The University of Winnipeg
Campus Sustainability Performance Report

1 April 2008 – 31 March 2009
(Fiscal Year 2008)

Campus Sustainability Office

Contents

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Bookstore and Library both continue with waste reduction initiatives aimed at recycling / reselling textbooks, reducing return rates, and using just-in-time inventory control on production of course packages for courses to reduce waste of printed matter. The Print Shop has also managed to trim 1 million impressions from the copying total in FY2007 of 15 million impressions, reducing it to 14 million in FY2008 (down from 17 million in FY2006) achieving both resource and financial savings.

- Social Sustainability – No work was undertaken to develop a social sustainability policy framework for the University in FY2008. While the Campus Sustainability Office is aware that the University has a policy level commitment to address social sustainability in its overall management system, there simply have not been the resources available to pursue this objective at this time. The University continually engages the community and the surrounding neighborhood through its Innovative Learning Centre, Global Welcome Centre, Wii Chiiwaakanak Centre, Education Mentorship, Service Learning, and Model School initiatives. Significant contributions to sustainability education and on-campus activism have also been made by the USWA, EcoPIA, and GESSA student organizations, and faculty and students of The University of Winnipeg Collegiate. While these different activities are not integrated into a single policy and planning framework, they are nevertheless contributing in signal ways to the social sustainability of the University and its surrounding neighborhood.

- Sustainable Transportation – With special funding from Climate and Green Initiatives Manitoba, and in partnership with the UWSA, the University has successfully completed detailed architectural design work for an innovative system of Bike Stations to help promote more active and sustainable transportation choices on campus. Additional Winnipeg Transit stops were opened in FY2008 at the south edge of the campus, dedicated bike lanes have been included in the Greenway development program, and much more complete data collection procedures are now in place to track staff and faculty travel on University business. Efforts continue to develop collaborative partnerships with community organizations such as Bike To The Future, One Green City, and the Active Living Coalition. Unfortunately, total fossil fuel consumption for reimbursed business travel is estimated to have increased 26.5%, total travel-related GHG emissions increased 24.3%, and total fleet vehicle fossil fuel use increased 26.4%--some of these “increases” being attributable to more complete data sets than in FY2007.

- Water Use Management – Water consumption decreased by 31.7% in FY2008 over the previous year reflecting a small drop in enrolment, measures that were instituted to reduce water use in boilers and cooling towers, and that fact that two major buildings were under renovation which reduced occupancy levels and hence water consumption. Specification of water-conserving fixtures for Wesley Hall and the CanWest Centre for Theatre and Film may also have contributed to consumption reductions in these two buildings.

While the University’s performance on quantitative measures of sustainability is something we can all look forward to improving, significant accomplishments can be cited in terms of management system development, employee and student involvement, and completeness and accuracy of data gathering and reporting systems. A solid foundation is being constructed for future achievements provided the financial and human resources can be assembled for action.

The Campus Sustainability Office

Mission and Mandates

The mission of the Campus Sustainability Office (CSO) is to catalyze, facilitate, support and provide leadership to all University departments and organizations in the development and continuous improvement of a Campus Sustainability Management System. This mission is operationalized through specific mandates which include:

- Providing leadership, facilitation support, and organizational strategic support to all University departments in the development and implementation of a sustainability management system;
- Providing overall planning, coordination and reporting capacity for the Campus Sustainability Council and all of its Working Groups, Committees or special task groups;
- Constructing, maintaining and continuously improving the University's sustainability performance monitoring and reporting systems and preparing reports for internal and external stakeholders;
- Assisting with and supporting documentation of University policies, procedures, plans, and performance reports consistent with the requirements needed for eventual ISO 14001-2004e certification;
- Collaborating on and supporting the development of research programs, educational events, resource materials and other supports to sustainability education, staff / faculty / student sustainability awareness and action;
- Providing a focus for expert consultation, support to senior administration, contact for external agency liaison functions, and support to University communications on sustainability matters;
- Participating as required and appropriate in the design and construction process of new

Conservation Working Group (9 members, meeting monthly), the Social Marketing Working Group (9 members, meeting bi-weekly), the Sustainable Transportation Working Group (10 members, meeting monthly until the working group was adjourned in November 2008), and

- The Campus Sustainability Office offered a general information presentation both to incoming first year students during “O-week” activities as well as an orientation presentation for new sessional and permanent faculty members.
- The Social Marketing Working Group of the Campus Sustainability Office developed a Sustainable Lifestyles Contest, a four week trivia contest with weekly questions printed in the Uniter, and identified weekly and grand prize winners.
- A series of Sustainable Lifestyles Workshops were offered during January, February and March 2009, consisting of winter themed sustainability topics. The three workshops in 2009 taught how to cook with winter vegetables, how to start seedlings indoors, and how to make green cleaning products at home.
- The Campus Sustainability Representatives met in October 2008 for a presentation on Waste Reduction Week.

Liaison and Communication with External Stakeholder s –

- On-going meetings between the Director, Campus Sustainability and counterpart sustainability coordinators from other post-secondary institutions in the region to explore ways of cooperating and sharing information in promoting campus sustainability. This collaboration now includes Sustainability Coordinat

- Hosted visit by VP-Finance and the Operations Director from the University of Prince Edward Island on tour of UW facilities and orientat

Air Quality Management

University operations affect indoor air quality (IAQ) in a number of ways including: (a) emission of green house gasses (GHGs) produced whenever fossil fuels are burned; (b) "fugitive" emissions of small amounts of chlorofluorocarbons (CFCs) from chillers and air conditioning equipment that escape during servicing or from leaking connections; (c) fume hood ventilation exhaust from laboratories; (d) "scents" used by students, faculty or staff. Air pollutants also originate off-campus which affect the quality of air internal to University buildings, a principal irritant being diesel exhaust from the bus station on Balmoral Street, and occasionally from delivery trucks idling in loading bays of the Shipping and Receiving Department. Of these emissions, GHG emissions are certainly 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.

For a detailed overview of University performance on all policy-mandated air quality indicators, see Appendix A.

Goals: The Air Quality Management Policy goals of The University of Winnipeg include:

- Strive continuously 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;
- Comply with the Kyoto Protocol by reducing green house gas (GHG) emissions to 6% below 1990 levels by 2012, or achieving the target FY2012 GHG emissions < 0.94 FY1990 GHG emissions.
- Offer a smoke-free campus environment to its students, faculty and staff;
- Strive to establish all its facilities as scent-free spaces;
- Encourage training and research programs which increase awareness and encourage adoption of activities and practices that prevent degradation of IAQ.

Air Quality Management Achievements for FY2008:

GHG Emissions:

The University's GHG emission performance for FY2008 is summarized in the table below and compared to a GHG emission baseline estimated for FY1990 as well as measured performance for FY2007. Since last year, the University posted a 1.1% decrease in emissions from natural gas, an 11.8% decrease in emissions from use of electricity.

Counterbalancing these improvements was a 26.4% increase in emissions from fleet vehicle fuel consumption over FY2007 and a 24.3% increase in emissions from business travel. Some of these increases are the result of more complete data reporting than in any past year. There is also an apparent increase of 278% in emissions from municipal solid waste, despite a composting program which is now diverting significant amounts of organic materials from landfill. This is probably an anomalous value which is attributable more or less entirely to wildly variable and unreliable data supplied by the University's MSW contractor.

Aggregately, University GHG emissions increased by 4.7%—a value partly attributable to the fact that there were 1.8% more Heating Degree Days in FY2008 than in FY2007, indicating a harsher winter overall. The University also slightly increased the area of its building inventory by 0.7% during FY2008, which should also increase energy consumption and GHG emissions.

UW GHG Emission Performance Summary – FY2008		
Factor	“Base Year” FY1990	FY2007 (% of total)

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. During FY2008, the Safety Office received 9 complaints (down from 15 complaints in FY2007), 7 of which required testing, and 3 of which are still under investigation (down from 4 still under investigation in FY2007).[3]

- A plan was finalized to manage all sources of asbestos in University facilities and provide for removal / containment.[3]
- Five building surveys were completed for asbestos containing equipment and finishes.[3]
- The entire University of Winnipeg campus is designated a smoke-free zone, thus going well beyond the smoke-free status required for the interiors of public buildings by City of Winnipeg By-Law.
- $150,000 was invested in asbestos removal from doors, pipes, and vinyl-asbestos floor tiles and general asbestos remediation activities.[1]
- Quantities of pesticides applied indoors was estimated to be approximately the same as for FY2007 (4,200 g.. / 92,950 m^2) but exact data were not available as the position responsible for reporting was vacant due to medical leave.
- Commissioning of Wesley Hall HVAC upgrades has substantially improved comfort and IAQ in this building.[1]

Air Quality Management Initiatives for FY2009:

- Comprehensive Facilities Audit Discussions have been initiated with Manitoba Hydro PowerSmart and the City of Winnipeg to plan a comprehensive Electrical, Mechanical, Air Quality and Water Audit of all "core" campus facilities which, when completed, will substantially assist the University in planning strategic capital investments that improve IAQ.
- 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 standards "Silver" standards which include use of low VOC (volatile organic compound) materials and finishes thus further improving Indoor Air Quality IAQ.
- $950,000 is being invested to replace flooring, some of it vinyl-asbestos, with low VOC, environmentally friendly linoleum sheet stock.[1]
- Asbestos surveys on all remaining University buildings will be completed in FY2009-10.[3]
- Scent-Free / Smoke-Free Guidelines A "scent-free guideline" has been published on the website (http://www.uwinnipeg.ca/index/safety-IAQ) of the University Safety Office which describes the health risks associated with the use of scented personal care products and encourages faculty, staff and students to avoid using them. This guideline was publicized through the E-Board campus announcement system.[1]

Air Quality Management Challenges:

- A continuing challenge is achieving measurable improvements in IAQ performance as well as strategic and efficient allocation of limited resources in the absence of a comprehensive audit of University facilities and the prevailing piecemeal approach to funding sustainability upgrades and infrastructure maintenance.[1]

Total Energy (GJ) [3]	116,124	109,574	- 5.6
Total Energy Cost ($ 000)	1,304.6	1,401.9	+ 7.5
% Renewable Energy	43.8	41.0	- 6.4
Celsius Heating Degree Days	5,897	6,002	+ 1.8
Energy (KwHe) / FCE	1,053	1,009	- 4.2
Energy (KwHe) / m^2	347	328	- 5.5

[1] 1 m^3 natural gas = 10.58 KwHe.
[2] 1 Liter gasoline = 9.72 KwHe.
[3] 1 KwH = 0.0036 GJ

Energy Use Management Achievements:

- The University continues to replace incandescent "pot" lights with compact fluorescent lamps thus achieving a 75% energy saving with each installation.[1]
- Installation of motion-sensor light controls in offices and classrooms as renovation / maintenance of these areas progresses.[1]

Energy Use Management Initiatives:

- Power distribution system study to identify potential savings achievable from the University owning its own transformers and distribution vaults.[1]
- Upgrades to mechanical and HVAC systems in buildings slated for deferred maintenance attention in FY2009.[1]
- Window replacements and upgrades to high efficiency sealed unit windows in Bryce, Manitoba and Centennial Halls. $850,000 have been allocated for these projects. Window upgrades will significantly reduce energy loss from these facilities.[1]
- Roof Replacement Program – The University is pursuing an on-going program of roof replacement which normally includes upgrades to roof insulation and consequent savings in energy.[1]

Energy Use Management Challenges:

- A continuing challenge is achieving measurable improvements in energy performance as well as strategic and efficient allocation of limit

Green Procurement

Procurement activities at the University hold much

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- 100% of campus yard wastes were composted in FY2008. [1]
- 70% of all landscapes on campus are xeriscaped with indigenous, low maintenance plants and landscape materials. No new landscaping projects were undertaken in FY2008. [1]
- 100% of all paper products used in washroom facilities are made of recycled paper. [1]
- 90% of all cleaning products are Enviro-Choice or other environmentally preferable labeled products, and 100% of all cleaners and stri

- The Wesley Hall Annex will see replacement of its present single-glazed wood windows with triple-glazed wood windows, thus dramatically improving energy performance and reducing air leakage.[2]
- Duckworth Athletic Centre roof is slated for replacement of the current EPDM four-ply membrane system with a two-ply Mod-Bit system along with upgrading of insulation. Since the Duckworth Centre is a very large facility, the energy savings should be significant. 170 Tonnes of river rock ballast is being recovered for recycling as landscaping material.[2]

Richardson College for the Environment

- This facility is being designed to a LEED Gold standard and contains numerous design elements that enhance its sustainability performanc

UWSA Day Care Centre

- Construction of the new UWSA Day Care Centre also on Langside Street, achieving LEED Silver+ sustainability performance, is scheduled to begin operation in FY2009. Sustainability features in addition to those needed to achieve its LEED-Silver rating include:

- · Water efficient fixtures throughout building reduc

Materials Conservation (Waste Reduction)

1 MSW = Municipal Solid Waste – the aggregate of all solid wastes produced by the University during the fiscal year.

2 Includes all materials captured in “blue boxes”, i.e., corrugated cardboard, box board, mixed fine office paper, confidential shredded paper, and drink containers, usually PET plastics, organic materials captured in composting containers, yard waste, toner cartridges, and disposable batteries.

- FY2008 Waste Audit completed - Successfully performed a new waste composition audit on the remaining fraction of the waste stream going to landfill, thus enabling another round of analysis and problem-solving aimed at further reducing waste;
- Duplex Printing Default

Bookstore: [6]

- Approximately 90% books are returnable to publishers. Full copies are returned, not portions.
- Most unsold stock is retained, re-priced and eventually sold.
- Textbook returns to publishers average about 30%. Inventory management is used to reduce return shipping requirements, saving both money and transportation impacts.
- All unsold magazines and other periodicals are returned in their original format. (Previous practice was to strip covers and return them for refunds.)
- Used textbooks are purchased by the bookstore and some of its wholesalers. There is strong interest in further promoting the sale of used textbooks as this practice is both financially and environmentally sustainable.
- Course packages are reused as long as professors continue to specify them. Old course packages are recycled. Production of course packages incurs about 800,000 impressions per year of photocopying. There is a 10-15% return rate.
- Close coordination between the Bookstore and the Pr int Shop has made possible a

Materials Conservation (Waste Reduction) Challenges :

- Full implementation of composting requires changes in mass behavior which is likely to be a slow, relatively long-term process. More resources are needed for effective social marketing of this initiative.
- The University's waste handling vendor, Johnson Waste Management, chronically returns untimely and unreliable weight data for MSW going to landfill. Evidently, providing accurate weight data is beyond the technical ability of the vendor and "estimates" vary by as much as 50% month over month. This situation makes planning, budgeting, cost-benefit analysis and even assessment of the fairness and accuracy of invoices nearly impossible.

Sustainable Transportation

The University strives to promote adoption of more sustainable approaches to transportation among students, faculty and administration. The Transportation Working Group of the Campus Sustainability Council met on four occasions during FY2008, dealt with the principal issues on its agenda, and resolved to meet again on a consultative basis at the call of the chair as and when needed. The most current data regarding transportation use patterns at the University continues to be based on parking statistics and a survey conducted by Winnipeg Transit in 2005. The Campus Sustainability Office has designed an independent transportation research initiative which is currently under review by Academic Council and the Research Ethics Review Committee. The CSO anticipates that the research will be completed by October 2009 and provide a more current and complete overview of transportation issues.

For a detailed overview of University performance on all policy-mandated sustainable transportation indicators, see Appendix F.

Goals: The goals of the University of Winnipeg Sustainable Transportation Policy include:

- To encourage the development and adoption by students, administration, staff and faculty, of modes of transportation that:
  - (a) progressively reduce consumption of fossil fuels used for transportation;
  - (b) progressively reduce the material and resource-use intensity of transportation;
  - (c) progressively reduce and eventually eliminate discharges of toxic substances, wastes, and pollution to the ecosphere, including GHG emissions;
  - (d) progressively increase equity of access to transportation services.
- Encourage the adoption and use of more sustainable approaches to transportation both with respect to infrastructure and behavior over which the University has direct control, but also where it has partial control or can exert influence through education, professional development, awareness-building, or community partnerships.

Transportation Performance for FY2008

Fossil fuel consumption and associated GHG emissions are presented for FY2007 and FY2008 in the table below. Some data are missing for FY2007, and at time of writing, no conversion factor was available for fuel consumed per passenger kilometer for rail travel.

Transportation Element	FY2007 (% of total)	FY2008 (% of total)	% Change FY2008 over FY2007
Fleet vehicle fossil fuel	6,111 L. (5.0%)	7,718 L. (4.9%)	+ 26.3

Fleet Vehicle GHG emissions	14.4 T. CO_2e	18.2 T. CO_2e	+ 26.4
Total reimbursed travel GHG	435.9 T. CO_2e	542.0 T. CO_2e	+ 24.3

is that both Wesley and the CanWest Centre underwent extensive renovations in FY2007 which would have limited occupancy, and hence water consumption.

- Cost of Water Increasing – It is noteworthy that the cost of water to University decreased only about 4% in FY2008 while consumption dropped by nearly a third. This reflects a general increase in the cost of utilities from the City, even though the volume of water consumed was considerably less.
- Water Conserving Fixtures – Approximately 5% of water fixtures are conserving models and are being changed out as washroom renovations move forward.[1]
- Grey Water Recycling – The University current recycles no grey water for uses for which it is appropriate. [1]
- Storm Water Recovery / Recycling – The University currently captures no storm water run-off for recycling. [1]

Water Use Management Initiatives for FY2009:

- An ongoing program is under way to replace automatic flushometers on urinals with water conserving fixtures. This is usually included in routine maintenance or renovation to existing facilities.[2]
- Upgrades are also being made to washroom facilities to better respond to special needs users.[2]
- Water Conservation Specifications will be implemented as part of the building design program for the Richardson College for the Environment, the Langside Student Residence, and the UWSA Daycare Centre all slated to begin construction in FY2009.

Water Use Management Challenges:

- A continuing challenge is achieving measurable improvements in water conservation performance as well as strategic and efficient allocation of limited resources in the absence of a comprehensive audit of University facilities and the prevailing piecemeal approach to funding sustainability upgrades and infrastructure maintenance.

Opportunities and Recommendations

While considerable progress has been made on campus sustainability initiatives since 2005, largely due to the efforts of faculty, staff and student volunteers, there remain many opportunities to advance campus sustainability performance. Going forward, the University might consider the following recommendations, opportunities, and emerging situations:

Reconceptualize “Development” of the University

In a general climate of rising costs and fixed or declining revenues, it is understandable that

and comprehensive information about the overall condition of all systems affecting the efficiency, health and safety of facilities. The urgency of this undertaking increases with each year it is deferred.

It is recommended that the University re-double its efforts to secure a comprehensive

approaches be developed to extend this process to d emand-side management in cooperation with University green procurement initi atives.

- Performance Tracking and Reporting Systems – Effectively managing the University toward sustainable outcomes requires timely, accurate and complete information about sustainability performance. The current performance

- Integrate Sustainability Objectives into Job Descri ptions – One significant way the University can "green" its campus culture slowly but surely is by introducing, wherever appropriate, more sustainability performance objectives in the job descriptions of new hires. This gradually builds intellectual and institutional capacity for improving sustainability performance and innovation.

  It is recommended that all job descriptions be revi ewed for appropriate opportunities to include sustainability performance objectives wh enever new positions are being created, or existing positions refilled after retir ements or departures of existing staff and faculty.

- More Staff Training and Awareness-Building – Anecdotal information suggests that the campus sustainability initiative still lacks coherence and uniformity across the University. There is need to develop a broad-based general awareness of the sustainability challenge and how it will likely affect the University in the future, as well as a consensus across departments that planning, decision-making, strategic thinking, and budgeting all need to include sustainability considerations. Finally, when job duties require it, more resources should be made available for specific training of individual staff so that they can more effectively exercise due diligence in the environmental performance management of the University.

  It is recommended that consideration be given and a ppropriate resources be allocated to both general awareness activities that help crea te a culture of sustainability within the University as well as more specific professiona

- Promote Student Engagement – The very mission of the University is focused on its students and students have been collaboratively involved from the very beginning of the campus

Source Notes

[1] Service Coordinator, Physical Plant, April 2009.

[2] Acting Director, Physical Plant, April 2009.

[3] Campus Safety Officer, March 2009.

[4] Penner, Lucas – PowerLand Computers (Private Correspondence) – April 2009.

[5] Michael Hoehner, Librarian – May 2009

[6] Scott Spearman, Bookstore Manager – Apr. 2009

[7] Kisti Thomas, UWSA, email 12 Nov. 2007.

[8] CSC meeting activity report.

[9] Amyot, Sarah (2007) (Private Correspondence)

[10] Morison, Matthew & Lahaie, Nicole (April 2009) EcoPIA Annual Report. (Private Correspondence)

Appendix A
Air Quality Performance Indicators

Indicator	Target	Performance	
		FY2007	FY2008
A1.1 Year over year improvement or maintenance of minimum baselines for indoor air pollutant indices as specified in provincial and federal standards.	Conformance to ASHRAE 129-1997 or better.	In conformance.	In conformance.
A1.2 Total square meters of indoor space contaminated with asbestos which has potential to negatively impact human health.	Diminishing annually to zero.	0	0
A1.3 Total square meters of indoor space contaminated with mold which has potential to negatively impact human health.	Diminishing annually to zero.	0	0
A1.4 Number of air pollution incident reports or complaints received per fiscal year and documented evidence of the action taken to			

	implemented with the intent of improving air quality in University facilities or programs offered on or off-campus.	with short description of each.	Annual Report	Annual Report

E1.11	Total annual stationary fuel consumption in liters (and KwHe).	Annual reductions to

Appendix C
Green Procurement Performance Indicators

Indicator	Target	Performance	
		FY2007	FY2008
GP1.1 Documentation that each procurement decision involving the purchase of $X or more of a good, material, product or service, has included a needs assessment as well as a demand-reduction plan whenever possible.	All procurement decisions include a needs analysis and demand reduction plan.	$ Threshold still to be established.	$ Threshold still to be established.
GP2.1 Percentage of total annual dollar value of equipment purchases for which life-cycle cost analysis was applied.	Increasing annually to 100%.	No data	No data
GP3.1 Total number of goods, materials, products or services procured by the University that contain or use toxic or carcinogenic compounds, or the use of which may pose a threat to human health or well-being.	Decreasing annually to zero.	No data	No data
GP3.2 Documentation that when goods, materials, products or services are procured that contain toxic ingredients or components, a thorough review of alternatives was undertaken and included in the procurement decision.	All toxic product procurement is accompanied by alternative search / review reports.	No data	No data
GP4.1 Percentage of total annual dollar value of all goods, materials and services procured from local and neighborhood suppliers.	Increasing annually to theoretical maximum.	No data	No data

GP5.6 Total annual embodied energy of the products, materials, goods, and

Appendix D
Land Use and Property Management Performance Indicators

Indicator	Target	Performance	
		FY2007	FY2008
L1(b).1 Annual amount of chemical herbicide applied to University landscapes in liters.	0 kgs. or 0 liters.	0 L.	0 L.
L1(b).2 Annual amount of artificial pesticide used on University landscapes in liters.	0 kgs. or 0 liters.	3.4 kgs.	3.4 kgs. (est.)
L1(b).3 Annual amounts (in kgs., liters, g., etc) of chemicals applied to University landscapes for any purpose (e.g., chemical fertilizers, ice-melt compounds, dust control products, etc.).	Annual reductions to practical minimum.	3,080 kgs. (Mtn. Organic Ice Melt)	3,600 kgs. (est.) (Mtn. Organic Ice Melt)
L1(c).1 Percentage of landscaping using xeriscaping techniques and materials.	Increasing annually to 100%.	70%	70%
L1(c).2 Annual quantity in liters of fossil fuels consumed by grounds maintenance machinery and vehicles (mowers, snow blowers, sidew			

- Oral toxicity of product - Presence of optical brightener - Third party certification (if available)			

L2.4 Percentage of cleaning products used annually that contain:

- Any known or suspected carcinogens/teratogens/mutagens as per IARC, ACGIH
- Endocrine disrupters
- Phosphates

Appendix E
Materials Conservation (Waste Reduction) Performance Indicators

Indicator	Target	Performance	
		FY2007	FY2008
W1.1 Annual total weight (in kilograms) of municipal solid waste sent to landfill.	Decreasing annually to theoretical minimum. 5 year goal; interim targets.	77.8 T.	125.1 T.
W1.2 Annual total weight (in kilograms) of materials diverted from landfill and recycled.	Increasing annually to theoretical maximum. 5 year goal; interim targets.	94.4 T.	104.4 T.
W1.3 Percent of waste reduced over previous year's waste production.	derived	- 26.3%	+ 60.5%
W.1.4 Percentage of the total weight (in kilograms) of waste destined for landfill or incineration comprised of recyclables (including organic wastes):	derived	15.8%	14.3%
W1.5 Annual total weight of organic materials composted (in kilograms). All organic materials (including all food and yard wastes) should be included in the calculation.	Increasing annually to theoretical maximum. 5 year goal; interim targets.	1.5 T.	11.1 T.
W2.1 Annual total weight (in kilograms) of solid and liquid hazardous waste produced by or discharged from University facilities and operations.	Decreasing annually to theoretical minimum. 5 year goal; interim targets.	0.65 T. Solids 1,000 L. Liquids	0.24 T. Solids 1,241 L. Liquids
W2.2 Reduction of hazardous wastes produced by the University over previous year.	derived	Not calculable.	- 65.6% for solids + 24.1% for liquids
W2.3 Annual total weight (in kilograms) of solid and liquid			

	in waste reeducation activities, practices and product choices.			
W6.1	Annual report of waste reduction performance.	Tabled annually.	Done	Done
W6.2	Post Waste Minimization Policy and performance reports to website.	Policy and reports posted.	Done	Done

automobile per passenger-km fuel consumption) = Total fossil fuel consumption.			

T1(a).9 Total estimated annual fossil fuel consumption incurred from carpooling and ride sharing travel from residence to campus an

T2.5	Percentage of students, faculty and support staff who regularly cycle to campus.	Increasing annually to practical maximum.	2005 Wpg Transit Study – CSO Office	2005 Wpg Transit Study – CSO Office
T2.6	Percentage of students, faculty and support staff who regularly use urban mass transit to travel to campus.	Increasing annually to practical maximum.	2005 Wpg Transit Study – CSO Office	2005 Wpg Transit Study – CSO Office
T2.7	Percentage of students, faculty and support staff who regularly use carpooling or ridesharing to travel to and from campus for work or classes.	Increasing annually to practical maximum.	2005 Wpg Transit Study – CSO Office	2005 Wpg Transit Study – CSO Office
T2.8	Percentage of students, faculty and support staff who regularly drive single occupant vehicles to campus.	Decreasing annually to practical minimum.	No data	No data