The University of Winnipeg Campus Sustainability Performance Report

1 April 2009 – 31 March 2010 (Fiscal Year 2009)

The University of Winnipeg
515 Portage Avenue
Winnipeg, Manitoba, R3B 2E9

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INTRODUCTORY

The data reported below reflect the as yet incomplete development of the University's sustainability reporting system. The performance report below is organized by policy area and subject to the scope of the Campus Sustainability Policy.

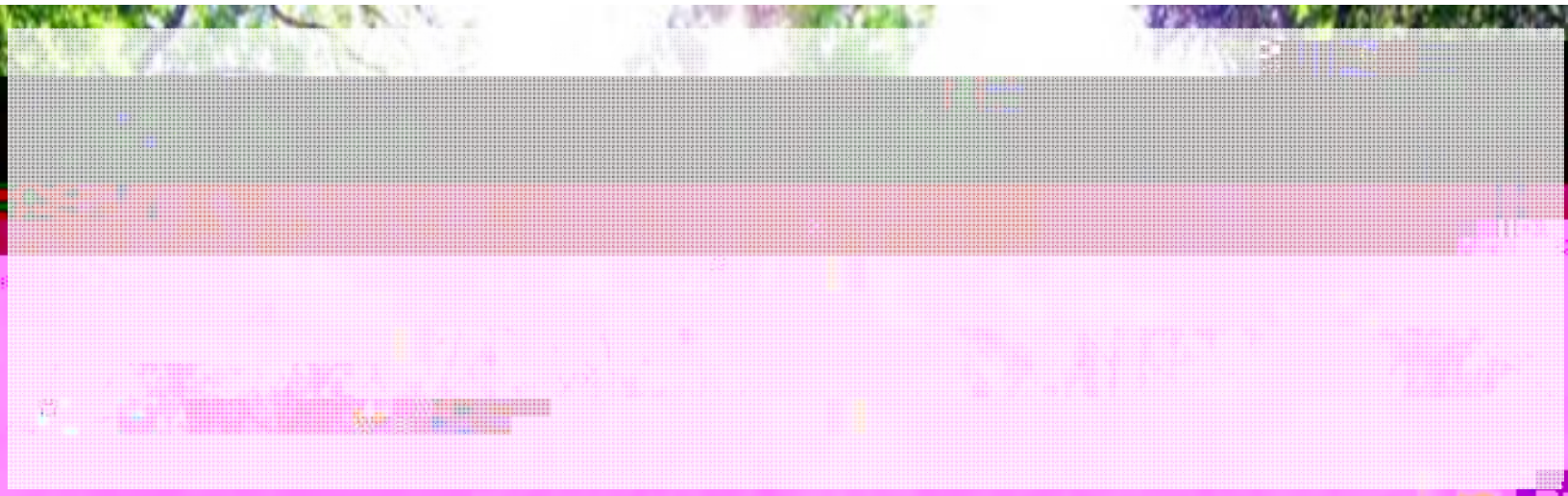
Scope

The scope of the Sustainability Management System, and hence the scope of this report, includes:

1. All physical facilities and buildings owned and managed by The University of Winnipeg including all future acquisitions of real properties which come to be owned and managed by the University.
2. All physical facilities and buildings, or spaces within facilities or buildings, leased or rented by The University of Winnipeg, and over which the University can reasonably influence the sustainability performance of the facility.
3. All routine activities, programs and operations of The University of Winnipeg, whether on or off campus, and including staff, faculty and student travel, both directly on behalf of the University in conducting its operations and programs, or commuting of staff, faculty and students to and from their places of residence for purposes of work, teaching, research, study, recreation or any other University activity.
4. All activities, programs or special events which may from time to time be hosted by The University of Winnipeg, or for which the University may provide physical facilities, active partnerships, or other support when such programs or events are offered by institutions, groups, corporations or organizations that are not formally recognized as part of the University community.
5. All "arms length" agencies, corporations, institutes, research centers or other entities, to which University policies may generally apply.

Reporting Period

2009 HIGHLIGHTS



GOVERNANCE

At a Glance

The Board of Regents' Sustainability policy, along with its aspect-specific administrative policies (Air Quality, Energy Use, Land Use and Property Management, Materials Use, Procurement, Risk Management and Emergency Response, Transportation, Water Use) form the core of the University's Sustainability Management System (SMS). These policies set down specific goals, for which performance indicators and targets have been developed. These indicators are included in relevant sections throughout this report.

The goals set down in the sustainability policy require that each department in the University take active responsibility for improving the

GOVERNANCE

GOVERNANCE

Members of Campus Sustainability Council

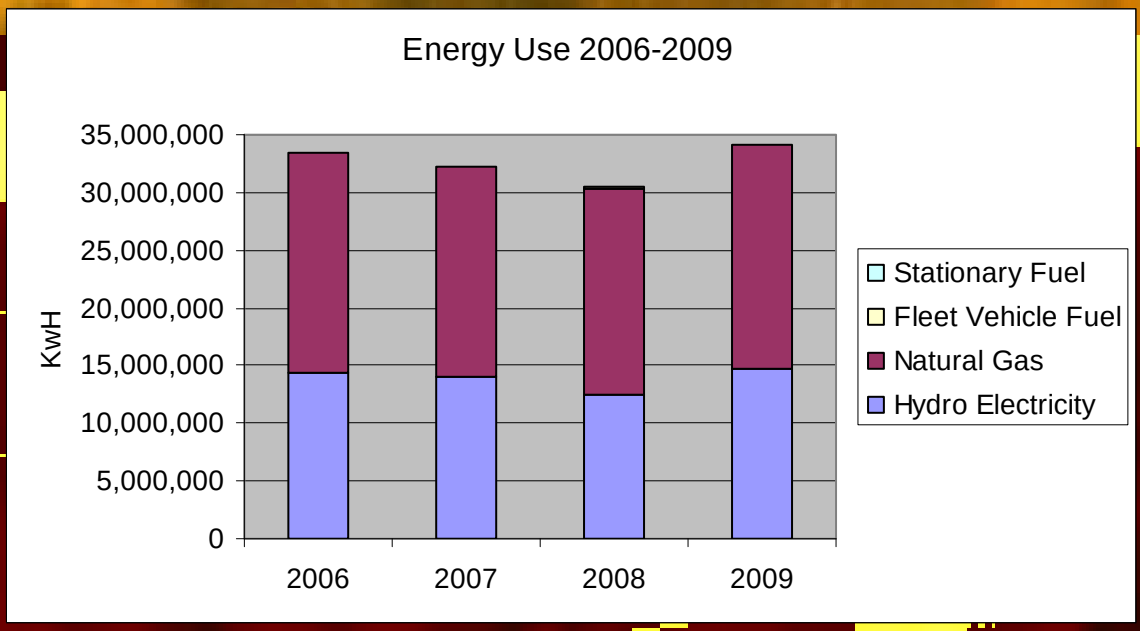
Staff	
Baccus, Jodene	Acting Director of Community Learning
Burch, Mark/ Alana Lajoie-O'Malley	CSO
Cann, Len	Assistant Director, Physical Plant
Coppinger, Steve	Retired
Dudley, Michael	Research Assoc., IUS
Emslie, Michael	Financial Services
Repski, Laurel	VP HR, Audit & Sustainability
Thomas,	CSO
Warkentin, Lydia	UWCRC
Faculty	
Buhay, Bill	Geography, CFIR
Diduck, Alan	Environmental Studies
Kumaragamage, Darshani	Environmental Studies
Gibbons, Ken	Politics
Students	
Villalta, Jazmin	UWSA
Cox, Alex	EcoPIA
Beech, Patrick	GESA

Members of Materials Conservation Working Group

Buhay, Bill	Geography
Burch, Mark	CSO
Cann, Len	Physical Plant
Klym, Dara	Safety Officer
Kramer, Ben	Diversity Foods
Molnar, Matthew	Purchasing
Thomas, Kisti	CSO
Warkentin, Lydia	Mgr. of Campus Living (Food Services)
Woods, Sherry	General Counsels Office
Procopchuk, Ernie	Chemistry
Danchura, Werner	Chemistry
Vanderwel, Desiree	Chemistry
Russell, Matt	Student (EcoPIA)
Vilalta, Jazmin	Student (UWSA)
Lajoie-O'Malley, Alana	CSO

ENERGY

UW's 2009 energy performance speaks to our greatest challenge in meeting energy and GHG emission reduction goals: an increasing footprint . While the amount of energy used per square foot decreased by 11.5% , total energy consumption increased by 12.0% . These intensity reductions can be attributed to annual variations in temperature , as well as to the dedicated efforts of members of the UW community in pursuing energy demand measures and commissioning two LEED Silver buildings. 2010 promises to be a watershed year , with two major initiatives planned that have the potential to significantly reduce UW's energy impact.



Energy Use 2006-2009 (KwH)

	Hydro	Gas	Vehicle Fuel	Stationary Fuel	Total Energy	% Change
2006	14,347,029	19,102,349	41,563			

Key 2009 Initiatives and Achievements

- Contract finalized to install hybrid heating system.
- RFP process completed to begin campus-wide sustainability audit.
- Ongoing window replacement project.

Key Challenges

- Increasing footprint of University is working against energy reduction goals.

2010 Priority Areas

- Installation of hybrid heating system & monitoring of resulting GHG and cost savings.
- Carrying out of campus-wide sustainability audit and development of implementation plan based on audit recommendations.
- Monitor energy performance of new LEED Silver buildings to verify energy model projections.

2009 Achievements & Initiatives

- Hybrid heating system: The University selected a contractor to install its hybrid heating system. This system will include the installation of two electric boilers, which will be used at off-peak times to reduce demand for natural gas in the University's core buildings. This project promises to significantly reduce the University's green house gas emissions and to manage energy costs. Key in FY 2010 will be monitoring the effectiveness of this new system.

- Facilities audit: In 2009, the University underwent a Request For Information (RFI) process and two Request For Propos46.1j-220.110 TD.0005 Tc.0023 1w( )TRFIP pocess a

ENERGY

Indicator	Target	FY2006	FY2007	FY2008	FY2009
Total energy use (KwHe)	Annual reductions to theoretical minimum.	33,490,941	32,253,322	30,507,144	34,158,051
Total energy cost		$1,447,027.83	$1,428,889.16	$1,388,785.52	$1,469,416.42
Total energy intensity of operations: KwH/m^2 of facilities		365	352	328	338
Total energy intensity of operations: KwH/m^2 of facilities/C Degree Day		0.067	0.060	0.055	0.068
Total energy intensity of operations: KwH/FCE/C Degree Day		0.204	0.179	0.169	0.198
Total annual electrical consumption in KwH.		14,347,029	14,118,810	12,501,378	14,702,975
Total annual electrical cost		$760,564.50	$770,608.66	$718,719.33	$839,021.19
Energy intensity of operations: KwH/m^2 of facilities under management	Derived	156	154	134	145
Energy intensity of electricity: KwH / m^2 of facilities under management / C Degree Day.	Derived	0.029	0.026	0.022	0.029
Energy intensity of electricity: KwH / FCE / C Degree Day	Derived	0.087	0.078	0.069	0.085
Total annual natural gas (KwH equivalent).	Annual reduction to theoretical minimum.	19,102,349	18,107,465	17,872,431	19,377,292
Total annual natural gas cost		$686,463.33	$651,473.71	$662,233.43	$622,004.03
Energy intensity of Natural Gas: KwH NG/m^2 of facilities under management	Derived	208	197	192	192
Energy intensity of operations: KwH NG / m^2 of facilities under management / C Degree Day	Derived	0.038	0.033	0.032	0.038
Energy intensity of operations:KwH NG / FCE / C Degree Day	Derived	0.116	0.100	0.099	0.112
Total annual fleet vehicle fuel consumption (KwH equivalent)	Replacement of fleet vehicles with zero emission models operated on renewable energy sources.	41,563	27,047	75,015	76,159

ENERGY

Indicator	Target	FY2006	FY2007	FY2008	FY2009
Total annual fleet vehicle fuel consumption cost		no data	$6,806.79	$7,832.76	$8,391.20
Total estimated annual energy consumption incurred for intra-city transportation of students, staff, administration and faculty in KwHe/annum	Annual reductions to theoretical minimum	no data	no data	no data	no data
Total annual energy consumption incurred for extra-regional transportation of students, staff, faculty and administration which was reimbursed travel by the university, in KwHe/annum	Annual reductions to theoretical minimum	no data	no data	no data	no data
Percent of annual energy obtained from renewable energy sources (hydro-electric, wind, solar thermal, solar PV, biomass, tidal, geothermal)	Increasing annually to 100%	42.84%	43.77%	40.98%	43.04%
Total annual stationary fuel consumption (KwH equivalent)	Annual reductions to theoretical minimum	no data	no data	58320	1625
Total annual stationary fuel consumption cost		no data	no data	no data	no data

WATER

Launching a major retrofit project for University washrooms and including a study of rain water use possibilities into the scope of its comprehensive facilities audit, Facilities Management and Physical Plant staff took significan

WATER

At a glance

Water is used by the University in essentially the same applications as those found in a household (washing, cooking, drinking, bathing and toilet flushing) with the exception of water used for laboratory purposes, in cooling towers, and in boilers. Water consumption can be influenced by differences in average annual humidity which can affect evaporator performance in chiller towers and by differences in annual temperatures. Summer 2009 having been a particularly cold and wet summer, these climatic factors are likely what account for a 6.7% decrease in water use. At the same time, water costs continue to increase (15.4% over FY2008).

The University continues to strive for:

- zero waste in the University's use of water
- zero emissions of toxic or hazardous substances to waste water systems
- reduced demand for potable water, discharge of pollutants to water, and production of waste water.

In FY2009, Facilities Management and Physical Plant staff undertook a major retrofit project in washrooms across campus, installing low-flow toilets and urinals as well as electronic sinks. Initial water savings results for retrofitted washrooms indicate that once complete, the project will save the University in excess of 4,536,634.13 litres of potable water, or approximately 6% of its annual water consumption.

The University can also anticipate water-saving opportunities to emerge through its comprehensive facilities audit, particularly through the capture of rain water for landscaping purposes.

WATER

2009 Achievements and Initiatives

Washroom retrofits

The University initiated its retrofit project by looking at the men's and women's washrooms on the main floor of Centennial Hall. The men's washroom consisted of three toilets, four urinals and three sinks. Throughout The University this is a standard size washroom. Before replacing the fixtures, plumbing staff was asked to put meters on the supply line to the men's washroom to measure the consumption from the existing fixtures. The meters were applied and measured the water consumption over a one month period.

After one month we removed the old fixtures and replaced them with the new low flow toilets, urinals and electronic sinks. Once again the meters were applied to measure the water consumption in the men's washroom. The results were as follows:

- The men's washroom saved 18,000 litres of water.
- Over a year that would equate to 216,000 litres per washroom.
- Using these numbers and applying them to all of the student washrooms on Campus, not including janitor closets or private washrooms, the possibility exists that The University can save annually in excess of 4,536,634 litres of potable water.
- This savings represents an excess of 18% of the University's FY2009 potable water use.

An additional and unexpected benefit was the improved level of cleanliness with the automatic flushers on the toilets and urinals. Flooding is not possible as there are leveling controls in both fixtures that automatically shut the water off. Finally, they are truly accessible for those in need.

Comprehensive Facilities Audit

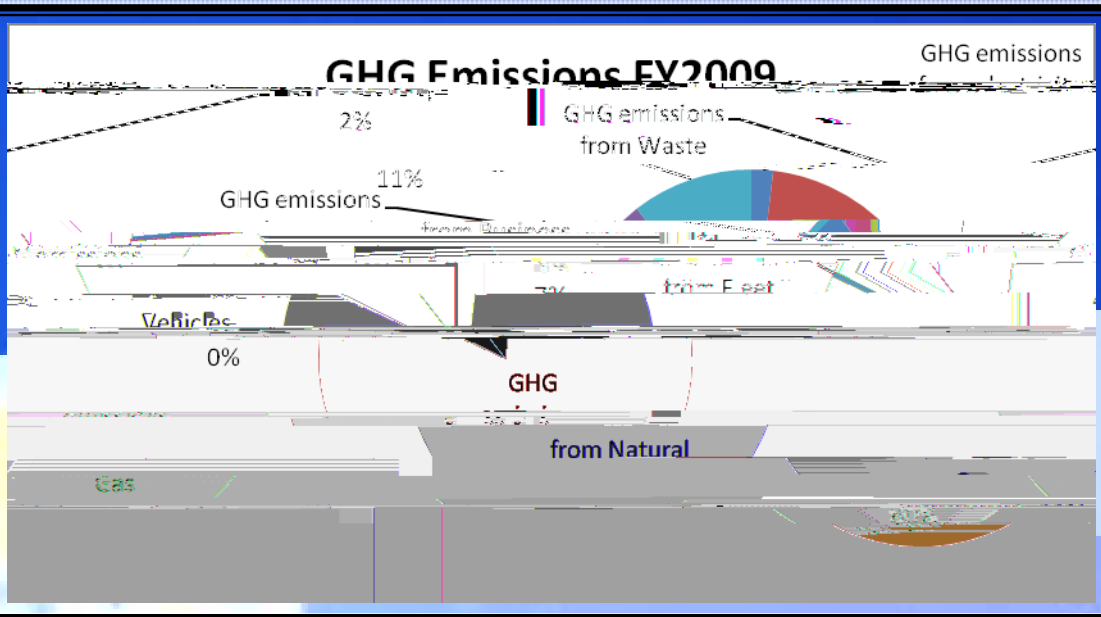
A goal for the audit (described in the Energy section of this report) is to identify opportunities for reducing potable water demand by identifying opportunities for storm water and grey water collection and use.

Water Conservation Specifications are being implemented as part of all new building construction projects.

GHG & Air Quality

"Water and air, the two essential fluids on which all life depends, have become global garbage cans." ~Jacques Cousteau~

In 2010 GHG calculations and the scope of the University's GHG reporting will be reviewed to better reflect provincial standards. In FY2009, members of the University community – especially Facility Management and Physical Plant staff – initiated two major projects aimed at achieving significant GHG reductions. The University can anticipate seeing the results of these efforts in FY2010 . Equally important, though, are the challenges the University faces in achieving absolute reductions in GHG emissions at a time when the campus footprint is increasing (8.8% in FY2009, with more additions planned for FY2010). This challenge is a likely cause of a 4.55% increase in emissions in FY2009.



GHG Emissions - Baseline & 2006-2009 (T of CO2e)	1990	2006	2007	2008	2009
emissions from Electricity	310.1	164.0	203.7	167.1	80.9
emissions from Natural Gas	2676.6	3410.0	3223.9	3187.8	3462.4
emissions from Fleet Vehicles	10.0	10.1	14.4	18.2	18.5
emissions from Business Travel	393.3	336.6	435.9	542.0	309.9
emissions from Waste	231.3	285.1	59.1	223.4	455.2
Total emissions	3621	4206	3937	4139	4327
Target		3404	3404	3404	3404
Reduction required to reach target (T)		802	533	735	923
Reduction required to reach target (%)		23.55%	15.66%	21.58%	27.11%

Key 2009 Initiatives and Achievements

- Contract finalized to install hybrid heating system.
- RFP process completed to begin campus-wide sustainability audit.
- Ongoing asbestos management plan execution.

Key Challenges

- Increasing footprint of University is working against GHG reduction goals.

2010 Priority Areas

- Review GHG calculations and benchmarks to comply with provincial reporting scope and standards.
- Installation of hybrid heating system & monitoring of resulting GHG and cost savings.
- Carrying out of campus-wide sustainability audit and development of implementation plan based on audit recommendations.

GHG & Air Quality

At a glance

University operations affect air quality in a number of ways, with the emission of green house gases (GHGs) produced whenever fossil fuels are burned being the most significant. The University is committed to reducing its overall GHG emissions 6% below 1990 levels by 2012, in conformance with the Kyoto Protocol on Green House Gas Emissions.

Having committed to the installation of a hybrid heating system and having made considerable progress in planning and contracting out a comprehensive sustainability audit of University facilities, the University took major steps in FY2009 towards achieving significant reductions in GHG emissions and meeting its 2012 target. Since our aim is absolute GHG emission reductions, our greatest challenge in meeting this target continues to be the University's expanding footprint.

Other ways in which University operations affect air quality include: (a) "fugitive" emissions of small amounts of chlorofluorocarbons (CFCs) from chillers and air conditioning equipment that escape during servicing or from leaking connections; (b) fume hood ventilation exhaust from laboratories; (c) "scents" used by students, faculty or staff; (d) contamination of indoor air space by asbestos and mold, which can negatively impact human health.

Air pollutants also originate off-campus which affect the quality of air internal to University buildings, a principal irritant being exhaust from the buses at stops near University windows and vents, and occasionally from delivery trucks idling in loading bays of the Shipping and Receiving Department.

In addition to meeting its GHG reduction targets, the University therefore also aims to achieve high levels of indoor and outdoor air quality; reduce sources of air pollution and actual discharges of air pollutants in and from all University programs and facilities; offer a smoke-free campus environment to its students, faculty and staff; strive to establish all its facilities as scent-free spaces; and encourage training and research programs which increase awareness and encourage adoption of activities and practices that prevent degradation of air quality.

Currently, adequate air quality is assumed to be provided if industry standard ventilation rates are maintained by Physical Plant. Air quality complaints are registered with either Physical Plant staff or the University Safety and Health Officer. Summary reports of the number, nature and action taken on air quality complaints are filed periodically to the University's Workplace Safety and Health Committee. Such complaints continue to be dealt with individually depending on circumstances. Pinchin Environmental, Ltd., in St. Boniface, Manitoba, provides air sampling and analysis services for the University.

GHG & Air Quality

2009 Achievements and Initiatives

Hybrid heating system: See Energy section.

Comprehensive Facilities Audit: A key goal for the audit is to identify opportunities for reducing GHG emissions caused by University facility operations through demand reduction and fuel switching.

Provincial Green Building Policy: The Province of Manitoba Green Building Policy mandates that new construction and major renovations to University facilities meet LEED-NC 1.0 or LEED-CI “Silver” standards which include use of low VOC (volatile organic compound) materials and finishes thus further improving Indoor Air Quality IAQ. The policy applies to the new science building, to the Buhler Centre, to McFeetors Hall, and to the new Daycare.

Ongoing Asbestos Management Plan: Continuing on with the asbestos management plan that was finalized in FY2008, in FY2009 an asbestos survey was undertaken for Centennial Hall. Six buildings have now been surveyed, with three left to survey (MacNamara Hall, the Duckworth Centre, and Sparling Hall). Replacement of asbestos containing doors is ongoing, as is the replacement of vinyl-asbestos flooring.

GHG & Air Quality

Indicator	Unit	Target	FY2006	FY2007	FY2008	FY2009
GHG emissions from Electricity	T of CO2e	Diminishing annually to zero.	163.99	203.67	167.09	80.87
GHG emissions from Natural Gas	T of CO2e	Diminishing annually to zero.	3409.96	3223.88	3187.78	3462.42
GHG emissions from Fleet Vehicles	T of CO2e	Diminishing annually to zero.	10.09	14.42	18.22	18.49
GHG emissions from Business Travel	T of CO2e	Diminishing annually to zero.	336.61	435.93	542.05	309.88
GHG emissions from Waste	T of CO2e	Diminishing annually to zero.	285.12	59.09	223.42	455.20
Total GHG emissions from all University operations in T CO_2e per annum for all gases and substances reportable under the CSA GHG reporting protocol.	T of CO2e	Diminishing annually to zero.	4206	3937	4139	4327
Total square meters of indoor space contaminated with asbestos which has potential to negatively impact human health.	m^2	Diminishing annually to zero.	0	0	0	See report
Total square meters of indoor space contaminated with mold which has potential to negatively impact human health.	m^2	Diminishing annually to zero.	0	0	0	0
Number of air pollution incident reports or complaints received per fiscal year and documented evidence of the action taken to address them.		Zero air pollution incident reports or complaints per FY and/or documentation of steps taken to address them.		Complaints – 15	Complaints – 9	Complaints - 5
			no data	Complaints requiring testing – 7	Complaints requiring testing – 7	Complaints requiring testing - 4
				Complaints still ongoing – 4	Complaints still ongoing - 3	Complaints still ongoing - 1

GHG & Air Quality

Indicator	Unit	Target	FY2006	FY2007	FY2008	FY2009
Total amount of pesticides (including all types of plant and animal poisons) in grams used indoors each year, divided by the total square meters of interior space; multiply by 1000.	g/m^2	0 $g/1000\ m^2$	No data	45.61	45.19	36.66
Total amount of pesticides in grams used indoors	g	0 g	No data	4185	4200	3709
Total annual quantities of substances discharged to the air which exceed the thresholds listed with the National Pollution Release Inventory (NPRI) as reportable substances.		Within NPRI tolerances.	No data	0	0	0
Total percentage of indoor space in square meters designated smoke-free.	%	100	100	100	100	100
Total percentage of indoor space in square meters designated scent-free.	%	100	0	0	0	0
Minutes or reports documenting decisions taken to rehabilitate economic, environmental or human health impacts arising from air pollution if such have occurred.	text	Minutes or reports of full rehabilitation if damaging impacts have been incurred.	No occurrences	No occurrences.	No occurrences.	No occurrences
Number and short description of research projects or innovations implemented with the intent of improving air quality in University facilities or programs offered on or off-campus.	number; text on file/in report	Non-zero positive number with short description of each.	No data	Included in CSO Annual Report	Included in CSO Annual Report	Included in CSO Annual Report

BUILDINGS AND LAND

At a glance

The renovation and maintenance of the University's existing facilities infrastructure is virtually synonymous with making progress on the "bricks-and-mortar" side of the sustainability equation. While this is only part

BUILDINGS AND LAND

2009 Achievements & Initiatives

Core Buildings & Grounds

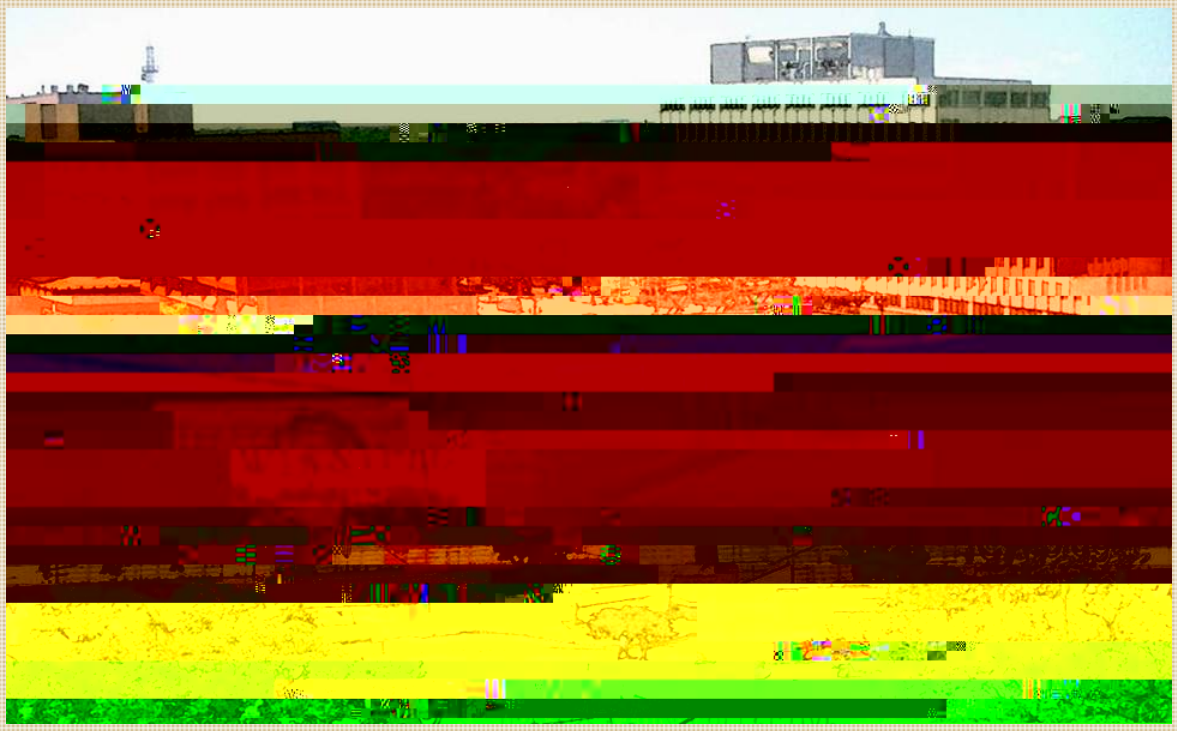
*See Energy, Water, and GHG & Air sections for resource-specific achievements.

- Hybrid heating system: See Energy section.
- Facilities Audit: See Energy section.
- Green Cleaning: The University continues to work with its cleaning service provider to ensure green cleaning practices are used across campus.
- Xeriscaping: University grounds are now 100% xeriscaped. This means that grounds are landscaped

BUILDINGS AND LAND

The Buhler Centre

The Buhler Centre, scheduled to be complete in the fall of 2010, is designed to meet LEED Silver certification for the Canada Green Building Council. The four-storey facility has been designed to this standard from the start, beginning with the deconstruction of the old United Army Surplus Store that once occupied the site: an incredible 90% of all materials from that store were diverted from local landfills. This diversion rate is upheld



throughout construction of the new building.

Of the wood used on the project 50% is certified by the Forest Stewardship Council, and a large portion of materials used on this project have a significant recycled content. Finishes and sealants use low to no volatile organic compounds including all paint finishes. A full post construction air exchange and system flush will ensure that new occupants are provided with a healthy work environment when they move in.

Throughout construction, the site has been protected to ensure construction sediment and debris does not end up in city sewers or tracked across city streets. The building has an integral building envelope that achieves a thermal rating of R-30 and its low emissions glazing controls heat gain. This combined with a complete no-CFC heating and cooling system means the building will perform to less than 44% of the Model National Energy Code.

Contributing to the low energy draw, the building is equipped with ultra low-flow faucets, low-flush toilets, and waterless urinals that account for a total water consumption reduction of 56% of a similar Code compliant building. Large skylights in the centre of the building flood classrooms and offices with natural daylight and a large roof terrace to the south is accessible to occupants 24 hours a day. On site, two electric cars will be able to recharge in dedicated stalls in the parking lot.

BUILDINGS AND LAND

PROCUREMENT

"Cut down the forest of desire, not the forest of trees."

~Dhammapada 283~

Green procurement principles prescribe reducing demand for purchases, substituting preferable products for products with negative environmental and health impacts, and using life-cycle accounting to make procurement decisions. In FY2009, purchasing agents strengthened existing sustainability requirements in Requests for Proposals (RFPs) and tenders to include a requirement that companies buy carbon offsets for any travel they undertake as part of University-related contracts. Sustainability language was also incorporated into a new board policy on procurement. A key priority for FY2010 will be working to incorporate sustainability principles into revised administrative policies and procedures. Data tracking continues to be a major challenge.

Key 2009 Initiatives and Achievements

- Sustainability language incorporated into new Board procurement policy.
- RFP's & tenders now require that companies purchase carbon offsets for travel undertaken to complete a contract.
- Ongoing efforts to consider full cost of procurement decisions.

2010 Priority Areas

- Incorporating sustainability principles in new procurement administrative policies and procedures, which will be under development through 2010.

Key Challenges

- Tracking of all sustainability-related procurement indicators remains difficult to achieve in the absence of supporting procedures and policies. Limited human resources restrict the University's ability to establish these.
- Procurement authority dispersed to University departments increases the challenge of training all those with procurement authority in green procurement practices.

PROCUREMENT

At a Glance

Procurement activities at the University hol

PROCUREMENT

2009 Achievements & Initiatives

- Sustainability language included in revised board policy for procurement.
- Strengthened sustainable procurement requirements for vendors to include a requirement that companies buy carbon offsets for any travel they undertake as part of their contract; adopted language encouraging recycled and refurbished products whenever applicable and giving preference to environmentally certified vendors (current standards used: EnergyStar, GreenGuard, ISO 14001, FSC).
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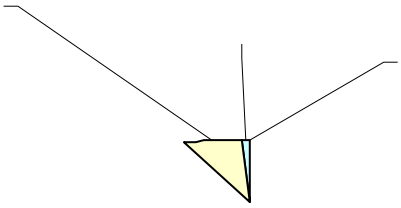
PROCUREMENT



WASTE

At a glance

Two key Materials Conservation goals are to

- continually reduce the total amount of solid waste produced by the University, which includes landfill-bound trash, hazardous waste, recyclable materials, and compost, and
- maximize the amount of solid waste being diverted from landfill through recycling and composting programs.

Producing 49.5% more solid waste this year than last and logging a significant reduction in our diversion from landfill (35.6% compared to 54.8% for FY 2008), the University cannot boast significant improvements in these key areas in FY 2009. Waste management costs also increased 28%

WASTE

2009 Activities & Achievements

Waste Management/Minimization

- Materials Conservation Centre Feasibility Study Completed: study to examine the possibility of establishing a physical facility designed and equipped in such a way as to enable on-site processing for all classes of non-hazardous "waste" materials leaving the University. It was determined that operating expenses for such a facility were prohibitive; however, the study raised several issues that will be followed up on in the coming year.

- Recycling of Fluorescent Light Bulbs: All spent mercury containing light bulbs are redirected from the waste stream to recycling containers; one which collects 4' fluorescent bulbs and the other all other types of bulbs, whether H.I.D., compact fluorescent, other types of fluorescent bulbs including CFL's and spiral bulbs, quartz halogen and incandescent bulbs.

- Recycling Services in Residence Halls: Implemented a recycling program in McFeetors Hall, UW's new student residence, and delivered a McFeetors Hall recycling program orientation to all McFeetors residence assistants.

- Library Journal Recycling Program : For the second year, the University Library, EcoPIA, and the CSO worked together to recycle old library journals.

- Diversity Foods: Diversity Foods is actively engaged in the takeoutwithout campaign, which aims to reduce restaurant waste by eliminating unnecessary packaging and emphasizing the use of re-useables. To this end:
    - All take-out containers and cutlery are made of compostable materials
    - The use of reusable plates when eating in the dining area is encouraged
    - Reusable take-out containers and cups are currently made available to food service customers
    - Compost is collected both in kitchens and in the dining area

- Paper Reduction: The Office of the Associate Vice-President (Research) and Dean of Graduate Studies moved all of its research and ethics forms to fillable pdfs and cut the number of copies requested from 12 to 2 . Committee members now view the minutes, agenda and applications online via a secure website. The Student Services Office is also undertaking a review of paper and electronic records with the view of establishing the most effective method of moving to electronic archives. The computer-based language level placement test developed by our English Language Program (ELP) not only serves the needs of The University of Winnipeg ELP students, but also eliminates one of the department's largest sources of photocopying).

- Bottled Water Ban: The impact of the Student Association's successful implementation of a ban on bottled water in 2009 remain inconclusive. Waste audit and recycling data suggest that use of PET bottles on campus decreased by 36.1% and significantly more made their way out of trash cans and into Recycling bins (81.7% compared to 62.9%). Sales data from Diversity Foods, however, do not support these numbers.

WASTE

Bookstore Initiatives

- The bookstore now has the capability to buy books back from students every day right out of their store. The bookstore purchases books from the students for up to half the retail price and then resells those books to future students at used book costs. The same text can be re-used for as long as the instructors wish to use the title. The bookstore goal is to have at least 25% of text inventory available as used. With the in-store buyback, the bookstore also purchases books that are not necessarily needed for classes. A wholesaler buys books through the bookstore as well. Any wholesale books bought get sent to a warehouse where universities and colleges can order from. The bookstore works closely with instructors so that students know that they have the option of selling their books back to their campus bookstore.

- Approximately 90% books are returnable to publishers. Full copies are returned, not portions. Textbook returns to publishers average about 30%. Inventory management is used to reduce return shipping requirements, saving both money and transportation impacts. Unsaleable books are currently stored or sold back to wholesalers when possible. The bookstore now has the ability to communicate with campuses across Canada and the U.S. and can often send books to others who may need them.

- Course packages are reused as long as professors continue to specify them. Old course packages are recycled or edited with any small changes the instructor may have added or taken out.

- Close coordination between the Bookstore and the Print Shop has made possible a 24 hour turn-around time on printing additional copies of course packages. This reduces the potential unsold inventory carried by the bookstore and also potential waste.

- Reusable cloth shopping bags were introduced.

- On-line ordering for students in place, while the bookstore is currently working on E-Doptions where faculty can submit their text orders via the bookstore website.

- The bookstore sells a wide variety of eco-friendly/sustainable products such as pens. These items are a very large seller among University of Winnipeg Students and Faculty and continues to grow every year.

WASTE

Publicity & Education

- Educational Action to Address Recycling and Composting Contamination : CSO staff partnered with EcoPIA to organize a student action on the first floor of Lockhardt Hall, where recycling contamination is particularly severe.

- Updated Signs and Posters: CSO staff updated all compost related posters and signage on campus when Diversity Foods replaced Chartwells as the University's main food service provider.

- Student orientations: CSO staff presented at "The Really Big Day" first year student orientation and student residence orientation on CSO initiatives and programs, particularly focusing on our compost & recycling programs.

WASTE

WASTE

Indicator	Target	FY2006	FY2007	FY2008	FY2009
Annual total weight (in kilograms) of solid and liquid hazardous wastes recycled (either on- or off-campus).	Increasing annually to theoretical maximum.	No data	0T On campus. Unknown off campus.	0T On campus. Unknown off campus.	0T On campus Unknown off campus
Percentage of total annual weight (in kilograms) of solid and liquid hazardous waste recycled.	derived	No data	No data	No data	
Waste to landfill disposal cost		$32,400.00	$33,323.93	$34,613.87	$49,273.49
Recycling collection fees		$5,000.00	$5,100.00	$5,000.00	$5,250.00
Confidential paper shredding service		$4,258.06	$7,176.72	$7,445.81	$9,280.60
Hazardous waste removal fees		$6,278.48	$15,000.00	$7,743.26	$4,775.19
Compost collection fees		$0.00	$0.00	$0.00	$1,889.84
Total waste management costs		$47,936.54	$60,600.65	$54,802.94	$70,469.12
Summary of educational, professional development, and general awareness activities designed to encourage research and increase participation in waste reduction activities, practices, and product choices.	Anecdotal reports.				

TRANSPORTATION

At a glance

Transportation continues to represent one of the most environmentally significant daily choices made by University members. It also represents one of the most challenging sustainability policy areas to track and is an issue upon which the University has limited direct control. Nevertheless, the University strives to promote adoption of more sustainable approaches to transportation among students, faculty and administration both in their commutes to and from the University and in their University-related travel.

The goals of the University of Winnipeg Sustainable Transportation Policy include encouraging the development and adoption by students, administration, staff and faculty,

TRANSPORTATION

2009 Achievements & Initiatives

- Inclusion of dedicated bike lane in the Green Corridor planned to connect the UW main campus with the new Richardson College for the Environment campus continues to inform designs for the area. Once completed, this feature will connect the UW central campus with the east-west cycling thoroughfare proposed by Bike to the Future for St. Matthews Avenue, thus connecting central Winnipeg with the Perimeter Highway and making the UW campus the eastern terminus of this route.

- Construction of Bike Station and Bike Lab: The UWSA and the CSO continue to work towards the construction of the University's first bike station and lab. A major donation for the project was secured by the University's Director of External Affairs and University Advancement, while the UWSA and the University have also committed funds to the project. The current aim is to have the facility open by the fall of 2010.

- Carbon Off-sets and travel distance re porting for all University business travel: An initiative was undertaken to implement a revised travel distance reporting procedure for faculty and staff reimbursed travel and to launch a consultation process with faculty leading to the implementation of a carbon off-set purchase regime for University business travel. The consulta-

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TRANSPORTATION

ACADEMICS

"It is the way we think and our capacity for wisdom that will ultimately produce the world we live in now and shape the world of the future."
~Konai H. Thaman ~

The University aims to encourage research and learning that support specific campus-based sustainability initiatives and that address local, regional, national and global sustainability concerns. In FY2009, several research projects with strong sustainability components were undertaken by University researchers. Efforts were also made to reduce the ecological impact of course delivery . Sustainability was given a prominent role in the University's new academic plan . Key in FY2010 will be facilitating campus-based research and experiential learning opportunities.

Key 2009 Initiatives and Achievements

- First Campus Sustainability Recognition Award conferred.
- Ongoing sustainability-related faculty research.
- Online course evaluations proposed to reduce paper consumption .

Key Challenges

- Establishing incentives for faculty and students to take up campus-based sustainability research remains a challenge.
- Increasing campus-sustainability related experiential learning opportunities for students remains a high priority but is difficult to realize given limited CSO staffing resources.

2010 Priority Areas

- Establish Sustainability Management System course that enables students produce the University's annual Sustainability report.
- Establish experiential learning course that supports campus-based sustainability learning.
- Identify & begin to address barriers to faculty & student campus-based research.

At a Glance

Central to the University's overall sustainability mission is encouraging teaching, learning, and research that support long term improvements in the University's sustainability performance and enable faculty and students to serve broader communities as they seek to improve theirs.

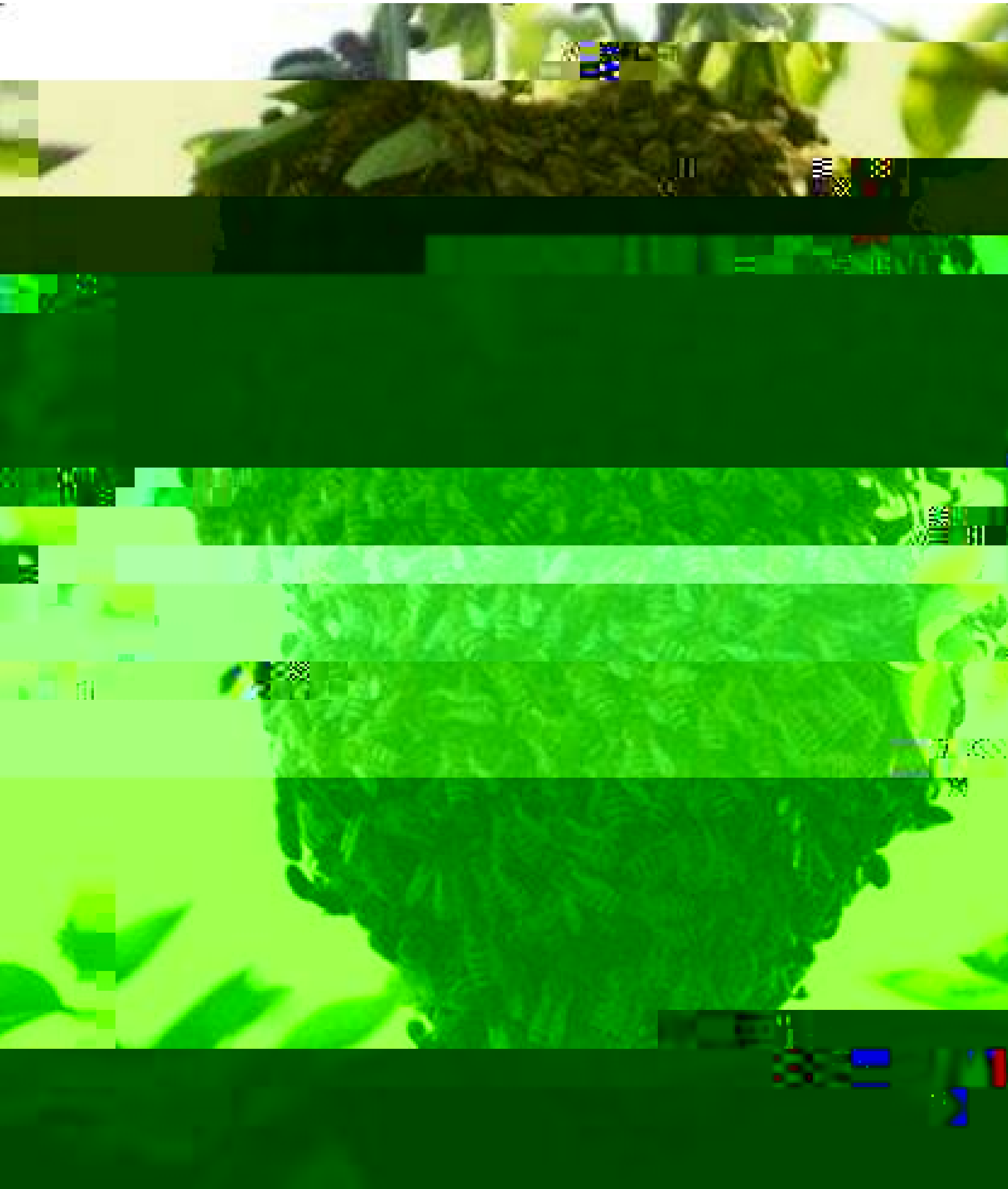
This includes encouraging research and learning to support specific campus-based sustainability initiatives. It also includes supporting course delivery and research activity that address local, regional, national and global sustainability concerns.

While there is no specific pol-

ACADEMICS

2009 Achievements and Initiatives

- Conferred the first Campus Sustainability Recognition Award to EcoPIA and the Library at fall convocation for their work in establishing a journal recycling program. Recipients for next year's recipients were also selected by the awards committee.
- A research proposal was been submitted to the Sustainable Development Innovation Fund to investigate the ecological impacts of classroom delivery of instruction and committee work and identify ways of reducing these impacts and publishing a best-practices compendium for use by University of Winnipeg faculty. At this writing, the outcome of the application is still forthcoming.
- A feasibility study was undertaken to assess the viability of establishing a materials conservation centre at the University.
- An initiative is currently in process to establish online course evaluations . Approval on an online evaluation is subject to: (1) Approval of the current draft document (for content) by Labour/ Management Committee on Student Evaluation at UW by the Senate. (2) Updating infrastructure at the UW. (3) Cisco upgrades and resolving any compatibility issues. (4) Final decision by the UW on appropriate software (internal, commercial, etc.) and content management that would all be compatible with the newer systems being implemented. (5) Major upgrades to currently old LMS (WebCT) by 3 versions that involves major server upgrades. Hence, a large budget approval. (6) Substantive issues that are to be addressed include: return rate, confidentiality, stability, reliability, compatibility, personnel & training.
- Sustainability is a central element of the University's new academic plan .
- Several research projects underway at UW have strong sustainability elements. Titles include:
    - Phytochemical Studies on Medicinally Important Plants
    - Methane and Nitrous Oxide cycling in the Red River
    - Developing renewable green bioproducts from aquatic natural resource
    - Reintroduction and Recovery of the Burrowing Owls in Manitoba
    - Managing Public Health Crisis: The Role of Models in Pandemic Preparedness
    - Artificial Thermal Refugia and WNS
    - Case studies of multi-level learning in resource and environmental governance in Canada
    - Silos and systems, development and sustainability: Catalytic forces in mineral policy?
    - Characterizing and Bioremediating Human Pharmaceutical and Personal Care Product Contaminants (PPCPs) in a Western Canadian Sewage Lagoon
    - Phosphorus Leaching in Manured Soils
    - Assessing the Practice of Sustainable Teaching
    - Comparing cumulative growth, stand biomass, and carbon storage among fire-origin and planted stands of Red and Jack pine in Sandilands Provincial Forest, Manitoba
    - Morden's Community Lead Environmental Action on Nutrient Elimination and Removal (CLEANER) in Dead Horse Creek
    - Ecological Energetics of Small, Wild Animals: From Flexibility to Fitness
    - Environment, Sustainability and Health



SOCIAL SUSTAINABILITY

At a Glance

Social sustainability pertains to the way the University interacts with the community in which it is situated and to the success with which it enables the well-being of its students, faculty and staff.

The University of Winnipeg Community Renewal Corporation (UWCRC), and a new Community Learning initiative are the main catalysts for developing and implementing initiatives and projects related to the University's role in promoting social sustainability in its external community.

The UWCRC's mandate is to support the University by developing a sustainable University community that promotes the attractiveness of the University to its faculty, staff, students, and the greater community.

Community Learning pertains to an increasingly integrated approach to learning that recognizes the University campus belongs to and is anchored within a diverse community - a community that includes adult learners, war-affected children, new immigrants, Aboriginal students and international students from every part of the globe.

Within the internal University community, student, faculty and staff wellbeing is also addressed through student associations and groups as well as various administrative councils and bodies. Many of these bodies also engage in community outreach work that has not been documented here.

The Campus Sustainability Office has a mandate to incorporate the University's social sustainability goals into its sustainability management system. To date, this effort has consisted of research into the meaning and potential scope for such a project. In FY2009, the Director's position for the CSO was made into a full-time (from a 60% FTE) position with the understanding that this increase in staffing would facilitate progress on developing the social sustainability elements of the SMS in FY2010.

Three major social sustainability initiatives were launched in FY2009: A new Acting Director of Community Learning was hired, a new social enterprise - Diversity Foods - opened its doors, and the University began offering community housing.

SOCIAL SUSTAINABILITY