developing a UBC strategy on Aboriginal affairs that is scheduled for completion in 2007/08.

#### **Community Engagement**

UBC currently has approximately 240,000 alumni, mostly residents of the Lower Mainland. In order to position 10% of undergraduates as future leaders of UBC Alumni by 2010, Alumni Affairs has recruited an Alumni Relations Manager for Students and Young Alumni. One of the key roles for the Manager is to help existing students to connect with each other at UBC now, in order for that relationship to continue after graduation.

The Sustainability Office partnered with the University Industry Liaison Office to develop and host the first two-day Sustainability Coordinator Program Workshop for external organizations in March 2007. This unique workshop was sold out, with 30 participants from private, public, and non-profit organizations attending from North America, including Hawaii. They learned how to improve sustainability at the department level, inspire the community, save money and natural resources, and create a culture of sustainability in their organizations.

## "The University must subscribe to best practices that are available, and putting the UBC name to sweat labor would just be wrong."

DEBBIE HARVEY, UBC bookstore director on the Campus' No Sweat Policy

## chön domo arigato

## **Economic Performance**

Sustainable economic performance makes it possible for UBC to generate long-term value for all of our stakeholders. In this context, our primary focus is the ongoing financial viability of the academic enterprise and the responsible management of the public assets entrusted to us. In our commitment to intergenerational equity, we focus on building a healthy portfolio of assets for future generations. As a large researchintensive institution, we are committed to excellence in research and innovation contributing to a strong local and national economy. *Our Sustainability Strategy* outlines three economic goals:

- D) Ensure Ongoing Economic Viability
- E) Maintain and Enhance the Asset Base
- F) Maintain and Maximize the Utilization of the Physical Infrastructure

#### **OVERALL ECONOMIC PERFORMANCE**

In fiscal year 2006, April 1, 2006 to March 31, 2007 (2006/07), UBC demonstrated strong performance against its economic sustainability targets. Home to exceptional world-class scholars, UBC continues to see an upward trend in research revenues; we have reached the \$1 billion landmark target for the University Endowment Fund three years ahead of schedule; we have worked hard with our government partners to gain support for capital investment and salary settlements; and we have increased our credit rating to Standard & Poor's AA+.

#### D) ENSURE ONGOING ECONOMIC VIABILITY Education Costs

UBC's target is to keep tuition rates at 25% to 30% of education costs for domestic students. Compared to 29.7% in 2005, this year's tuition rates represent 28.8% of education costs for UBC Vancouver and UBC Okanagan combined.

Grants and tuition combined with other revenues make up the full cost of education as illustrated for the 2006/07 school year in the table below:

	UBC V	UBC V %	UBC O	UBC 0 %
2006/07 Provincial Grants	397,294,536	71.1%	38,547,000	73.0%
2006/07 Tuition	161,790,647	28.9%	14,285,544	27.0%
Total	559,085,183	100.0%	52,832,544	100.0%

#### **Financial Viability**

2006/07 marked the conclusion of the Provincial Funding Review. Under the terms and conditions of this Review, the Provincial Government operating and capital funding for post-secondary education is now based on a three-year model. Historically, this funding was based on a one-year model. To enable implementation of the funding review, UBC has initiated an Academic Planning Process, which will conclude with a Mid-Level Academic Plan, linked to the three-year budget model.

In addition, UBC received funding for all Public Sector Employer Council (PSEC) approved salary and benefit negotiated settlements.

Our ongoing economic viability will require work to ensure core academic operational costs accurately reflect inflation. There is, for example, limited flexibility with respect to provincial funding for non-salary inflationary costs (library acquisitions, supplies and equipment, utility charges, and the capital costs of new buildings and labs). Also, the ability to raise revenues has been impacted by the Provincial Government commitment in the February 2005 Throne Speech to limit future tuition increases to the rate of inflation. UBC is continuing to work with government to ensure appropriate funding is available to meet its goals of economic viability.

In 2006/07, UBC continued its commitment to Policy #90, *Over-expenditure of Research and Specific Purpose Trust Projects/Grants,* by operating within the set budget. This policy provides greater clarification of the roles and responsibilities of various University personnel in ensuring prudent fiscal management of research monies in order to prevent over-expenditures.

#### **Research Support**

UBC aims to be amongst the top recipients of government research funding for Canadian universities, and this goal extends to emerging sustainability research areas such as clean energy and climate change. We continue to develop strategies and infrastructure to attract and keep the best sustainability researchers and trainees in the region. Our average research revenue growth rate has been 13.1% per year over the past five years, with research funding up \$139 million from five years ago. However, research revenues for UBC in 2006/07, a total of \$399.5 million from more than 6,600 projects, were down \$85 million from 2005/06. The decline reflects that the Canadian Foundation for Innovation (CFI) funding is a two year cycle, and this past year is one where less funding has been awarded. Therefore, CFI and BC Knowledge Development Fund (BCKDF) projects released this year were \$59 million in 2006/07 compared to \$123 million in 2005/06. All monies from the CFI and BCKDF puts infrastructure (building and equipment) in place for future generations. UBC ranks first in the country for CFI funding and second nationally for Fellowships of the Royal Society of Canada, Steacie Fellows, and Guggenheim awards. Research grants are largely multi-year grants. The numbers reported in this section are based on awards as reported by the Office of the Vice-president Research (VP Research), whereas the research funding as reported in the Consolidated Statement of Financial Position reflects research funds that are earned as the research is performed, normally after the award is made.

- The Georgia Basin Futures Project (\$2.5 million grant) An inter-faculty collaboration headed by the Sustainable Development Research Institute. Supported by a Major Collaborative Research Initiatives (MCRI) grant from the Social Studies and Humanities Research Council of Canada (SSHRC).
- Museum of Anthropology (\$34.4 million funding) Redesigning of the Research Centre and a development of the digital network (known as the Reciprocal Research Network) linking Northwest Coast collections in institutions worldwide. Funding received from the CFI and BCKDF. Additional funds to be provided by UBC and private donations.
- The Metropolis Project (funded by eight federal departments and the Immigration Branch of the Province of British Columbia)

Involves UBC and Simon Fraser University and is tied to national and international networks in 20 countries. It considers the impact and integration of immigrants in Greater Vancouver. • The Beaty Biodiversity Research & Centre & Natural History Museum (\$49 million total funding; \$41.2 million from research funding and \$8 million from Mr Ross Beaty)

The research centre is dedicated to the study of how biodiversity originates, how it is maintained in ecosystems, the natural and human forces that lead to extinction, and the local and global consequences of its loss. The Museum upon its completion in 2009 will bridge the gap between the general public and UBC biologists.

In addition, UBC is developing a \$36.1 million Centre for Interactive Research in Sustainability (CIRS) and the \$11 million Clean Energy Research Centre (CERC) opened in 2007. Each was supported through grants from the CFI, BCKDF, and private sponsors.

UBC Okanagan's academic plan calls for a community that is characterized by intimate learning, integrated research, and local responsiveness. Rapid population growth in the Okanagan region threatens natural air, water, land systems, and habitats. The area has a number of species at risk. Thus, the region provides a living laboratory for study and problem-solving related to human settlements and sustainability. As such, UBC 0 has research competencies in conservation biology, watershed management, environmental change research, rhizosphere biology, and plant natural products.<sup>10</sup>

#### E) MAINTAIN AND ENHANCE THE ASSET BASE

At UBC we are committed to responsible asset management. Early in 2007, our efforts were recognized by Standard & Poor's, as they upgraded our long-term debt rating from AA to AA+. In addition, Moody's reaffirmed our Aa1 rating. This credit rating is unparalleled by any other Canadian university. As part of our ongoing commitment to continuous improvement, in January 2007 we put in place a prioritization process that ensures future debt is targeted against areas of strategic capital growth. Furthermore we ensure that any long-term borrowing from an external third party to replenish working capital does not result in an increase to the University's debt-burden ratio such that the projected rate over time exceeds 5.5%. We also do not allow borrowing to provoke a downgrade of any one of the University's credit ratings. As a result, in 2006/07, our debt-burden ratio was approximately 2.99%, well below the limit of 5.5%.

#### **Endowment Fund**

During 2006/07, UBC increased its Endowment Fund by \$154.7 million. The Fund now contains \$1.01 billion, meaning we have met our endowment fund target of \$1 billion three years ahead of schedule. This year's increase resulted, in part, from \$38 million in new endowments, as well as investment growth due to strong financial market performance. Generous gifts from alumni, parents, students, corporations, foundations, and other friends help UBC to make a lasting impact on our world. In 2006/07, more than 23,000 gifts totaling over \$111 million enabled our students to prepare to work with and for their communities, our researchers to uncover solutions that change lives, and our graduates to become leaders in every segment of society. As the Development Office continues to build productive and long-term relationships with donors, the goal is to continue the trend of increasing donations so that they reach \$150 million annually by 2010.

This year's increase also includes contributions of land lease revenues, excluding Hampton Place, of approximately \$82 million to the Endowment Fund. Land endowments are funds generated from land set aside for UBC in 1920 by virtue of the Endowment Land Act. Initially 3,000 acres were granted. In 1989, the Provincial Government transferred approximately 1,800 acres to the then called Greater Vancouver Regional District (now Metro Vancouver) for the creation of Pacific Spirit Regional Park. The remaining 1,000 acres continues to belong to the University for academic use, building a sustainable community, and generating revenue for the Endowment Fund. Typically, but not always, parcels of land that have specified uses are taken to market and prepaid long-term land leases are negotiated. These leases are in the Hawthorn and Chancellor Place neighbourhoods. Completion of these neighbourhoods and the addition of the Wesbrook Place neighbourhood are projected to realize approximately \$420 million, after site servicing costs for the Endowment Fund.

#### **Reserve Levels**

Internally restricted reserves are used for employee benefits, faculty and department carry-forwards, specific purpose reserves, ancillary reserves, and research reserves. In 2006/07, these totaled \$100.5 million, down from \$141.8 million in 2005/06. The decrease in reserves was caused by UBC using internally restricted reserves to finance capital projects. The reserves may be replenished with a bond offering in 2007. However, UBC's current reserve level is still substantially higher than the \$27.8 million level five years ago.<sup>11</sup>
## F) MAINTAIN AND MAXIMIZE THE UTILIZATION OF THE PHYSICAL INFRASTRUCTURE

#### **Facilities and Infrastructure Costs**

UBC is committed to the responsible management of its public assets. This includes over 255 academic buildings, nearly 70% of which are more than 30 years old. Launched in 2002, the UBC Renew program, a partnership with the Provincial Government, renovates buildings rather than demolishing them and rebuilding. UBC and the Province each committed \$60 million to Renew Phase 1.

The project creates state-of-the-art learning facilities from deteriorating buildings. Renew retains the foundations, structure, and envelope of the targeted buildings but otherwise completely renews and revitalizes the buildings so that they are safe, accessible, efficient, and in synch with the academic plan.

Phase I of UBC Renew targets the renovation of 10 buildings between 2005-2010, extending the life of more than 36,455 square metres of buildings by 40 years or longer. In 2006/07, we completed 70% of Renew Phase I.

Replacing the 10 buildings was estimated to cost \$209 million; instead, renovations were completed for \$120 million, representing a savings of \$89 million. In consideration of this saving, every third building is built at no cost.

UBC Renew has four phases and is expected to save B.C. taxpayers \$550 million and reduce the Accumulated Deferred Maintenance by up to \$300 million. By renovating instead of building, the process saves up to half a year of valuable time and lessens the possible inconvenient impact on UBC researchers, faculty, and students.

#### **Reduce Deferred Maintenance**

This year, UBC will present the B.C. Government with a business plan for Phase II of UBC Renew. Our goal is to maintain operating budgets for new and renovated buildings at Associate of Physical Plan Administrators (APPA) Level 2 standard. However, due to budgetary cutbacks this year, although building system maintenance remained at APPA Level 2, custodial and landscape maintenance was reduced to APPA Level 3.

#### **Facilities Planning**

UBC's success since 2000 in attaining Canada Foundation for Innovation (CFI) and Canada Research Chair (CRC) grants, as well as other funding, increased the need to plan proactively for renovations and new development. The Core Density Study, completed in March 2007, confirmed the adequacy of core campus building sites for future research and academic growth. UBC is planning an efficient and flexible infrastructure that will facilitate quality research, teaching, and administrative facilities for all campus constituents. The campus has reached an age where new sites are scarce; therefore, Facilities and Capital Planning facilitates the redevelopment and intensification planning process for existing sites. Integral to this process is the development of a Demolition Plan tied to consequential moves through new projects and renovations.





"The refurbishment cost \$7.2 million as opposed to \$17.6 million had we built it from scratch. We diverted 220,000 kgs of waste from going to landfill, 775,000 kgs of CO2 equivalent emissions were not released and 3.5 million litres of water saved."

> SUZANNE POOHKAY, Director of Facilities and Capital Planning on the value of UBC's Renew Program

UBC will increase space utilization by at least 5% above 2000 levels by 2010. Recommended construction of a swing-space teaching facility, now completed, as well as allocating designated swing space in several lab buildings on campus, have contributed to achieving this target. Space utilization was up 2.5% from 2000 levels in 2005/06, and 4% in 2006/07.

The Facilities and Capital Planning Office follows an ongoing intensification process at UBC by:

- reviewing allocation to entitlement on inventory for each campus group every two years;
- finding units with under-utilized space and investigating the cause;
- working with these constituents to redesign their allocated areas and, if feasible, relocating synergistic groups to share the space;
- applying for minor capital and renovating as required to intensify use;
- reallocating any remaining underutilized space from this process to others in need, as required.

Facilities and Capital Planning, through inventory and functional reviews as well as input from campus constituents, continues to identify functions and space typologies that are presently underserved and underbuilt on campus. High-performance computing is the present function required across campus, and we are facilitating planning for a central, shared, and sustainable facility with a constituent committee.

UBC is working towards development and implementation of a transparent web-located space allocation policy. The process is in preliminary stages. A campus constituent committee has held preliminary meetings, and a framework document is underway. However, Facilities and Capital Planning is behind their proposed schedule due to project planning implementation increases this year that have resulted in minimal time for committee work.

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# **Environmental Performance**

At UBC we are committed to reducing our ecological footprint and minimize drawing down the earth's natural capital upon which we all depend. We are integrating environmental considerations into the decision-making at all levels, throughout both our operations and our academic enterprise. From addressing climate change to reducing our waste streams to green designs, we strive for an equitable use of natural resources, now and into the future. Our Sustainability Strategy outlines three environmental goals:

- **G) Reduce Pollution**
- **H) Conserve Resources**
- I) **Protect Biodiversity**

#### **OVERALL ENVIRONMENTAL PERFORMANCE**

Our successes in 2006/07 include: wrapping up the ECOTrek Program, which has achieved a 25%  $CO_2$  emissions reduction per square metre since the base year of 2000; diversion of 46% of all University waste from landfills into recycling centres; the elimination of pesticide use for cosmetic purposes on campus; and the implementation of guidelines for green residential buildings in developments on campus.

Looking ahead, we remain focused on the enhancement of our energy efficiency and greenhouse gas reduction programs. UBC Sustainability Office, in collaboration with students and other groups on campus, will complete a comprehensive greenhouse gas inventory, set further reduction targets, prepare a university-wide climate action plan, and form new leadership alliances. We are also extremely pleased that a U-Pass program was launched at our UBC 0 campus in September 2007.

#### 75,000 0.075 0.070 70.000 0.070 0.068 65.000 0.065 60,000 0.060 55,000 0.055 50,000 0.050 Total CO2 Emission 45,000 0.045 CO2 Intensity (tonnes/m≤) 40,000 0.040 1990-1991-1992-1993-1004 1005 1007 2000-2001-2002-2003-2004-2005-2006 1006 1008 92 93 99 00 01 02 03 04 05 06 07 Yea

Annual CO 2 Emissions for Core & Ancillary Buildings

#### **G) REDUCE POLLUTION**

#### **Air Quality**

As stewards of a large public institution, we seek to continuously reduce our greenhouse gas emissions. In 2006, we were pleased to wrap up the largest energy and water infrastructure upgrade ever to take place on a Canadian campus. Known as ECOTrek, this program involved rebuilding and retrofitting the infrastructure of 277 core buildings. As a result, total  $CO_2$  and equivalent emissions from buildings has been reduced by 25% per square metre from 2000 levels<sup>12</sup> and the University saves \$2.6 million annually. Additionally, the program involved retrofitting of the boilers in our steam plant. This has resulted in NOx emissions being 86% lower in 2006 than in 2000.

At our UBC Okanagan campus, we have commenced construction of a geo-exchange heating and cooling system, which will replace an existing natural gas plant that is nearing the end of its lifespan. Using groundwater as an energy source, the geoexchange system will be used to heat and cool \$400 million worth of new buildings planned for the UBC Okanagan campus, preventing the emission of more than 38,000 tonnes of CO<sub>2</sub> into the atmosphere over two decades—equivalent to the electricity consumption of 4,850 homes.<sup>13</sup>

 <sup>&</sup>lt;sup>12</sup> Institutional and ancillary buildings, adjusted for growth
 <sup>13</sup> US Climate Technology Cooperation Gateway > Carbon Equivalency Calculator

#### Mobility

To improve transit use and decrease commuter traffic, our transportation management office, TREK, oversees implementation of UBC's Strategic Transportation Plan. The plan is updated every five years with the next due in 2010. TREK is also responsible for effecting the mandatory U-Pass (universal transportation pass) program, launched at UBC V in 2003. The U-Pass has resulted in transit ridership increasing by over 50%, with more than 40,000 people now using transit to get to and from UBC daily.

While the amount of automobiles at UBC on a daily basis increased 2% from 2005 levels, minor fluctuations from year to year are typical in transportation trends. Overall, automobile levels in 2006 were 22% below 1997 levels, despite a 28% growth in population during that time. This represents a decrease in automobile traffic of 44% per capita.

The TREK office is pursuing the expansion of the U-Pass program to include community residents, faculty, and staff. TransLink is currently addressing capacity building issues, and once this is resolved, we hope to have a campus-wide U-Pass program. A student U-Pass program began at UBC Okanagan in September 2007.

The UBC vehicle fleet has now converted 3% of its vehicles (including UBC 0) to meet or exceed the Californian Super Low Emission Vehicles (SULEV) standard, with a target of converting 10% by 2010. Additionally, UBC increased the proportion of biodiesel fuel to 20% in UBC Vancouver's diesel vehicles!<sup>4</sup> With a focus on reducing the carbon footprint associated with the delivery of food products, UBC's Food Services Department, with the assistance of Land & Food Systems class AgSci 450, are creating new policies for sourcing eggs and other foods that focus on products that are produced locally, can be harvested and delivered sustainably, or are packaged in an environmentally conscious way.

#### Waste

UBC's waste reduction strategies, and recycling and composting practices, reduce the volume of waste going to landfills, conserve resources, and make good business sense. To achieve our waste management goals, hundreds of units across campus are working imaginatively to come up with innovative solutions. In 2006, UBC generated 5,941.6 tonnes of waste, and 46% was recycled. This is 763 tonnes less waste than was generated in 2005, and then only 41% was diverted from landfill. People bringing their own mugs, and printing drafts on re-used paper contributed to decreased waste, and composting and recycling efforts diverted more material from landfills.

Our Waste Management department continues to work with Genesis Recycling Ltd. to ensure that campus electronic waste is handled responsibly. Genesis ensures that materials are neither sent to the landfill nor shipped overseas. Waste Management also introduced a monthly "E-Waste Day" where members of the UBC community are encouraged to bring in personal e-waste for free disposal. UBC boasts Canada's first university in-vessel composter. Since its installation in 2004, it has digested more than 300 tonnes of waste. Collection is now done from more than 46 sites on campus, including all food service outlets, and many private housing developments and institutional buildings. The in-vessel composter is now operating at about 80% of its capacity, and the tonnage collected is expected to increase by at least 10% to 15% in 2007. The soil generated from the in-vessel composter is currently used by the campus landscaping team, saving the University the cost of purchasing it elsewhere.

As a large research-intensive university, UBC uses hazardous materials for many reasons, including for research, hospital needs and for cleaning buildings. UBC disposed of 118 tonnes of hazardous waste in 2005 and 127 tonnes in 2006. The Health, Safety, and Environment (HSE) department oversees the handling of all hazardous materials to ensure responsible use, handling, and disposal to ensure the campus community and the environment safe. Efforts to minimize their use are done through training, recycling, and finding effective, non-toxic alternatives.

We recognize that the diversion of construction waste from landfill is an important factor in the reduction of our overall ecological footprint. Therefore, the UBC Technical Guidelines for institutional construction on campus requires that 50% of construction waste must be diverted from landfill. The numbers for this target are yet to be collated; however, details will be in our next report. Our target of diverting 75% of campus waste from residential construction, demolition, and land clearing for new residential buildings has, in part, been achieved through the standards outlined in the mandatory requirements of the Residential Environmental Assessment Program (REAP). The numbers for this target are yet to be collated; however, we expect to include them in subsequent sustainability reports.

#### Stormwater

UBC is at the forefront of developing and piloting several innovative stormwater management programs. In 2006/07, a SEEDS project developed the idea of creating a bioswale in the Wesbrook Place neighborhood. A bioswale is a natural gutter that allows water to be absorbed into the ground rather than being put through manmade pipes. This will allow UBC to avoid building an underground pipeline infrastructure, mitigating impacts on the environment, and saving money. It will also allow for social amenities such as creekside parks and walkways. The project is now undergoing a feasibility study. Additionally, UBC has recently completed a pilot test of a closed-loop storm drain. The closed loop reduces our demand on the region's watershed and stabilizes fluctuations in stormwater drainage to UBC's cliffs.

Our goal is to establish an Integrated Stormwater Management Plan by 2008.

#### **H) CONSERVE RESOURCES**

#### Consumption

Not only has ECOTrek reduced  $CO_2$  emissions, it has also led to a 23% energy consumption reduction since 2000. UBC's goal is for all new buildings, both academic and residential, are designed to meet certain energy efficiency guidelines as outlined by the Residential Environmental Assessment Program (REAP) and our Technical Guidelines. In 2006, seven of eight new institutional buildings were 25% more efficient than the Model National Energy Code (MNEC 1997), and 100% of new residential buildings met or exceeded the MNEC standard.

As part of our overall energy management plan, we have targeted the introduction of renewables to the UBC energy supply. Photovoltaic solar panels have been installed in the Fred Kaiser Building, and a solar unit powers the map on Marine Drive. We have also purchased enough BC Hydro Green Power certificates to power four buildings on campus.

An Operations Centre was set up in 2006/07 to ensure the ongoing management of energy use on campus and is funded out of energy savings realized from the ECOTrek program. Under the ECOTrek program, the building automation system was significantly expanded, and gas, electrical, and water meters were installed in all major buildings. Through the Building Management System, the Operations Centre can now monitor consumption trends in individual buildings and proactively respond to variances in consumption. UBC Properties Trust is working hard to introduce renewable energy sources into campus residential developments—they used geothermal systems for domestic hot water in their three residential projects that either started or were competed in 2006/07. Going forward, a district energy system is planned for Wesbrook Village, which will use the excess heat from the grocery store to contribute to residential hot water heating needs.

#### Water

The 40% reduction target for water use has already been surpassed. In 2006, water consumption was 42% lower than the 2000 base year. This was achieved through ECOTrek improvements such as fixing leaks and installing waterless urinals. Campus water use has been reduced by the amount equivalent to that needed to supply 11,800 Vancouver residents for one year.<sup>15</sup>

Water conservation is strategically important to our UBC Okanagan campus, which is situated in a semi-arid climate. A number of water-related priorities have been targetted.

#### Paper

Despite close to a 30% increase in students since 1999, our overall use of paper has been reduced by 27%. On a per capita basis, we have reduced paper consumption by 41%, which means we have achieved our 2010 target. In 2006/07, the Faculty of Land & Food Systems Academic Office became the first paperless office at UBC, and in January 2007 the UBC Bookstore made e-textbooks available to students for the first time. Initiatives such as these will lead to further reduction of paper use.

#### I) PROTECT BIODIVERSITY

#### Hazardous Materials

In 2006, UBC stopped using pesticides for cosmetic purposes on campus grounds. Instead we use organic solutions such as vinegar concentrate, employ more seasonal gardeners for weeding, and are testing a product that uses steam to control weeds. Pesticides may only be used in the future if use of a particular product is necessary to preserve the health of old trees or plants like the 100year-old oaks along Main Mall. In 36 buildings across campus, UBC also now uses green cleaning products, which are environmentally friendly and less hazardous for the custodians using them.

In the last decade UBC's research funding has tripled and its hazardous waste increased tenfold. To address this issue the Health Research Resource Office created the Chemical Exchange Database enabling researchers to use chemicals from other labs that would otherwise be sent for disposal. In 2006 the Chemical Exchange Database recorded over 130 transactions that redirected 1,497 kilograms of chemicals. In this way, one lab's waste becomes a valuable part of another's new experiment and the University avoids expensive disposal costs and environmental risks

#### **Housing Design**

In 2006/07, UBC introduced version 2.0 of the Residential Environmental Assessment Program (REAP), a required set of standards to guide and measure sustainable building practices for residential developments on campus. Participation in the REAP system ensures that buildings meet higher performance standards than conventional construction in the Greater Vancouver area. REAP, in combination with innovative planning objectives set by the Metro Vancouver,<sup>16</sup> UBC Properties Trust, and Campus & Community Planning, delivers residential developments that feature:

- High density and small lots
- Preserved greenspace
- Bicycle storage and fewer parking spots for automobiles
- Energy-efficient lights and appliances plus electricity-use monitoring
- Reduced use of volatile-organic-compound-emitting materials
- Stormwater management and construction techniques that include sediment control
- Central mechanical venting systems for improved air quality
- Dual-flush and/or low-flow toilets in some units
- Innovative energy systems, such as geo-exchange and district heating plans in some projects

Each of the University Town neighborhoods has incorporated innovative sustainability projects or design features, including the following examples.

Neighbourhood	Design Features
Hawthorn Place	New greenway and park spaces and a deep well for stormwater management by aquifer recharge A geo-thermal system for heating water, hot water meters for each suite, Energy Star appliances, dual-flush toilets, and a building waste
	management and recycling plan
North Campus	Demonstrates stewardship by protecting the area's ecological resources including respecting adjacent parkland
East Campus	Geo-exchange domestic heating
Wesbrook Place	Stormwater distribution, rainwater retention, and green roofs
Chancellor Place	The historic granite-clad Iona Building was renewed and given an adaptable retrofit

#### **Hawthorn Place**

Bounded by SW Marine Drive, Thunderbird Boulevard, East Mall, and Stadium Road, the plan for this neighbourhood was approved in 2001, and construction is expected to be completed in 2007. Hawthorn Place provides a variety of housing options for faculty and staff, including rental and co-development housing as well as market housing. Public areas include greenways and park spaces. Traffic has been reduced by replacing parking areas with pedestrian paths and cycling routes.

#### **North Campus**

Located across from NW Marine Drive from the academic core, and is bounded by Pacific Spirit Park to the North, West and South. Norman MacKenzie House, Green College, Cecil Green Park and Coach House, the Department of Anthropology and Sociology, and the Museum of Anthropology are all within this local area. A hydrological study was done to ensure the protection of Pacific Spirit Regional Park.

#### **East Campus**

Bounded by Wesbrook Mall, Agronomy Road, and Fairview Avenue, construction is currently underway after approval was obtained in 2004. East Campus has a high proportion of rental housing and a focus on pedestrians and cycling.



**Map of University Town** 

### Wesbrook Place

Wesbrook Place, the largest of the University Town neighbourhoods, is a part of the South Campus development and is bounded to the north by 16<sup>th</sup> Avenue and to the east by Pacific Spirit Regional Park. Approved in 2005, construction is now underway, with the first residential properties due for completion in 2008. The neighbourhood will include both rental and market housing, a commercial/retail area, community centre, school, playing fields, parks, and public open space.

#### **Chancellor Place**

Located on the corner of Chancellor Boulevard and Wesbrook Mall, Chancellor Place is a partnership among four theological neighbours: Carey Theological College, St Andrew's Hall, St Mark's College, and the Vancouver School of Theology. The neighbourhood will retain and enhance the academic teaching missions of the colleges, renovate existing buildings, create public open spaces, and integrate new residential units.

### Hampton Place

Bounded by 16<sup>th</sup> Avenue, Wesbrook Mall, and Pacific Spirit Regional Park, Hampton Place was constructed over a 10-year period commencing in 1989, prior to the creation of Official Community Plan. It is a multi-family residential community with 957 units in 11 buildings.

#### Institutional Building Design

UBC Vancouver is home to some award-winning green institutional buildings, including the C.K. Choi Building, the Liu Centre, the Fred Kaiser Building, and the recently completed UBC Life Sciences Centre. In 2006, we hired a new Green Building Advisor to be an inhouse resource on Leadership in Energy and Environmental Design (LEED™) certification for all institutional projects (both renovation and new construction). The new Life Sciences Centre was certified LEED™ Gold in 2006. All building renovations are targeting LEED™ Silver or better certification. When renovating, LEED™ points can be earned by retaining significant portions of the existing buildings, upgrading windows, improving wall insulation, installing efficient lighting heating and ventilation systems, and promoting good indoor air quality with smart product choices.

#### **Sustainability Education**

In 2006/07, the Sustainability Office published three major reports on UBC contributions to sustainability: *the 2005/06 Sustainability Office Annual Report, The Sustainability Strategy 2006-2010,* and *The Sustainability Strategy AND YOU*. The Office was also featured in national and regional newspaper articles, and its redesigned website had 1.4 million visitors. Additionally, the Office developed the *Inspiring Change* binder that teaches organizations across North America how to use UBC's unique model for sustainable behavior. In 2006 the Sustainability Office received the following awards and recognition for its programs:

- Association for the Advancement of Sustainability in Higher Education (AASHE) Campus Sustainability Leadership Award;
- National Resources Canada (NRCan) Award for highest energy savings in the Western Region;
- Honorable Mention, APEGBC (Association of Professional Engineers and Geoscientists of BC) Sustainability Award for UBC Geoexchange Project;
- Canadian Association of University Business Officers (CAUBO) awarded the 2nd place national prize in recognition of our commitment to student learning and research through Social, Ecological, Economic Development Studies (SEEDS) Program;
- National Wildlife Federation Campus Recognition (for the third time).

UBC is now a national leader in sourcing seafood sustainably. In January 2006, the Sustainable Seafood Project was started, a collaborative effort facilitated by the Sustainability Office's SEEDS program. UBC food service providers, faculty from Project Seahorse (Fisheries Centre) and Land and Food Systems, and student researchers and analysts provided their first recommendations in spring 2006. UBC Food Services, AMS Food and Beverage, and Green College embraced the ideas and removed five threatened seafood species from their menus and catering options: monkfish, snapper (rockfish), longline-caught tuna, sevruga caviar, and swordfish. The Project expanded in fall 2006 to include recommendations on the sustainability of shellfish, steelhead trout/rainbow trout, and shrimp. The next category being analyzed is salmon.







Appendix A: Per	formance Charts	

# **Social Targets**

 Goal:
 A) Improve Human Health and Safety

 Objectives:
 Develop and implement a holistic Health and Wellness framework designed to enhance personal and organizational health and well being;

 Enhance campus safety and security

Target		Res	sults		Comments
	Timeline	Prev Year	Current	Status	
Establish measurements and set targets for health promotion and wellness	Fall 2006	N/A	Be in place by end of 2007	On track	Framework to be implemented by end of 2007 and will start tracking and reporting on the measures by 2008
Decrease frequency of time loss accidents by 10% each year	2006-2010	1% decrease	15% decrease	Achieved 2006	Frequency of time loss accidents per 100 employees (calendar year): 2002: 1.51; 2003: 1.10; 2004: 1.01; 2005 1.0; 2006 0.85 Decrease in average number of days lost per WCB (Workers Compensation Board) claim by 5% each year: 22 days lost per WCB claim in 2002; 2003:23 days; 2004:23 days; 2005:25 days; 2006:23 days
Decrease campus property theft incidents by 20% each year	2005-2010	+149%	+3.5%	Not achieved	Property theft incidents 137 in 2004, 342 in 2005, 354 in 2006. Increase in 2005 is because the new monitoring system captures incidents that were not previously reported. Increase in 2006 reflects new reporting procedure for bicycles (increase to 152 from 39 for bikes alone that would have previously been recorded separately). Also in 2006, Vancouver City Police initiatives to decrease property crime in the West side of Vancouver displaced some potential offenders into other areas including the UBC Campus. Programs initiated in 2007 to increase recovery of stolen items: Bait Bike, Key Watch Program (mail back lost keys), Book Watch (mark with invisible ink), Property Cop (property registration)
Increase awareness of Campus Security services by 15% per year	2005-2010	N/A	+15% in 2006	Achieved 2006	2005: 23,000 people aware of services 2006: 26,500 people aware of services Number based on estimate of people at the Campus Security booth at outreach events
Designate UBC Vancouver as a "Safe Community"	2006			On hold	Process on hold as Safe Community program is revising its application process.

Goal:B) Make UBC a Model Sustainable CommunityObjectives:Create a truly livable campus environment in which people may flourish at work, at home and at play; Meet ethical and environmental purchasing standards								
Target		R	esults		Comments			
	Timeline	Prev year	Current	Status				
Develop a series of targets, priorities, action plans, and measures for enhancing the work environment at UBC	2006	Draft	Draft	ln progress	The "Focus on People" plan is being presented at November Board meeting for approval			
Implement and review the targets, priorities, action plans, and measures for enhancing the work environment at UBC	Ongoing			On hold	Pending approval of the "Focus on People" plan			
Work to maintain 25% ratio of housing provided specifically for full-time undergraduate students	Ongoing	24.8% 2005	27.8% 2006/07	Achieved 2006/07	As of May 2007: 6,531 beds (6,216 Housing & Conferences total beds; minus 100 for Green College beds that are run by Housing & Conferences but are for graduate students; plus 280 fraternity beds; plus 72 sorority beds; 63 beds, half the beds from Vancouver School of Theology and Carey Hall). 23,464 full time undergraduate students (PAIR survey) As of April 2005: 5,720 beds for 23,066 undergrads.			
Work toward the Official Community Plan (OCP) goal that not less than 50% of new market and non-market housing serves households where one or more members work or attend university on the UBC (Vancouver) campus	Ongoing	48.8% 2005	68% 2006	Achieved 2006	UBC Properties Trust Neighborhoods Survey 2006 shows 68% of new built and planned residential units since OCP have at least one member of the household who works or studies on campus. Total UNA households 1554: Hampton 958; Chancellor 78; Hawthorn 369. Survey interviewed 621 households Work/study: Chancellor 48%; Hawthorn 72%; Hampton 39%; Post OCP: Chancellor + Hawthorn 68%; Total (including Hawthorn) 43%			
Plan for the Official Community Plan goal that 20% of new residential dwellings will be rental housing, of which not less than half will be non- market housing that may include staff, faculty, cooperative, social, or other special housing needs	Ongoing	39% 2005	28% 2006	Achieved 2006	28% of built and planned new residential dwellings are rental housing as of 2006 60% of the built and planned rental dwellings are non-market as of 2006			

Target		R	esult		Comments
	Timeline	Prev year	Current	Status	
Ensure designs meet the Official Community Plan goal that 40% of new residential dwellings will be ground-oriented housing	Ongoing	37% 2005	40.3% 2007	Achieved 2006/07	40.3% of new residential built & planned units are ground oriented
Use triple bottom line for procurement at the unit level	2007			Being achieved	<ul> <li>Sustainability component established in bid documents: In 2005, Supply Management initiated a procedure whereby it recommends, to each end-user committee, the inclusion of a sustainability component clause in the evaluation criteria. In 2006 approximately 63% of Request for Bids and 26% of Request for Proposals included a sustainability component, with an average of 5% of the overall rating criteria.</li> <li>Energy efficiency criteria established in bid documents: Energy efficiency is included in bid documentation on a case-by-case basis, including photocopiers and major appliances. In both cases the EnerGuide/Energy Star certification is provided on the copiers and major appliances purchased for UBC.</li> <li>Computer and related equipment lease agreement: In 2005, UBC entered into a lease agreement for computers and related equipment, wherein the leased computer/equipment, at the end of its lease at UBC, is returned to the lessor, the equipment is not purchased by UBC. Since 2005, 1,843 computers were leased, reducing the number of UBC computers in the landfill. Prior to 2005, almost all computers were purchased.</li> </ul>
Offer "fair trade" coffee at all eligible Food Service units	2007	None	All	Achieved	Pura Vida, 100% organic, shade grown, fair trade certified coffee has been Food Services' house brand coffee at all non-franchise units since September 2006.

Goal: Objectives:

C) Increase Understanding of Sustainability Inside and Outside the University Strengthen the UBC community's awareness and understanding of sustainability, global citizenship and civil society through learning, research and community service; Connect with the larger community to promote global citizenship and sustainability through outreach programs, partnerships and collaborations

Target	Target Results				Comments	
	Timeline	Prev year	Prev year	Status		
Develop new programs with methods and materials assisting faculty members to incorporate sustainability into their teaching as appropriate	2006	N/A	Done	Being Achieved	Developed 2 TAG courses that were offered twice in 2006/07; Worked with Faculty of Medicine to integrate sustainability into PBL; conducted survey of all faculties at UBC and will post on Sustainability Office website the 400+ courses that integrate sustainability; collected 81 case studies that relate to sustainability that can be used by several faculties. Plans to build on these initiatives in the coming years.	
Issue recommendations from stakeholder consultation for expanding teaching and research related to sustainability at UBC	2006	N/A	TLEF funding	Achieved	TLEF funding granted for 2006/07 to develop resources recommended from stakeholder consultation	
Increase the number of students signing the Sustainability Pledge to 20%	2010	3%	4%	Progress made	2005/06 1,266 signed pledge/43,579 students 2006/07 1,809 signed pledge/43,579 students	
Involve 10% of students in Community Service Learning Programs	2010	2%	2%	On track	1,000 in 2005/06 853 in 2006/07 Divided by 43,579 students as of November 2006 Does not include UBC O at this point	
Increase participation in student mobility programs by 15%	2006	N/A	+25%	Achieved	2005: 480 students placed 2006: 600 students placed 2006 added placement of 300 volunteers (not part of percentage increase)	
Increase percentage of Aboriginal students in curricular and co- curricular courses	2010				Since Fall 2006 the Director of the First Nations House of Learning also serves as Senior Advisor to President on Aboriginal Affairs. Developing campus-wide strategy on Aboriginal Affairs to be completed in 2007.	
Increase number of courses & enrollment in courses on Aboriginal issues and perspectives	2010				Aboriginal Analis to be completed in 2007. As of 2005: 77 courses with significant Aboriginal content (1.9%) 17 faculty members are Aboriginal (1.23%) 354 Aboriginal students enrolled at UBC (.9%) Total BC population is 4.4% Aboriginal	
Position 10% of undergraduates to become future leaders of UBC alumni, helping them to connect with each other and with UBC after graduation	2010	N/A	None yet	On track	Alumni Relations Manager for Students and Young Alumni now in place, partnering with units throughout the university. Comprehensive student-to-alumni strategy going to consultation. Robust metrics and tracking mechanisms in development.	

## **Economic Targets**

D) Ensure Ongoing Economic Viability Keep tuition fees consistent with educational costs Goal: Objectives: Increase research support in all areas Ensure ongoing financial viability Target Results Comments Timeline Prev year Prev year Status Ongoing 29.1% On track The university has very limited flexibility with respect to its Strive to keep tuition rates at 29.7% in 25 20% of adjunction pacts for 2005/06 2006/07

25-30% of education costs for domestic students		2005/06	2006/07		revenue sources for its core academic operations. There is no provincial funding for non-salary inflationary costs and tuition increases are capped at the rate of inflation, which does not cover these costs. Tuition: 161,790,647 (UBC V) + 14,285,544 (UBC O) Prov Grants: 397,294,536 (V) + 38,547,000 (UBC O) Total Funding: 559,085,183 (UBC V)+52,832,544 (UBCO)
Be one of the top recipients of government research funding for Canadian universities	Ongoing	\$485.6 million 2005/06	\$399.5 million	On track	Decrease from previous year reflects a reduction in the number of CFI (Canadian Fund for Innovation)and BCKDF (BC Knowledge Development Fund) projects. CFI funding is done on two year cycle, and this is the low funding year UBC has been number one for CFI funding (Canada Foundation for Innovation) UBC has been second nationally for Fellowships of the Royal Society of Canada, Steacie Fellows and Guggenheim Award recipients UBC has been third for CIHR grants
Develop strategies to increase government and granting agency's funding for research in sustainability	Ongoing				A task force is being set up in 2007 to address this target. Eleven research clusters have been identified, and many relate directly to issues addressing sustainability such as: Sustainability/Environment; Society in Global Context; Culture and its Representation; Population Health, Services and Human Development Cluster; Human Health and Genomics. UBC Okanagan has 8 research themes, one of which is Sustainability

Target		Re	esults		Comments
	Timeline	Prev year	Current	Status	
Continue to use the Planning Framework which ensures break- even operations	Ongoing			On track	Provost working on plan to integrate mid-level academic plans with the budget. A 1.7% across the board cut was necessary to balance the operating budget at UBC Vancouver for 2006/07.
Implement recommendations of Provincial Review Funding and work with government to secure sustainable funding levels	Ongoing			On track	The university is now given an outline of the provincial funding over three years, which facilitates planning and budgeting.
Over-expenditures are not permitted unless prior approval is obtained for research and specific purpose trust projects/grants (as per university policy)	Ongoing			On track	Adopted Policy 90 in June 2005 to enable more effective management of expenditures

# Goal:E) Maintain and Enhance the Asset Base17Objectives:Make the best use of available assets<br/>Increase the Endowment Fund to \$1 billion by 2010<br/>Develop reserve levels to protect against economic risks

Target		Re	esults		Comments
	Timeline	Prev year	Current	Status	
Develop a prioritization process to ensure that debt is utilized in areas of strategic capital growth	2007	N/a	Put in place Jan 2007	Done	
Utilize debt capacity to increase the asset base to fulfill the mission of the university	Ongoing			On track	
Any long term University borrowing from an external third party to replenish working capital can neither result in an increase to the University's debt burden ratio such that the projected rate over time would exceed 5.5%, nor shall such a borrowing provoke a downgrade of any one of the University's credit ratings	Ongoing		Approx 2.99%		Provincial government capped our debt at lower than 5.5
Maintain an appropriate credit rating level from Moody's and Standard & Poors which ensures ongoing financial viability	Ongoing	Moody's: Aa1 S&P: AA 2005/06	Moody's: Aa1 S&P: AA+ 2006/07	On track	Standard & Poor's upgraded the university's long-term debt rating based on UBC's ability to generate consistent surpluses and the strong support from the provincial government.
Increase the Endowment Fund to \$1 billion	2010	\$846.3 million 2005/06	\$1.01 billion 2006/07	Achieved	Endowment Fund calculated by fair value of endowment investments plus book value of endowments held by the Vancouver Foundation 2005/06: \$828+\$18.3 2006/07: \$993.9+19

<sup>17</sup> During the 2006/07 year UBC changed its accounting policy on consolidation. In previous years, UBC consolidated its wholly owned subsidiaries and related not-for-profit organizations, and proportionately consolidated its share in joint ventures. Under the new accounting policy, UBC has included its controlled for-profit entities and its share of the joint ventures in these financial statements using the equity method of accounting. This has meant that some of the numbers for 2005/06 were restated from the March 31, 2006 reprot.

Target		R	esults		Comments
	Timeline	Prev year	Current	Status	
Increase our fundraising goals to reach \$150 million annually	2010	\$117.8 million 2005/06	\$111 million 2006/07	On track	Target \$120 million for 2007/08
The University should manage endowment funds to ensure that the annual income continues at an adequate level to support the quantity and quality of projects and programs they were initially established to provide. Only by preserving the constant value of capital is it possible to maintain the purchasing power of income over time	Ongoing	\$96.1 million 2005/06	\$52 million 2006/07	Being achieved	UBC Investment Management Trust Inc. (IMANT) was started in 2005.
The proceeds from any long term leasing for market residential or commercial use of real estate on the Point Grey campus shall be endowed and invested as a component of the endowment investment portfolio and spending administered under the terms of this policy, unless otherwise approved by the Board of Governors	2010	\$22.4 million 2005/06	\$58.3 million 2006/07	On track	
Determine appropriate reserve levels	2006	\$141.8 million 2005/06	\$100.5 million	On track	Rationale approved by Board annually.
Develop strategies to obtain the targeted levels of reserves for the University	2007		2006/07	Done	Rationale approved by Board annually. The decrease in reserves reflects that the university is using internally restricted reserves to finance capital projects. The reserves may be replenished with a bond offering in 2007.

# Goal:F) Maintain and Maximize the Utilization of the Physical InfrastructureObjectives:Control space and infrastructure costs, and reduce deferred maintenance

Target		Re	esults		Comments
	Timeline	Prev year	Current	Status	
Seek provincial government support for Phase 2 of "UBC Renew"	2010	N/A	Done	In process	UBC Renew Phase II business plan developed and will be presented to Ministry of Advanced Education
Maintain operating budgets for new and renovated buildings at APPA Level 2 standard	Ongoing			Partially achieved	Building system maintenance at APPA Level 2. Custodial and landscape maintenance reduced to APPA Level 3 due to University-wide budget reductions
Increase space utilization by at least 5% from 2000 levels	2010	2.5%	4.0%	On track	With intensive swing space use in 3 existing campus buildings, intensification data changes, means reporting is not final. In the process of intensifying one more campus building for 2007.
Complete core density study to confirm adequacy of space for research and academic growth over the next decade	2007	40% complete	Completed in March 2007	Achieved	Core density study confirms adequacy of building site area for research and academic growth. Currently reviewing assumptions re: site densification before publication.
Develop and implement a space allocation policy	2008	5% complete	15% complete	Behind schedule	This process is preliminary; campus constituent committee has met twice. Background framework document underway. Target is behind schedule because our direct project load has increased this year and time for committee work is minimal.

# **Environmental Targets**

Goal: G) Reduce Pollution Objectives: Reduce greenhouse gas emissions and improve air quality Reduce all forms of waste and improve waste disposal processes Improve stormwater quality								
Target		Res	sults		Comments			
	Timeline	Prev year	Current	Status				
Reduce CO <sub>2</sub> and equivalent emissions from institutional and ancillary buildings by 25% from 2000 levels (adjusted for growth)	2010	22% reduction	24% reduction	On track	1990: .070 tonnes CO <sub>2</sub> /m <sup>2</sup> 2000/01 baseline: 0.063 tonnes CO <sub>2</sub> /m <sup>2</sup> 2005/06: 0.049 tonnes CO <sub>2</sub> /m <sup>2</sup> 2006/07: 0.048 tonnes CO <sub>2</sub> /m <sup>2</sup>			
Reduce steam plant NO <sub>x</sub> emissions by 80% from 2000 levels	2007	N/a	86% reduction	Done	Target achieved with retrofit of boilers as part of Ecotrek: NO <sub>x</sub> reduced from ~190 ppm to 20–30 ppm (ppm=parts per million)			
Implement updated Strategic Transportation Plan	Ongoing	Done	Done	Done	STP updated in 2005; next update in 2010			
Maintain annual average automobile traffic at or below 1997 per capita levels	Ongoing	24% less	22% less	On track	Screenline counts done every fall, status reports available Jan/Feb. 1997 62,400 vehicles; 2005 47,700 vehicles; 2006 48,800			
Expand U-Pass to include community, faculty, and staff	2007	N/A		On hold	Translink is addressing capacity building issues.			
Convert at least 10% of UBC vehicle fleet to super ultra low emission (SULEV) standard	2010	3%	3%	On track	2006: UBC V: 9 of 326 vehicles UBC 0: 2 of 22 (15 vehicles + 7 golf carts, 2 electric) 2005 figure was 11 of 327 vehicles (all Vancouver) Increased to 20% biodiesel fuel in LBS diesel vehicles (up from 2% in 2005; 19% of LBS fleet is diesel; LBS is 50% of UBC Vancouver vehicle fleet) Two electric vehicles purchased as of May 2007. Plan on replacing a total of 10 John Deere gators with electric vehicles in 2007.			

Target		Re	sults		Comments	
	Timeline	Prev year	Current	Status		
Increase Food Services purchases from local producers	Ongoing			ln process	Worked with Land & Food Systems class (Agsci 450) to maximize opportunities to use local food items. Unable to report metrics until develop a definition for "local". Will continue to work on this with Land & Food Systems class.	
Divert 50% of campus waste from construction of new institutional buildings from the landfill	Ongoing				Part of Technical Guidelines. Numbers to start tracking will be sent to Sustainability Office starting in 2007.	
Divert 75% of campus waste from construction, demolition and land clearing for new residential buildings from the landfill	Ongoing				Mandatory requirement in REAP	
Divert 55% of annual operational waste from the landfill (by 2010)	2010	41% in 2005	46% in 2006	On track	2006 2,246.7 tonnes diverted from total of 4,847.1 2005: 2,239.8 diverted from total of 5,491.6 Numbers based on calendar year	
Expand organics collection to the on site composter to include all Food Services retail outlets	2007	Residences only	100%	Done	Collect from all Food Service outlets. Looking to increase the tonnage collected by 10-15% in 2007.	
Continue to effectively manage the disposal of hazardous waste and set targets to reduce hazardous waste	2006			On track	Developed action plan to reduce UBC's hazardous waste by 10%; presented to head of Research Services in February 2007. Plan to work with Associate Deans of Research in each faculty to identify how to decrease hazardous waste.	
Establish stormwater quality guidelines	2006	Formed committee	Timeline established	To be Achieved in 2008	Writing Integrated Stormwater Management Plan. Open House planned for November 2007 for stakeholder input. Plan scheduled for completion in 2008. Being guided by committee with representation from Utilities, Campus & Community Planning, GVRD, Faculty of Applied Science.	

Goal:       H) Conserve Resources         Objectives:       Reduce non renewable energy consumption         Reduce water consumption       Reduce paper use								
Target	Results				Comments			
	Timeline	Prev year	Current	Status				
Reduce non renewable energy consumption in institutional buildings by 30% (adjusted for growth) from 2000 levels	2010	17% reduction	23% reduction	On track	Adjusted 2000/01 baseline: 1,813,836 GJ 2005/06 less baseline adjustment: 1,510,126 GJ 2006/07 less baseline adjustment: 1,395,857 GJ			
Make new institutional buildings	Ongoing				Requirement of UBC Technical Design Guidelines			
25% more efficient (on average) than the Model National Energy Code (MNEC 1997)					Seven out of eight were 25% more efficient; Chem Bio was the only one that was not. Waiting for exact numbers from the 8 buildings to determine the actual average			
Design new residential buildings (4 stories or more) to meet or exceed Model National Energy Code (MNEC 1997)	Ongoing		100%	On track	Mandatory requirement of REAP since June 2006 Results available in March 2007			
Implement three demonstration projects	2007	1	2		PV panels for Kaiser Bldg			
to produce energy off the grid for the campus					Sustainability Street – pilot for planned solar powered water pump, geothermal applications			
					Consideration of district energy for Wesbrook Place, the excess ground source heat from commercial space would contribute to residential heating needs			
Reduce water consumption in institutional and ancillary buildings by 40% (adjusted for growth) from 2000 levels	2010	34% reduction	42% reduction	Achieved	Achieved as a result of Ecotrek 1998/99 (baseline) 5.9 million m³/year 2005/06 3.9 million m³/year 2006/07 3.4 million m³/year			
Reduce volume of paper purchased per capita by 20% from 2000	2010	31% reduction	41% reduction	Being achieved	1999 (baseline) 113.4 million sheets/ 35,502 students 2005/06 90.3 million sheets/ 40,970 students 2006/07 82.7 million sheets/ 44,161 students			

Goal:

I) Protect Biodiversity Ensure that hazardous materials are handled safely and used sparingly Ensure that University housing design respects the needs of a healthy and sustainable ecosystem Ensure that the University community understands the value and importance of a healthy ecosystem, and follows the principles and practices Objectives: articulated in the University's policies on sustainable development, environmental protection and management of hazardous materials

Target		Re	esults		Comments	
	Timeline	Prev year	Current	Status		
Eliminate the use of pesticides for "cosmetic" purposes (as defined by Metro Vancouver)	2008	45.18 L Roundup 1.8 kg Casoron in 2005	None used in 2006	Achieved	Now using more seasonal gardeners, a hot-water system and investigating organic solutions (such as vinegar concentrate). Small amounts may be used to protect the health of plants/trees, such as half litre of fungicide per year to protect the mature roses in the Rose Garden.	
hazardous materials	progress Scientific Supplies  • June 2006: VP Resear				• March 2006: HSE presented to Supply Management's end-user committee for Scientific Supplies	
purchased			• June 2006: VP Research and 30 stakeholders met to discuss how to reduce hazardous chemicals purchased and disposed of			
					<ul> <li>November 2006: Hazardous Waste Working Group met with a supplier of software to track (and potentially decrease) amount of hazardous waste purchased</li> </ul>	
					<ul> <li>Research Office's creation of the Chemical Inventory Database has decreased chemicals purchased by 1,497 kg in 2006 (http://www.herro.ubc.ca/devl/ce.aspx, link on Supply Management website directing purchasers to Database http://www.supplymanagement.ubc.ca/Chemical%20Purchasing.pdf)</li> </ul>	
					• February 2007: Supplier awarded Scientific Supplies contract has included sustainability, disposal and environmental initiatives; progress on these targets is reviewed quarterly by Supply Management	
Implement the Residential Environmental Assessment Program (REAP) for all new residential buildings	2006	N/A	Approved	Achieved	Board approval Spring 2006; implemented in 2006	

Target	Results				Comments		
	Timeline	Prev year	Current	Status			
Evaluate mechanisms to certify new institutional buildings under LEED <sup>™</sup> (Leadership in Energy and Environmental Design)	2010			On track	Life Sciences certified as LEED gold in 2006. AERL, Friedman, Chemistry submitting for LEED silver, and Buchanan submitting as LEED gold in 2008 (AERL in 2007). Hired new Green Building Advisor position to provide in-house resource on LEED certification for all institutional projects (renovation & new construction).		
Incorporate one innovative sustainability project or design in each of the neighbourhoods of University Town	Ongoing	3	Included in 5 of 7 plans	On track	<ul> <li>Hawthorn Place: Geo-exchange DHW heating for two projects; Deep well for storm water management by aquifer recharge</li> <li>North Campus: Cliff Erosion Mitigation Plan Phase 3; two dewatering wells installed for reduction of cliff face seepage</li> <li>East Campus: Geo-exchange DHW heating for one project</li> <li>Westbrook Place: Neighborhood Stormwater Strategy; "Green streets" which are pedestrian only; consideration of district energy, using excess ground source heat from commercial space to contribute to residential heating needs</li> <li>Chancellor Place: Shared strata vehicle for project; Adaptable retrofit if Iona and Iopping of peak storm water discharge demo project</li> <li>University Boulevard: in development</li> <li>Gage South: on hold until bus loop is relocated</li> </ul>		
Devise and issue a series of publications on major UBC (including AMS and GSS) contributions to sustainability	2007			Achieved	<ul> <li>From March 2006-March 2007:</li> <li>The Sustainability Office Annual Report highlights major UBC achievements with respect to sustainability</li> <li><i>The Sustainability Strategy 2006-2010</i> and <i>The Sustainability Strategy AND YOU</i> published in June 2006</li> <li>3 articles in the Globe &amp; Mail and 6 articles/ads in the Vancouver Sun plus 50 regional and electronic publications</li> <li>1.4 million visitors to the redesigned Sustainability Office website (www.sustain.ubc.ca). The Sustainability Strategy is the most requested document on the site</li> <li>Developed <i>Inspiring Change</i> binder as part of Sustainability Coordinator Workshop that teaches how to use UBC's unique model for sustainable behavior to organizations from across North America (30 to date)</li> </ul>		
Implement a purchasing policy to guide Food Services in the procurement of sustainable fish and seafood	2006	None	Policies on 7 seafood categories	Achieved	Food Services made changes to seafood purchases (deleted some items and resourced others based on sustainability considerations) in 2006. Recommendations on other seafood categories will be considered when presented. Will revise RFP for seafood to reflect these changes in policy by 2009. Egg purchasing policies are also being reviewed. All whole egg purchases will be "free range" eggs starting in 2007, which is about 34% of total egg purchases. Exploring how this may increase to 50% of total egg purchases in the coming years.		

THE UBC SUSTAINABILITY REPORT 2006-07 63

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n	"The University of British world's best universities, exceptional global citizen sustainable society, and o the people of British Colu Trek 2010: A global Journe	will prepare students to ns, promote the values of conduct outstanding re- mbia, Canada, and the v	o become of a civil and search to serv	/e

**TREK 2010** states that graduates of UBC will value diversity, work with and for their communities, and be agents for positive change. They will acknowledge their obligations as global citizens and strive to secure a sustainable and equitable future for all (TREK 2010, Mission Statement, 2005). The UBC academic enterprise is on track with this mission, and many faculties and units have integrated sustainability values and outcomes into faculty mission statements, programs, courses, and research. The following exemplify sustainability learning and research destinations at UBC.

#### **Faculty of Applied Science**

The Faculty of Applied Science offers graduate and undergraduate degrees in engineering, architecture, landscape design, and nursing. Within these degree programs, students can select from a number of sustainability-related courses as well as associate with leading research.

The UBC Landscape Architecture program uses the local and regional landscape as a laboratory for inquiries about ecosystem health, sustainability, and exemplary design. Professor Patrick Condon, in his capacity as the James Taylor Chair, is the driving force behind many regional sustainable neighbourhoods and communities, including the Headwaters Sustainable Development Demonstration Project, a sustainable community for 15,000 persons slated for construction on a 500-acre site in Surrey, BC. Professor Ray Cole has been teaching environmental issues in building design at UBC's School of Architecture for the past 20 years. He heads the Environmental Research Group, the focus of environmentally related research within the School.

The Centre for Environmental Research in Minerals, Metals, and Materials (CERM3), in the Department of Mining Engineering and led by Professor John Meech, is a \$3.3 million project with over 35 faculty and research support staff working to address environmental problems caused by mining activity. Professor Greg Dipple is looking into the potential of some mine tailings to sequester CO<sub>2</sub>, ultimately to work to mitigate global warming.

The Clean Energy Research Centre (CERC), under the direction of Professor Robert Evans, provides state-of-the-art research facilities (many that are unique in Canada) for the exploration of clean energy technology. More than 20 professors and nearly 100 graduate students are working on technologies that promise greatly reduced greenhouse gas emissions, such as cleanburning engines, fuel cell systems, biofuels, and new hydrogen production methods.

The Bachelor of Environmental Design [ENDS] is a four-year, nonprofessional degree program that provides the opportunity for students to explore and understand the built environment through the medium of environmental design.

The Faculty of Applied Science hosts a number of co-curricular groups dedicated to sustainability, including Engineers Without Borders, the Sustainability Working Group, and the Chemical and Biological Engineering Sustainability Club.

#### **Faculty of Arts**

The largest faculty at UBC, the Faculty of Arts, is made up of 18 diverse departments, many of which have produced leading work and innovative programs addressing sustainability.

The Museum of Anthropology at UBC is world-renowned for its collections, research, teaching, public programs, and community connections. Canada's largest teaching museum, it houses 535,000 ethnographic and archeological objects, representing cultures of indigenous peoples around the world.

The UBC Political Science Department is home to Professor Michael Byers who teaches international law, politics, and human rights; Professor Kathryn Harrison who works on environmental policy-making; and Professor Allan Sens, Chair of the International Relations Program—an interdisciplinary undergraduate degree program—and co-coordinator of the Terry Project and the related Global Citizenship Seminar Series.

The Geography Department is a focal point for teaching and research related to sustainability. Professor Karen Bakker focuses on water governance, the political economy of environmental change, and environmental philosophy and politics. And Professor John Robinson, an internationally recognized expert on sustainability, is now developing the innovative Centre for Interactive Research in Sustainability (CIRS).

#### **Faculty of Dentistry**

As the only dental school in British Columbia, UBC recognizes its role as the central link between the community and the dental industry in improving the oral health of the population. UBC's Faculty of Dentistry has established a strong track record for developing and implementing new community programs to serve individuals with limited access to dental care, as well as providing valuable experience for students. These include the Special Children's Dental Program, offering free basic dental and preventive services to low-income school-aged children from the Lower Mainland who are not eligible for existing government-funded programs; the Portland Community Clinic, providing comprehensive oral health care to individuals in the Downtown Eastside; and the Skidegate Dental Clinic, providing comprehensive dental care as part of the Haida Dental Project.

#### **Faculty of Education**

The Faculty of Education provides teacher candidates with learning and community service opportunities through unique environmental and social initiatives. The Native Indian Teacher Education Program (NITEP) builds upon Aboriginal identity and cultural heritage while preparing persons of Aboriginal ancestry to be effective educators for public, band, and independent schools in BC. To support the increasing attention to social responsibility performance standards in BC schools, including environmental sustainability, a new two-year elementary teacher-education cohort was implemented in September 2006. Accordingly, all members of the cohort team—UBC instructors, supervising school teachers, and teacher candidates—work to develop learning communities that foster respect for self, others, and the environment. Developed by the Vancouver School Board and the Faculty of Education's Centre for Youth Social Development, the Strathcona Social Interaction Program (SSIP) provides treatment for elementary school children whose social, emotional, and behavioural problems require resources that are not available in the school.

#### **Faculty of Forestry**

A 2006 review ranked UBC's Faculty of Forestry amongst the premier forestry schools in the world and noted its unique community of forestry scholars. The Faculty offers to students and organizations around the world, expertise, research, and courses related to the sustainable management of forests and other natural resources. Students may choose to take a Global Perspectives Major, a program that focuses on the conservation and management of renewable and non-renewable resources, policy formation, and planning within a global context. These students either study abroad for a period or participate in an intensive international field school or related experience. Offcampus facilities include three research forests: the Malcolm Knapp Research Forest in Maple Ridge, the Alex Fraser Research Forest near Williams Lake, and the Aleza Lake Research Forest near Prince George (co-managed with UNBC).

#### **College of Health Disciplines**

The College, which leads the University's 15 health and human service programs, focuses on complex social sustainability issues such as patient safety, HIV/AIDS, family violence, and international and Aboriginal health. It is home to the UBC Centre for International Health that, in collaboration with the Liu Institute for Global Issues, brings together faculty and students committed to better health and greater equality worldwide. Additionally, the Institute for Aboriginal Health, in partnership with the UBC First Nations House of Learning, works with Aboriginal peoples province-wide to improve the health of Aboriginal people provincially, nationally, and internationally.

#### **College for Interdisciplinary Studies (CFIS)**

The College for Interdisciplinary Studies (CFIS) supports and cultivates world-leading interdisciplinary research and teaching at UBC that aims to find solutions to complex, real-world problems. CFIS provides the infrastructure and support for hundreds of world-class researchers in 35 schools, institutes, and centres, 12 graduate programs, and two residential colleges to collaborate with researchers in other disciplines, in industry and government, and in local and international communities to find solutions to problems that cannot be as readily solved within the confines of a single discipline. The interdisciplinary research and teaching that CFIS research units engage in can be roughly divided into seven broad themes: sustainability, health, global issues and cross-cultural policy analysis, applied ethics, a deeper discourse on feminism, a common language for scientists, and the human-computer relationship.

Selected CFIS learning and research destinations include:

- The School of Community and Regional Planning (SCARP) was set up to advance the transition to sustainability through excellence in integrated policy and planning research, professional education, and community service. The first dedicated planning school in Canada, it pioneered the integrated approach to planning for development. It was also the birthplace of ecological footprinting and the Centre for Human Settlements.
- The Centre for Human Settlements, a legacy of the 1976 United Nations Conference on Human Settlements, Habitat I, held in Vancouver, was the first centre of its kind established in Canada.
- The Fisheries Centre and the Institute of Resources, Environment, and Sustainability (IRES) are both providing hard evidence of unsustainable global resource depletion
- The Liu Institute for Global Issues examines diverse international issues such as global warming and Canadian sovereignty, and the reconciliation and healing of war children.

#### **Faculty of Land & Food Systems**

With one of the highest undergraduate enrolments for similar Canadian faculties, UBC's Faculty of Land and Food Systems is finding new ways to transfer knowledge and make connections between the role of universities in meeting urgent local and global challenges surrounding food safety, resource use, and our shared environmental resources. Using an integrated approach that unites scientific knowledge and interdisciplinary studies, our graduates use an international perspective to address pressing societal issues. Through systems-based scientific inquiry, the Faculty provides the student-centred education, research, and knowledge necessary to promote human health, a sustainable food supply, and the responsible use of finite land and water resources.

Professors Brent Skura, Alejandro Rojas, and Art Bomke are leading a study to find out how secure Vancouver's food system is, that is, whether food is affordable, available, accessible, appropriate (culturally, morally, and nutritionally), safe, and environmentally sustainable.

#### Faculty of Law

UBC's Faculty of Law is internationally renowned for its scholarship and teaching in areas relevant to sustainability. It is a leader in First Nations legal education in North America, granting degrees to over 180 Aboriginal students since 1975. The Centre for Feminist Legal Studies, established in 1997, has enhanced the visibility of feminist legal studies at UBC and strengthened cooperation in research and teaching between scholars working within UBC and externally. It is also home to Professor Joel Bakan whose work examines the social, economic, and political dimensions of law. His book *The Corporation,* published in 2004, received international attention and was made into an award-winning documentary.

#### **Faculty of Medicine**

With the only Faculty of Medicine in the province, UBC is fast becoming home to the largest and most complex medical school in North America. It provides innovative educational and research programs in the areas of health and life sciences through an integrated and province-wide model. In training 2,590 students per year (doubled incoming enrolment in 2005 to meet BC's need for more doctors), the Faculty works with many collaborating institutions including BC's six health authorities, the University of Victoria, and the University of Northern British Columbia.

The Faculty of Medicine has been focusing on finding a balance between science and technology and "the human touch." Efforts such as Dr. Andrew Seal's encouragement of medical students' involvement in the arts, UBC's newly formed Institute of Mental Health that co-sponsored events with the Dalai Lama on Peace and Education, and faculty members Dr. Robert Woollard and Dr. Aleck Ostry, who wrote *Fatal Consumption: Rethinking Sustainable Development*, are a few illustrations of how this Faculty engaged in sustainability teaching, research, and service.

#### Sustainability at UBC Okanagan (UBCO)

The newly created Okanagan Sustainability Institute will address sustainability issues in the Okanagan region and in similar regions globally. It will serve as a central store of ecological, economic, and social data, enabling integrated scenario development and modeling to address issues of urban sprawl and affordable housing, traffic congestion, loss of greenspace and habitat of endangered species, air and water quality, increasing demands on limited water supplies, and natural hazards such as forest fires, droughts, soil erosion, and landslides. In 2005, UBCO partnered with the Indigenous people of the Southern Interior of BC to develop programs and courses on Okanagan Indigenous culture, history, philosophy, and knowledge.

#### **Faculty of Science**

UBC's Faculty of Science is known for its outstanding research in the life sciences, physical sciences, and mathematical and computer sciences. Faculty and students unravel the natural principles behind nature's wonders, with benefits as diverse as fighting diseases, designing new materials, or building a sustainable society in a changing world.

UBC is committed to provide an unprecedented quality of education for science students. In 2007, Dr. Carl Wieman, a Nobel laureate with a passion for science education, came to UBC to lead the Carl Wieman Science Education Initiative, an innovative \$12 million program to reshape science education at UBC. Wieman advocates an evidence-based approach to science education. There are many notable areas of study related to sustainability. The Department of Earth and Ocean Sciences is the largest and most productive earth sciences department in the country. The Biodiversity Research Centre is dedicated to the study of all aspects of biodiversity and ecosystem sustainability. The Centre for Blood Research takes a unique multi-disciplinary approach to blood research in order to improve transfusion science and blood products in Canada. Additionally, the Bamfield Marine Sciences Centre, the only facility of its kind on the outer coast between Oregon and Alaska, undertakes research and teaching in all aspects of marine biological sciences.

#### **Sauder School of Business**

UBC's Sauder School of Business, recognized internationally as a leader in business research, is integrating sustainability into its teaching and research, recognizing that organizations of the 21<sup>st</sup> century will have to integrate it with every area of business practice. In addition to producing extensive research publications in this field, Sauder has developed new curricula across a number of programs. The Sauder MBA specialization in Sustainability and Business was launched in January 2007, offering a business education in the realms of environmental economics, sustainable development, and corporate social responsibility. Sauder faculty are supporting an innovative international initiative with Greenapple to rank the sustainability of Canada's major urban centres. Sauder is home to the W. Maurice Young Chair in Business Ethics, held by Dr. James Tansey who has also designed a carbon offset program.

