UWinnipeg Sustainability Performance Report

April 1 2012 – March 31 2013
(FY2012)

THE UNIVERSITY OF WINNIPEG

Contents

List of Tables

List of Figures

List of Abbreviations

AVP – Associate Vice President
CO2e - Carbon Dioxide Equivalent
CSC - Campus Sustainability Council
CSO - Campus Sustainability Office
EcoPIA - Ecological People in Action
FY - Fiscal Year (April 1 - March 31)
GESA - Geography & Environmental Studies Students' Association
GHG - greenhouse gas
IAP - Initial Action Plan
ISO - International Standards Organization
LEED - Leadership in Energy & Environmental Design
MMSM - Multi Materials Stewardship Manitoba
RCFE - Richardson College for the Environment
ROI - Return on Investment
STARS - Sustainability Tracking, Assessment, & Rating System
TOR - Terms of Reference
UWCRC - University of Winnipeg Community Renewal Corporation
UWSA - University of Winnipeg Students' Association
VP Finance & Admin - Vice President Finance & Administration
VP HR, Audit & Sustainability - Vice President Human Resources, Audit & Sustainability

1.0 Executive Summary

1.1 Performance

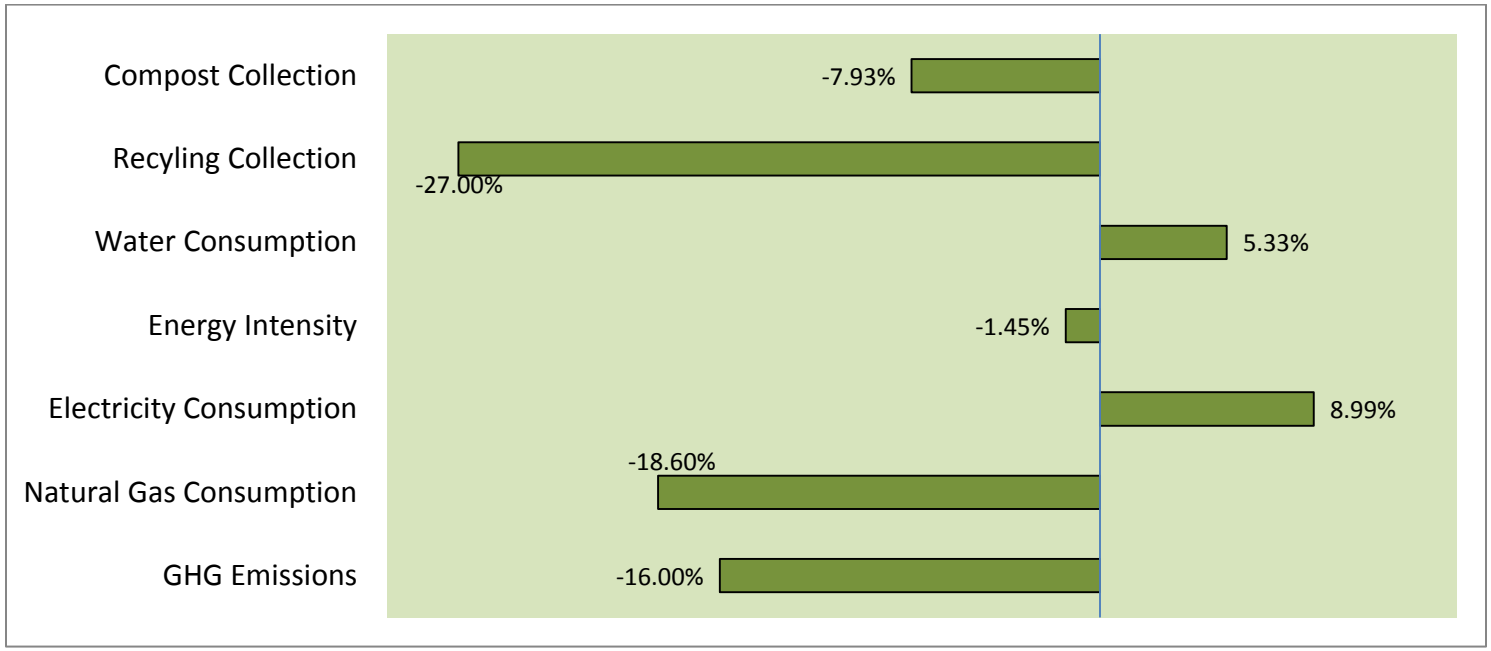

Figure 1 Sustainability Performance Summary for The University of Winnipeg from April 1st, 2012 – March 31st, 2013 showing percent change over FY2011 for compost collection, recycling collection, water consumption, energy intensity, electricity consumption, natural gas consumption and greenhouse gas (GHG) emissions. GHG emissions and natural gas consumption are normalized for weather.

Throughout FY2012, the initial action plans committed to in the *UWinnipeg Sustainability Strategy* provided the roadmap for action related to campus sustainability at UWinnipeg. Details on the status of each action can be found in the body of this report, while the performance metrics in Figure 1 and those provided in more detail in relevant report sections speak to the results achieved through the University's efforts.

1.2 Key Successes

Kyoto target, GHG reductions & energy efficiency: The University was strongly focused on executing its planned energy retrofit to main campus buildings over the fiscal year. These efforts, along with the first heating season in which the University's hybrid heating system was operational, resulted in a 16% reduction in GHG emissions and an 18.6% reduction in natural gas consumption over the fiscal year. A portion of this reduction in natural gas use is the result of the use of the hybrid heating system. Electricity consumption increased 9% over the year; however, a lighting retrofit in the Duckworth Centre and a significant ventilation system upgrade promise to counteract this increase in the coming year. While GHG emissions were not 6% below 1990 emission levels by the end of the fiscal year, the final stages of the energy retrofit efforts on campus were completed over the summer of 2013. With the efforts complete, the University's mechanical systems are operating to a projected utility consumption that is significantly lower than that required to meet the Kyoto target.

Office Paper: The University exceeded its goal of increasing post-consumer content of all paper products purchased on campus. The University met its goal to switch to 100% recycled content for letterhead and business cards, while also exceeding its goal to transition all office paper to 50% post-consumer content. Office paper is now FSC certified, 100% post-consumer fibre, EcoLogo certified, processed chlorine free, and manufactured using biogas energy. Alongside reductions in chemical use and waste, this represents a saving of approximately 1389 trees per year. Leslie Uhryniuk, Coordinator of Printing & Parking Services was awarded the 2013 Campus Sustainability Recognition Award for her efforts.

Pesticide-free grounds: In the spring of 2012, the University announced its commitment to eliminate the use of cosmetic pesticides in campus grounds keeping. This initiative was informed by provincial consultations on the implementation of an eventual ban on the use of cosmetic pesticides in Manitoba, for which the University has expressed its support. In determining the operational feasibility of this change at UWinnipeg, campus staff were able to learn from the successful implementation of pesticide-free grounds keeping at the Manitoba Legislature.

Peg-City Car Coop: Late in the year, the University entered into a partnership with Peg City Car Co-op. A silver Honda Fit hatchback is now parked behind the Buhler. A carshare allows for access to a car on an as-needed basis while reducing the heavy costs associated with car ownership. Members of the co-op pay for usage on an hourly and per kilometre rate. Carsharing is a practical alternative that helps university staff meet their transportation needs off campus while allowing them to commute by transit, cycling, and walking.

UWSA Bike Lab: The University of Winnipeg Students' Associate must once again be recognized for an extremely successful year at the BikeLab. Partnerships with the University's Model School , the Wii Chiiwaakanak Learning Centre, Art City, and several other school and community groups has continued to extend the reach of the BIkeLab into the community while also offering a valuable service and community to students, staff, and faculty. Current efforts to enhance bicycle mechanic training programs promise to support students and community members in developing key skills while also growing the Lab's capacity to meet the constantly growing demand for the facility.

1.3 Key Challenges

Waste Diversion: In FY2012, the University encountered what might be considered a "perfect storm" with respect to its waste diversion initiatives: unexpected changes in bin servicing contracts, severely deteriorated bin infrastructure, and rising expenses for supplies that diverted financial resources away from communication and education. These challenges resulted in the University's first decline in recycling rates since it began tracking this information. A major bin infrastructure upgrade is planned for FY2013, with key support provided from the Winnipeg Foundation and the Canadian Beverage Container Recycling Association. Ongoing bin servicing and supply costs continue to be a matter of very significant concern.

Data collection and management: The University's first Sustainability Management System was established in 2006 and has served as the foundation of the University's sustainability performance monitoring and reporting since then. Sseveral areas of sustainability management have continually suffered from data collection and monitoring difficulties. While some degree of difficulty exists for most areas of data collection, waste, procurement and transportation have presented particular challenges. In addition to these challenges, the University is increasingly participating in third party reporting programs such as The Climate Registry and STARS (Sustainability Tracking, Assessment, and Rating System). The result is an overload of reporting responsibilities in the Campus Sustainability Office. In the coming year, the CSO will be working towards streamlining reporting and building on the University's existing strengths in data collection and management by strengthening internal data quality accountability and auditing mechanisms. These efforts will align well with an overall enhancement of institutional data management at the University; however, they will require close attention to be successful.

Integration of campus development planning and sustainability management: The University's ability to set its Kyoto target and achieve it speaks to the significant institutional progress that has been made in integrating sustainability planning and management into the University's overall planning processes. Still, the primary challenge and barrier to further improvements in the University's environmental impact is the work that remains to be done to properly integrate campus development planning with campus sustainability targets. To date, strategies to offset the GHG and energy impacts of campus expansion have been developed to react to already complete plans for new buildings and other related campus development projects. Moving forward, an integrated approach to campus planning that takes a whole-campus view of absolute energy, water, and GHG impacts is needed. Efforts to establish the governance structures needed to achieve this integration were begun in FY2012 with some challenged. Ongoing efforts are required in FY2013 to ensure further progress on this important challenge and leadership opportunity.

1.4 FY2013 Priorities

At the beginning of FY2013, the Campus Sustainability Council developed new action plans to drive efforts over the coming year. These plans again aim at driving progress towards achieving the targets set in the *UWinnipeg Sustainability Strategy.* Key initiatives are highlighted here.

Next steps for further GHG emission reductions: With progress on improving energy efficiency in campus buildings moving along well, the University must now begin investigating strategies for achieving deep reductions in its use of fossil fuels through the application of alternative forms of energy. At present, the potential of a design competition to solicit realistic solutions to this challenge is being explored, while other approaches will be considered if they are determined to be more effective.

Bin Upgrades: A bin infrastructure upgrade is planned to help address ongoing waste diversion challenges. The scope of the project will depend on the amount of funds secured.

STARS: The University will be submitting its first report to the Sustainability Tracking, Assessment, and Rating System. This self-reporting campus sustainability rating system is administered through the Association for the Advancement of Sustainability in Higher Education.

Data collection & reporting consolidation: A Sustainability policy and indicator review is planned for FY2014. In preparation for this effort, the Campus Sustainability Office will be working several other areas to begin developing stronger data collection and auditing mechanisms at the University.

Integration of campus development planning and sustainability management: Key initiatives related to this challenge include ensuring strong processes for reporting on projected environmental impacts of campus development projects and ensuring ongoing participation by Sustainability staff in new building projects; ensuring that the University's new procurement procedure is followed for all new capital projects; actively seeking out ways to leverage new projects to help phase out Natural Gas for heating in existing buildings; working towards a process that ensures new capital projects include an impact neutralization plan and funds as part of the initial design and scope of work to ensure that existing buildings are improved to offset the added ongoing energy requirements of the new project.

2.0 Introduction

2.1 Reporting Period and Scope

This report applies to FY2012 – April 1st, 2012-March 31st, 2013 and where possible applies to the full scope of the University of Winnipeg's Sustainability Management System. This 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 centres or other entities, to which University policies may generally apply.

2.2 Sustainability Governance & Strategic Plan

Implementation of the University of Winnipeg's Sustainability Policy, along with its eight accompanying administrative policies, is coordinated through the Campus Sustainability Office, with the support of the Campus Sustainability Council and its various committees. With the assistance of the Director of the Campus Sustainability Office, the VP HR, Audit & Sustainability champions sustainability-related issues at the University's senior level.

In January 2012, The University's Board of Regents adopted the *UWinnipeg Sustainability Strategy.* This document, aimed at advancing progress on the implementation of the University's Sustainability Policy and 8 related administrative policies, provides a roadmap for sustainability-related action and initiatives throughout the University. Performance relative to each target area forms the main substance of this report.

2.3 Annual Demographic, Weather, and Space Variations

The number of people on campus, annual variations in weather, and changes in the campus footprint all have an impact on the University's sustainability performance. More people, cold winters, hot summers, and a larger footprint will all increase resource demand, while fewer people, warmer winters, cooler summers, and reductions in the University's footprint would have the opposite effect.

2.3.1 UWinnipeg Occupied Space

The University of Winnipeg's annual sustainability report reflects data on buildings that the University owns and/or that the University exercises some degree of control over utility consumption. With the exception of electricity consumption at 520 Portage Avenue, this report does not include data on leased space, as the University does not have any operational control over it and does not have access to utility consumption data. The table below summarizes campus area over the past several years.

Table 1 Space inventory at University of Winnipeg from 1990 – 2012 including buildings/housing leased and owned (m^2).

Year	Buildings Leased	Buildings Owned	Housing Owned	Housing Leased	Total Area Occupied	Total Owned Space	Total Leased Space
1990	NA	87,644	0	0	87,644	87,644	NA
2005	5,221	95,648	1,774	3,538	106,182	97,422	8,759
2006	5,909	95,648	1,774	3,538	106,869	97,422	9,447
2007	6,752	95,648	1,960	3,538	107,899	97,608	10,291
2008	7,580	95,379	2,146	3,538	108,643	97,524	11,119
2009	6,564	94,795	8,798	3,538	113,695	103,593	10,102
2010	4,927	98,887	8,481	3,538	115,834	107,368	8,466
2011	7,271	112,759	8,295	3,538	131,863	121,054	10,810
2012	7,409	110,515	8,413	3,538	129,876	118,929	10,948

As shown in Table 1, UWinnipeg owned and leased slightly less space March 31 2013 than on March 31 2012. MacNamara Hall, the Young building, and two small garages were demolished to make way for the new United RecPlex, one Student Housing house was sold, and leased space at 520 Portage was vacated.

2.3.2 Campus Population & Operational Changes

The numbe of staff and students on campus in FY2012 was relatively stable. New data collection methods for FCEs very likely have produced a 'false' decrease in FCEs on campus.There were modest increases in the number of staff and students on campus in FY2012, as shown in Table 2. This may have caused a very slight increase in the amount of energy and water consumed on campus and amount of waste generated. There have not been significant changes to campus hours of operation or other building use patterns that may have impacted the resource use of the University.

Table 2 Student and staff population of University of Winnipeg from FY2010 – FY2012. The student population is measured in full course equivalents (FCE), and the staff measured in full time equivalents (FTE).

Fiscal Year	FCE #	Staff #
FY2010	33,920	724
FY2011	34,980	756
FY2012	33,690	824

2.3.3 FY 2012 Weather

The summer (Jun-Aug) of 2012 in Winnipeg was about 1.5 degrees warmer than normal (1981-2010), and quite dry; July was especially warm at approximately 3 degrees above normal. The fall (Sep-Nov) was 1 degree below normal, and wetter than normal. The winter (Dec-Feb) of 2012/13 was about 0.6 degrees below normal (and 5.5 degrees colder than the exceptionally warm winter of 2011/12). March 2013 was cold--about 5 degrees below normal (and 13 degrees colder than the record-warm March of 2012). In general, weather over FY2012 was much more consistent with typical Winnipeg weather than FY2011. Natural gas consumption for heating reflects this fact.

Table 3 Winnipeg weather data from FY2006 to FY2012 showing heating degree-days (HDD - # of days)*, cooling degree-days (CDD - # of days) and precipitation (mm). All data was collected at the weather stations at the Richardson International Airport. Data was not available (NA) for all fiscal years.

Fiscal Year	HDD (# of days)	CDD (# of days)	Precipitation (mm)
FY2006	5,443	NA	NA
FY2007	5,897	NA	NA
FY2008	6,002	NA	NA
FY2009	5,464	119	460
FY2010	5,600	173	761
FY2011	5,117	250	430
FY2012	5,828	255	427

* Please note: Heating degree-days (HDD) for a given day are the number of Celsius degrees that the mean temperature is below 18°C. Cooling degree-days (CDD) for a given day are the number of Celsius degrees that the mean temperature is above 18°C.

3.0 Performance

Each aspect of sustainability performance over FY 2012 was guided by the Initial Action Plans that were published in the *UWinnipeg Sustainability Strategy*. A report on the status of each action plan is included in Appendix A. The Campus Sustainability Council has also developed action plans for FY2013. They are included in Appendix B.

3.1 Air, Energy & Water

Greenhouse Gas Emissions & Energy Consumption

In FY2012, several years of efforts to plan and manage greenhouse gas emissions and energy consumption resulted in significant reductions. The University was strongly focused on executing its planned energy retrofit to main campus buildings over the fiscal year. These efforts, along with the first heating season in which the University's hybrid heating system was fully operational, resulted in a 16% reduction in GHG emissions.

Please note that emissions from waste and reimbursed travel have traditionally been reported. They are not represented here due to ongoing data quality challenges related to waste and data gaps for FY2012 travel data. Travel data has been transitioned to a new tracking system that is now fully operational. A solution to challenges related to determining emissions from waste is under development.

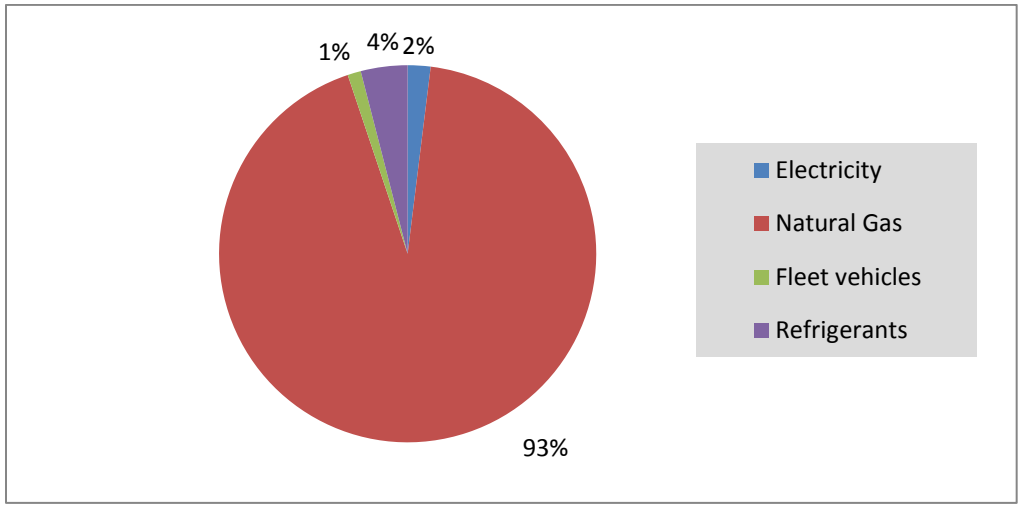

Figure 2 Breakdown of greenhouse gas emissions (TCO_2e) from University of Winnipeg in FY2012 by source, including electricity, natural gas, fleet vehicles and refrigerants.

Table 4 Greenhouse gas emissions in tonnes of carbon dioxide equivalents (TCO_2e) from FY1990 to FY2012. Real annual emissions and weather adjusted amounts are shown.

Greenhouse Gas Emissions (TCO_2e)	1990	2006	2007	2008	2009	2010	2012
Real Annual Emissions	3,130	3,718	3,591	3,688	3,701	3,551	3,130
Weather Adjusted Annual Emissions	3,130	NA	3512	3,573	3,881	3,625	3,070

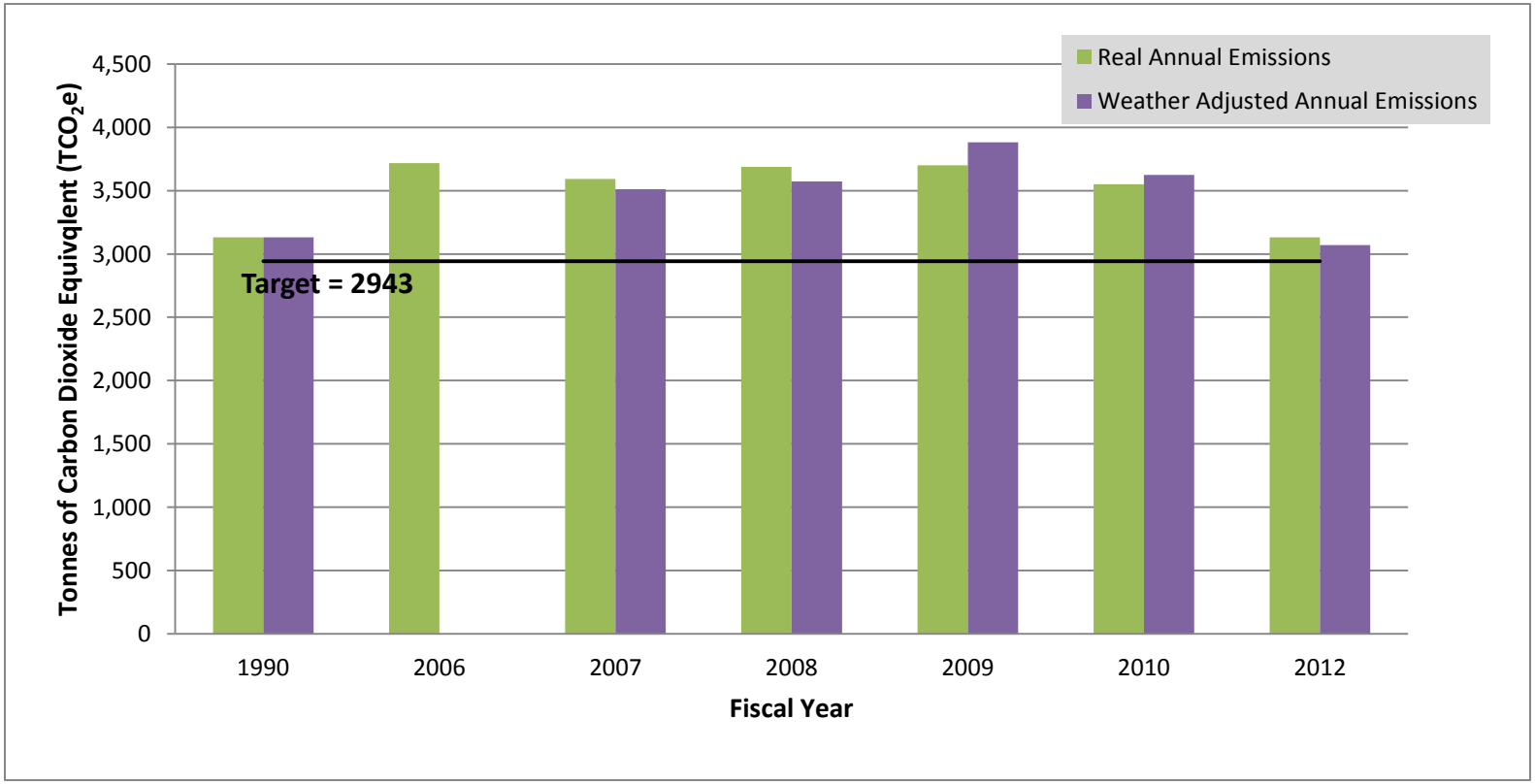

Figure 3 Greenhouse gas emissions at University of Winnipeg in tonnes of carbon dioxide equivalents (TCO_2e) from FY1990 to FY2012, and target emissions quantity (2,943 TCO_2e). Real annual emissions and weather adjusted annual emissions are shown.

While GHG emissions were not 6% below 1990 emission levels by the end of the fiscal year, the final stages of the energy retrofit efforts on campus were completed over the summer of 2013. With the efforts complete, the University's mechanical systems are operating to a projected annual utility consumption that is significantly lower than that required to meet the Kyoto target. The campus can be satisfied that its first target has been met and focus its efforts on achieving a 10% reduction in emissions as against a 1990 baseline by 2016.

Total campus energy consumption was reduced by 3% over last year. This reduction included an 18.6% drop in natural gas consumption over the fiscal year. A portion of this reduction in natural gas use is the result of the use of the hybrid heating system. Electricity consumption increased 9% over the year; however, a lighting retrofit in the Duckworth Centre and a significant ventilation system upgrade promise to counteract this increase in the coming year.

Table 5 Energy consumption breakdown for University of Winnipeg from FY2006 to FY2012 including stationary fuel, vehicle fuel, natural gas (weather adjusted) and hydro (kWh or kWh equivalent). The intensity (kWh /m^2) is also reported.

Type (kWh)	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Stationary Fuel	0	0	58,320	1,625	1,625	1,625	1,625
Vehicle Fuel	41,563	27,047	75,015	76,159	89,891	64,784	145,868
Natural Gas (weather adjusted)	19,102,349	17,692,420	18,212,494	20,412,307	19,245,773	19,337,721	15,900,858
Hydro	14,347,029	14,118,810	12,501,378	14,702,975	16,864,380	22,284,140	24,287,065
Intensity (kWh/m^2)	344	326	316	340	337	344	339

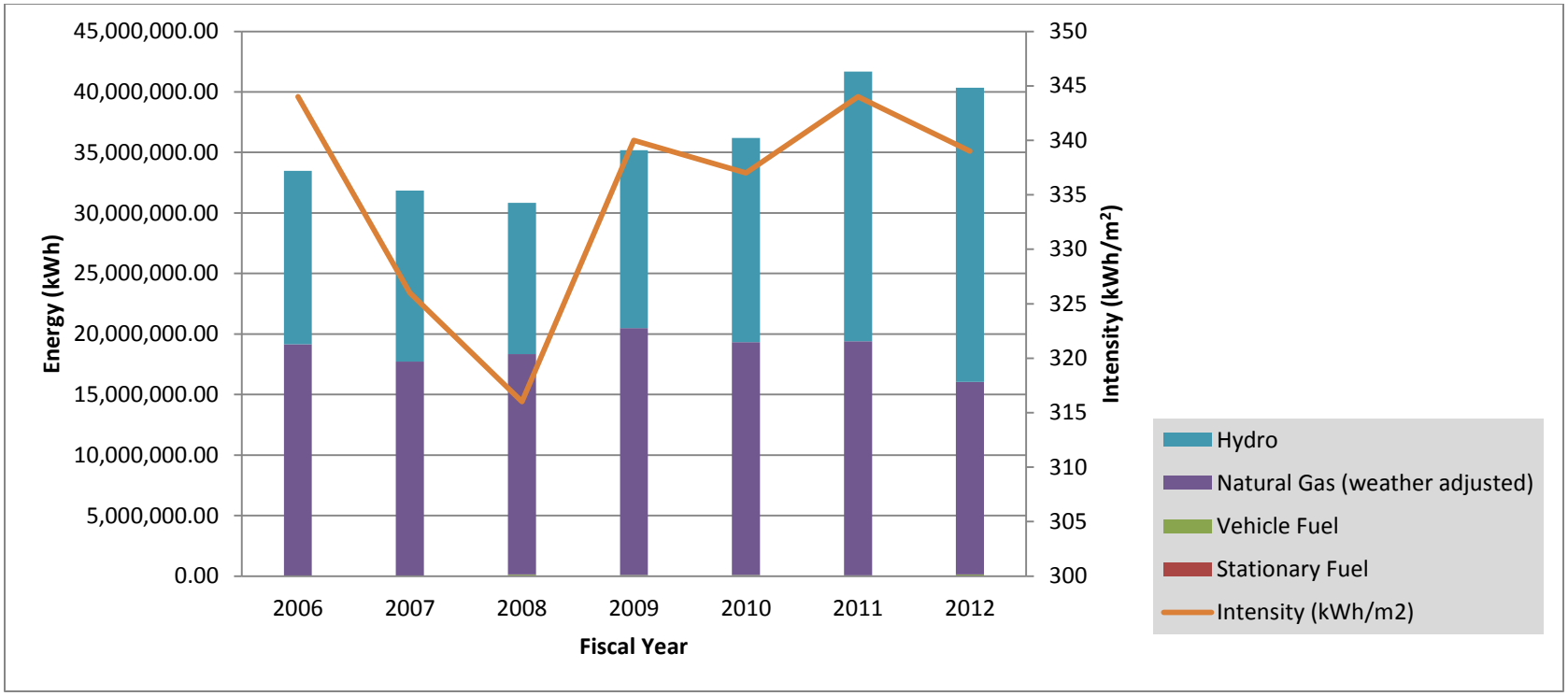

Figure 3 Energy consumption breakdown for University of Winnipeg from FY2006 to FY2012 including stationary fuel, vehicle fuel, natural gas (weather adjusted) and hydro (kWh). The intensity (kWh /m^2) is also reported.

Table 6 Natural gas consumption for University of Winnipeg from FY1990 to FY2012 including real annual consumption and weather adjusted consumption (m^3). The intensity (m^3/m^2) is also reported.

Natural Gas Consumption (m^3)	**1990**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
Actual Natural Gas	1,415,408	1,710,947	1,688,739	1,830,931	1,779,367	1,551,615	1,534,067
Weather Adjusted Natural Gas	1,415,408	1,671,730	1,720,871	1,928,728	1,818,504	1,845,921	1,502,488
Intensity (m^3/m^2)							
Actual Intensity	16.15	18.65	18.17	18.1	17.08	12.82	12.9
Weather Adjusted Intensity	16.15	17.13	17.65	18.62	16.94	15.25	12.63

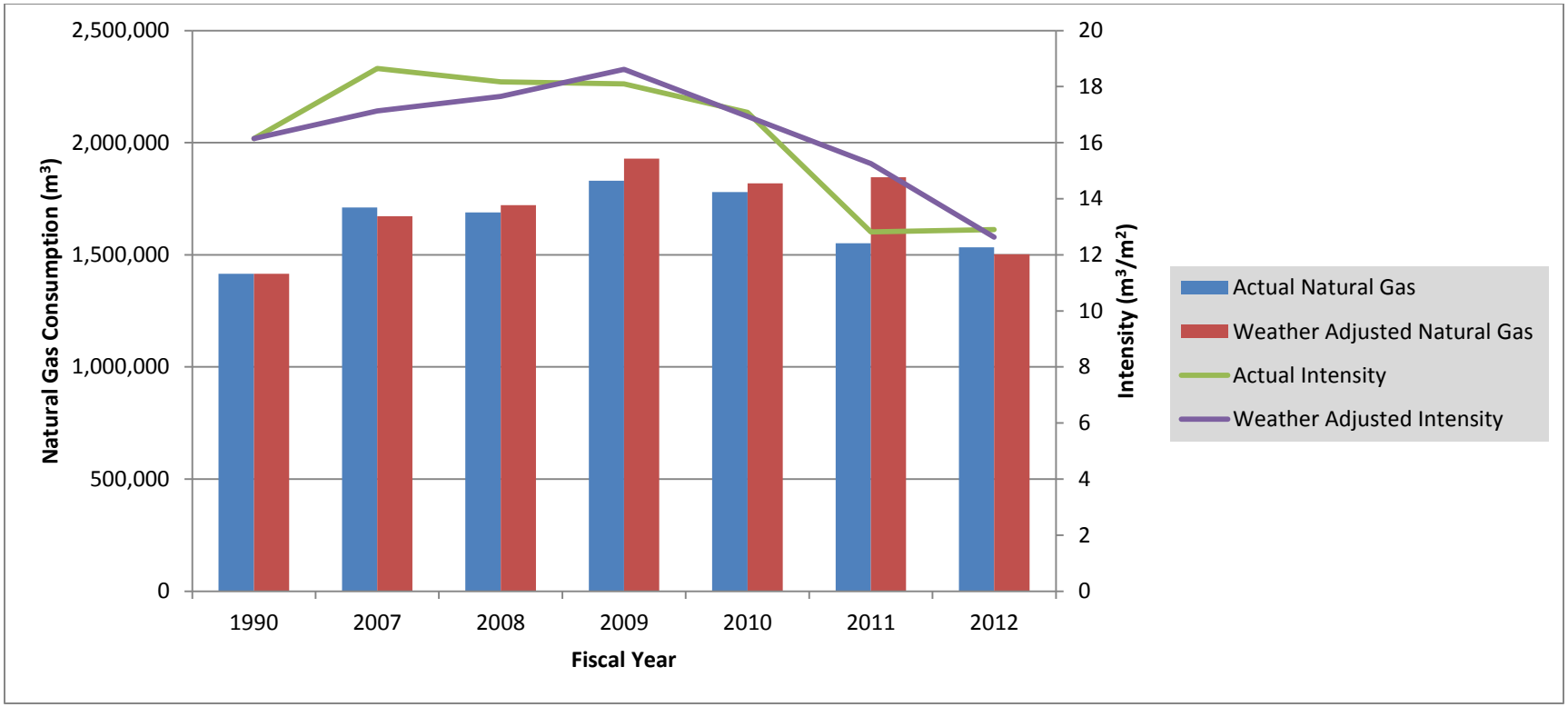

Figure 4 Natural gas consumption for University of Winnipeg from FY1990 to FY2012 including real annual consumption and weather adjusted consumption (m^3). The intensity (m^3/m^2) is also shown.

Table 7 Electricity consumption (kWh) for the University of Winnipeg from FY2007 to FY2012. The intensity (m^3/m^2) is also reported.

Electricity Consumption	2007	2008	2009	2010	2011	2012
Electricity (kWh)	14,118,810	12,501,378	14,702,975	16,864,380	22,284,140	24,287,065
Intensity (kWh/m^2)	145	128	142	157	184	204

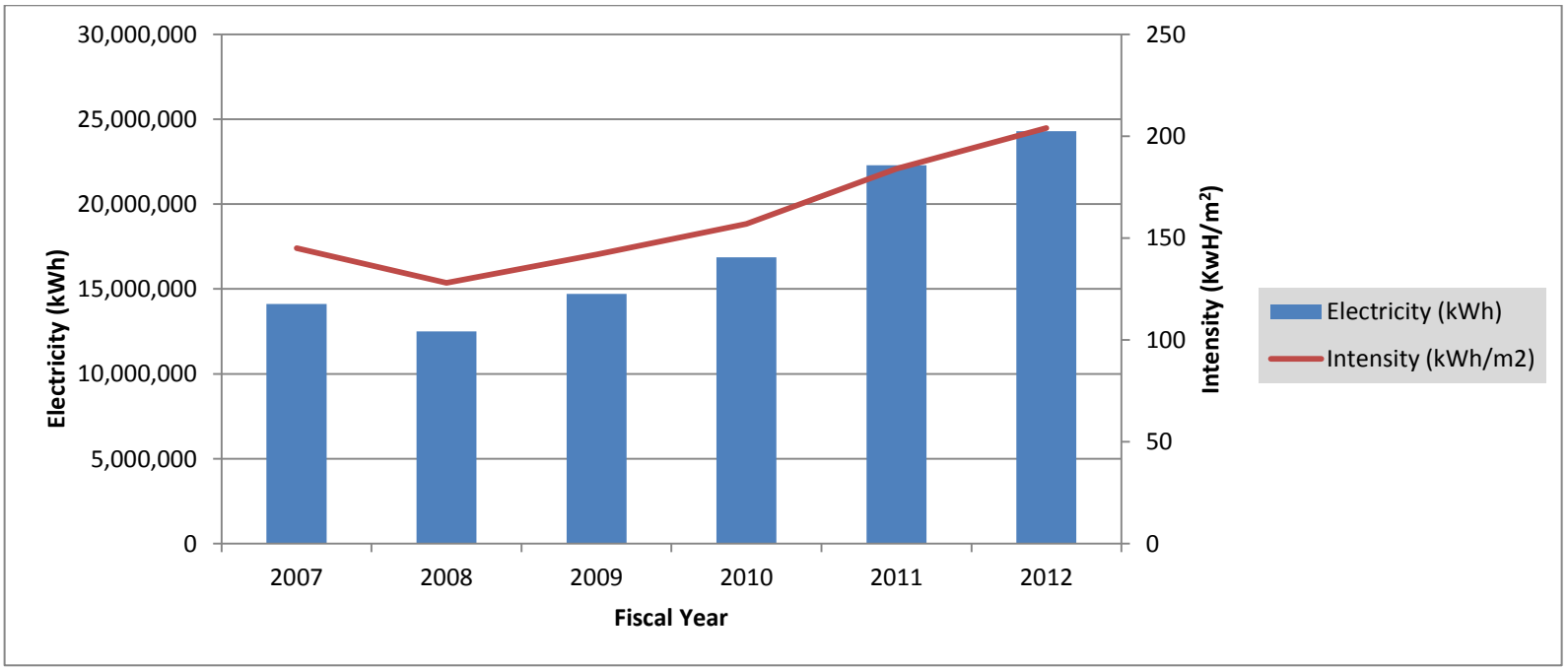

Figure 5 Electricity consumption (kWh) for the University of Winnipeg from FY2007 to FY2012. The intensity (kWh/m^2) is also shown.

Water

Despite ongoing progress on a water retrofit to bathrooms on campus, water consumption increased approximately 5% this year. A significant contribution to this resulted from the near doubling of water consumption in the Richardson College for the Environment & Science Complex over last year. This increase is likely attributed to a dramatic increase in humidification requirements in the building. Funds have been allocated to make changes to humidification controls in order to address this issue.

Table 8 Water consumption (L) for University of Winnipeg from FY2006 to FY2012.

Water Consumption	2006	2007	2008	2009	2010	2011	2012
Amount (L)	47,388,592	43,897,460	80,113,761	74,714,597	69,452,051	69,914,000	73,638,940

The summer (Jun-Aug) of 2012 in Winnipeg was also 1.5 degrees warmer than normal (1981-2010) and very dry; July was especially warm -about 3 degrees above normal. This increased water consumption for the cooling towers in main campus buildings. While it is difficult to separate out impacts of retrofit from other water demands due to metering limitations, we can assume improvements in bathroom-level water use.

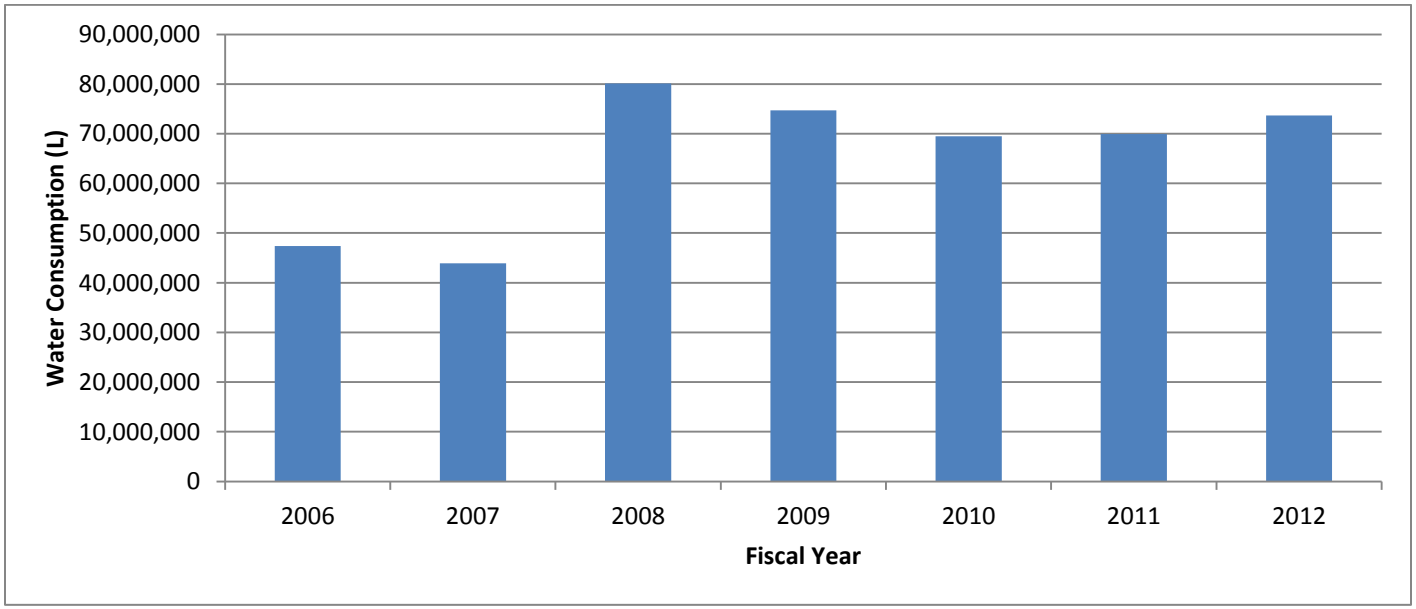

Figure 6 Water consumption (L) for University of Winnipeg from FY2006 to FY2012.

3.2 Waste, Grounds & Cleaning

Waste

Recycling rates decreased 27% and compost rates decreased by nearly 6% in FY2012. It should be noted that FY2012 is also the first year that recycling was delivered to a new recycling provider. It is therefore possible that the University's previous recycling provider's weighing system provided systematically higher weights than those provided by the current provider. Never-the-less, it is clear that waste diversion was a significant challenge this year. Reasons for this may include deteriorating bin infrastructure and signs, bin servicing challenges that resulted in recyclable materials being placed in trash cans, and a less active bin-side education program (due to human resource pressures).

Bin servicing challenges are being addressed through the transition to employing regular cleaning staff to service all bins on campus. The CSO, Physical Plant, and cleaning contractors will work together in FY2013 to ensure that cleaners are properly trained in waste diversion activities. A critical concern in this transition is the added cost involved in pursuing this approach to bin servicing. A planned bin upgrade to main campus buildings (pending funding) promises to significantly improve diversion by ensuring access to well-marked and strategically located bins throughout campus.

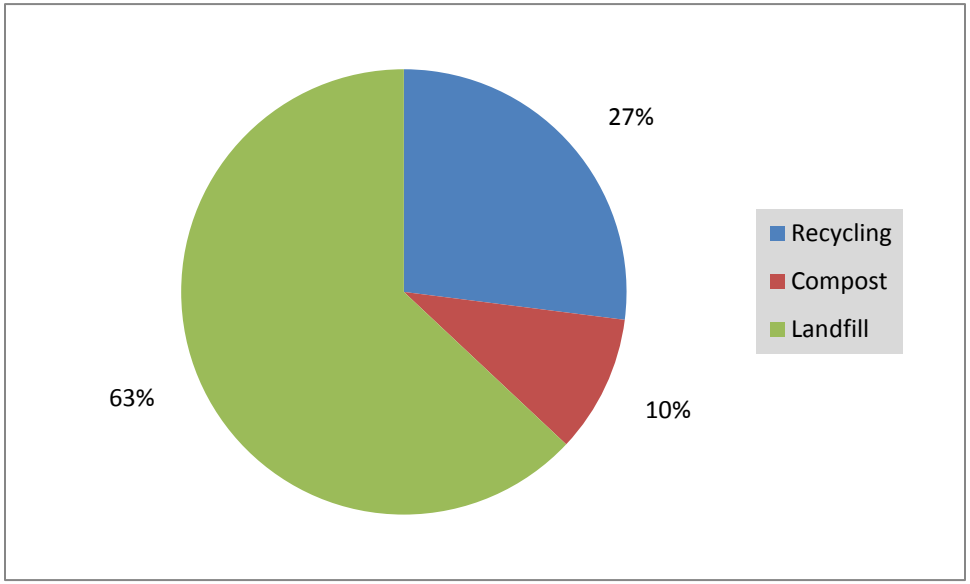

Figure 7 University of Winnipeg's Waste Profile for FY2012, including waste sent for recycling, compost and disposal in the landfill.

Table 9 Comparison of recycling and composting (metric tonnes) at University of Winnipeg from FY2006 to FY2012.

Type of Waste (t)	2006	2007	2008	2009	2010	2011	2012
Recycling	86.1	92.7	93.2	108	132.2	146	106.4
Compost	0	1.5	11.1	13.5	23.2	44.4	40.88

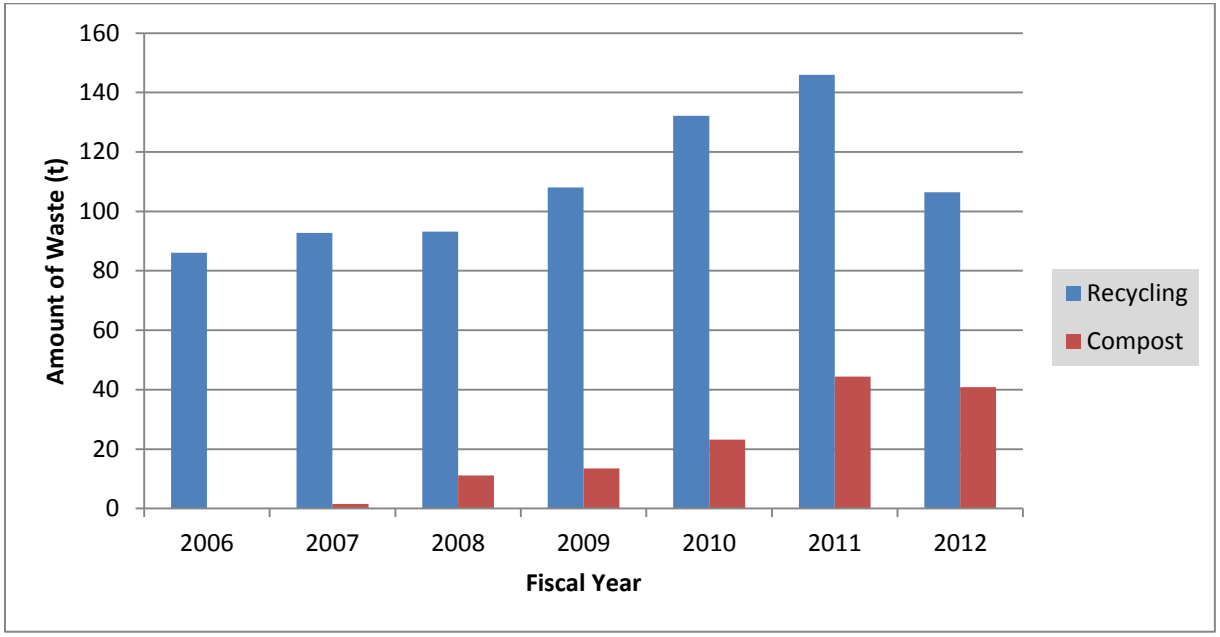

Figure 8 Annual recycling and composting amounts (metric tonnes) at University of Winnipeg for FY2006 to FY2012.

A waste audit conducted in February 2013 suggests that the University's diversion rate is 42.49%. An examination of annual weights for each waste stream suggests a diversion rate of 37% as shown in Table 9**.** This difference may emerge from the significant margins of error in annual municipal solid waste weights, for which extreme data variability is a continued and noted challenge, and in estimating the weight of compost.

Table 10 Comparison of municipal solid waste and total recycled waste (metric tonnes) for the University of Winnipeg in FY2012.

Waste Type	Amount (t)
Municipal Solid Waste*	248.0
Recycling	147.3
Total Waste	395.3
Diversion Rate	**37-42%**

*expect signification margins of error; see discussion above for explanation of diversion rate range.

Waste audit data also suggests an overall capture rate of 73.38%. Fine mixed paper and corrugated cardboard have the highest capture rates (88.23% and 89.50% respectively). The high capture rates for these two categories contribute significantly to the overall capture rate. Box board has the lowest (29.8%). Other paper, PET bottles/packaging, aluminum and steel cans, and HDPE bottles have capture rates ranging from 35.55% to 49.79%.

Cleaning

Progress has been made in developing stronger monitoring mechanisms to ensure the ongoing use of greener cleaning products on campus, despite ongoing challenges. While the majority of cleaning products in use are EcoLogo certified at present, it is clear that some cleaning functions are regularly demanding products that do not meet the University's green cleaning product criteria. The University remains committed to using 100% EcoLogo certified cleaning products. The Campus Sustainability Office is developing stronger partnerships with cleaning staff, and is developing training resources for cleaning staff aimed at strengthening understanding of waste diversion and green cleaning principles.

Grounds

In the spring of 2012, the University announced its commitment to eliminate the use of cosmetic pesticides in campus grounds keeping. This initiative was informed by provincial consultations on the implementation of an eventual ban on the use of cosmetic pesticides in Manitoba, for which the University has expressed its support. In determining the operational feasibility of this change at UWinnipeg, campus staff were able to learn from the successful implementation of pesticide-free grounds keeping at the Manitoba Legislature.

Students, faculty, and staff interest in participating in the development of an innovative campus grounds planning process continues to grow exponentially. Inspired by ideas ranging from turning all University landscaped areas into an educational and beautiful ethnobotanical garden to drawing on examples of edible landscapes in municipal building grounds throughout North America, the appetite on campus is strong for a totally renewed vision of what campus grounds are for and what they should represent. It is hoped that the establishment of a landscaping committee over FY013 will provide a forum for these ideas to be discussed and weighed.

3.3 Procurement & Waste Reduction

Figure 9 Diversity Food Services continues to serve only organic, locally roasted, fair trade coffee and works hard to purchase sustainable produce from local farmers. 100% recycled paper is now used in all offices on campus.

Practices such as including sustainability criteria in the evaluation of RFPs, prioritizing local suppliers, and prioritizing the purchase of products made with recycled content remain key elements of the University's. Mechanisms to measure the proportion of environmentally preferable purchases on campus remain elusive. Efforts to develop these mechanisms are ongoing. See appendices for details.

3.4 Transportation

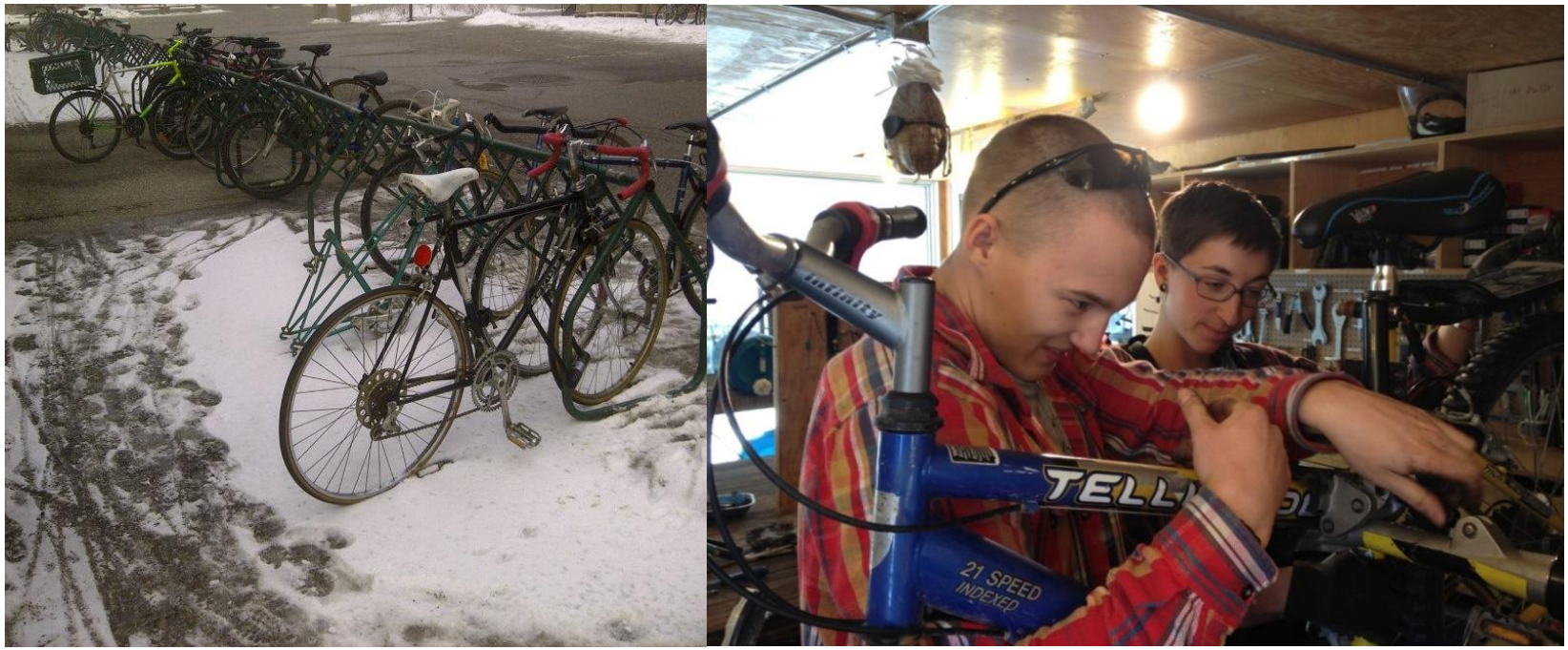

Figure 10 The University of Winnipeg – a 4-season cycling destination. Students work (and play!) in the UWSA BikeLab.

Over FY2012, the University's data collection process for tracking reimbursed travel was changed. While the long-term impact of this change promises significant improvements to data quality, the transition process resulted in some data gaps for FY2012. As such, data for this year is incomplete and is therefore not reported here.

3.6 Academics

Academic research on issues related to sustainability remains active at UWinnipeg. A list of current projects demonstrates the range of issues researchers are exploring.

Figure 11 Craig Willis, UWinnipeg's "Bat Man"

German Avila-Sakar & Scott Forbes - Development of Sustainable Inland Fisheries; Developing Organic Fertilizers from Fishery Waste.

Paul Holloway –Natural Products as a Biocontrol Method for Freshwater Fouling

Judith Huebner & Murray Wiegand- Effects of UV Radiation in water

Andy Park – Comparing cumulative growth, stand biomass, and carbon storage among fire-origin and planted stands of Red and Jack pine in Sandilands Provincial Forest, Manitoba; A framework for managed relocation of forest trees in southeast Manitoba.

Eva Pip - Nutrient status and chlorophyll a in relations to microcystins and anatoxins in Lake Winnipeg, MB

Jacques Tardif – Gap Dynamics in Trembling Aspen Stands, Dendroclimatology of Jack Pine and Tree-Ring Anomalies in Conifers from Manitoba.

Richard Westwood - Growth & diversity of Pine/Spruce plantations in Manitoba.

Craig Willis - Ecological Energetics of Small, Wild Animals: From Flexibility to Fitness; Artifical Thermal Refugia and White Nose Syndrome.

Athar Ata - Phytochemical Studies on Medicinally Important Plants (creating natural pharmaceuticals).

Charles Wong – Reducing rural wastewater effluent contaminants and toxicity, and improving water quality using new subsurface treatment technology

Figure 12 Bill Buhay investigates water quality in Manitoba

Alan Diduck – Learning, environmental governance and sustainability: Lessons from Manitoba Hydro's Bipole III project

Darshani Kumaragamage – Investigating phosphorus release from waterlogged soils in Manitoba to facilitate design standards and operational protocols for drainage systems.

Jacqueline Binyamin – Impact of climate change associated with global teleconnections, volcanic eruptions and the Arctic's now-ice albedo in Greenland

Danny Blair – Infrastructure for Wide Market Adoption of PHEV (Plug-in Hybrid Electric Vehicles); Assessment of climate change and variability in Manitoba/Western Interior; Impacts of climate change on transportation in the Western Interior.

Bill Buhay – Isotope based water quality research; Morden's Community Lead Environmental Action on Nutrient Elimination and Removal (CLEANER) in Dead Horse Creek.

Patricia Fitzpatrick - Government and Voluntary Policies for Mining Sustainability: Development, Implementation and Learning in Canada and Brazil; Silos and Systems, Development and Sustainability: Catalytic Forces in Mineral Policy?

Chris & Joni Storie – Applied Remote Sensing and Water Resource Management.

Soham Baksi - Multiple pollutants and the benefits of cleaner technology adoption.

Amrita Ray Chaudhuri - International cooperation to reduce climate change and the impact of clean technologies.

Maggie Liu –Accounting for sustainable development.

Shailesh Shukla - Social Learning for Sustainability: Building on Knowledge and Perspectives of Traditional Medicinal Healers from India, Canada and Columbia.

Jaime Cidro – Food Security as a social determinant of health for urban immigrant, refugee and Aboriginal populations: Ethno-cultural food consumption in Winnipeg.

Melanie O'Gorman - Africa's missed agricultural revolution: a quantitative study of the policy options.

Melanie O'Gorman & Danielle Gaucher – The right to clean water in First Nations.

Gina Sylvestre – In Transit: Using mobile methods to inform safer winter walkways in Winnipeg.

Jan Stewart – Community partners for sustainable education in South Sudan.

Bruno Silvestre – Advances in cleaner production – integrating cleaner production into sustainability strategies.

Gabriel Nemoga – Pan-Indigenous conceptions of the Mother Earth, development and sustainability.

Terry Duguid – Understanding policy enablers and barriers for the adaptive management and resilience of coastal communities in the Hudson Bay Inland Sea regions.

3.5 Governance, Finance & Administration

The University recognizes that strong sustainability management and governance are crucial to the transition to a sustainable campus and remains committed to continually improving sustainability governance on campus. See appendices for details on key activities in FY2012 and planned activities for FY2013. The Campus Sustainability Office website (sustainability.uwinnipeg.ca) also includes detailed information on existing policies and governance practices.

Figure 13 Campus Sustainability Office Website

4.0 Challenges

Waste Diversion: In FY2012, the University encountered what might be considered a 'perfect storm' with respect to its waste diversion initiatives: unexpected changes in bin servicing contracts, severely deteriorated bin infrastructure, and rising expenses for supplies that diverted financial resources away from communication and education. These challenges resulted in the University's first decline in recycling rates since it began tracking this information. A major bin infrastructure upgrade is planned for FY2013, with key support provided from the Winnipeg Foundation and the Canadian Beverage Container Recycling Association. Ongoing bin servicing and supply costs continue to be a matter of very significant concern.

Data collection and management: The University's first Sustainability Management System was established in 2006 and has served as the foundation of the University's sustainability performance monitoring and reporting since then. Since its inception, several areas of sustainability management have suffered from difficulties compiling and tracking data. While some degree of difficulty exists for most areas of data collection, waste, procurement and transportation have presented particular challenges. In addition to these challenges, the University is increasingly participating in third party reporting programs such as The Climate Registry and STARS (Sustainability Tracking, Assessment, and Rating System). The result is reporting overload in the Campus Sustainability Office alongside a desire to build on the University's existing strengths in data collection and management by strengthening internal data quality accountability and auditing mechanisms. These efforts will align well with an overall enhancement of institutional data management at the University; however, they will require close attention to be successful.

Integration of campus development planning and sustainability management: The University's ability to set its Kyoto target and achieve it speaks to the significant institutional progress that has been made in integrating sustainability planning and management into the University's overall planning processes. Still, the primary challenge and barrier to further improvements in the University's environmental impact is the work that remains to be done to properly integrate campus development planning with campus sustainability targets. To date, strategies to offset the GHG and energy impacts of campus expansion have been develop in reaction to already complete plans for new buildings and other related campus development projects. Moving forward, an integrated approach to campus planning that takes a whole-campus view of absolute energy, water, and GHG impacts is needed. Efforts to establish the governance structures needed to achieve this integration were begun in FY2012. Ongoing efforts are required in FY2013 to ensure further progress on this important challenge and leadership opportunity.

5.0 Conclusion

The University of Winnipeg celebrates a very significant achievement this year. In 2005 we set a greenhouse gas emission reduction target. We can now say that we performed all work required to ensure that it is met.

This achievement is, first and foremost, an achievement in sustainability management and governance. In FY2012, several years of strategic efforts to plan and manage greenhouse gas emissions and energy consumption resulted in significant reductions. The University was strongly focused on executing its energy retrofit to main campus buildings over the fiscal year. These efforts, along with the first heating season in which the University's hybrid heating system was fully operational, resulted in a 16% reduction in GHG emissions. While GHG emissions were not 6% below 1990 emission levels by the end of the fiscal year, the final stages of the energy retrofit efforts on campus were completed over the summer of 2013. With the efforts complete, the University's mechanical systems are operating to a projected annual utility consumption that is significantly lower than that required to meet the Kyoto target. The campus can be satisfied that its first target has been met and focus its efforts on achieving a 10% reduction in emissions as against a 1990 baseline by 2016.

As UWinnipeg looks ahead not only to its 2016 GHG reduction target, but also to the other targets contained in the *UWinnipeg Sustainability Strategy,* we can continue to emphasize a process-oriented approach to our work with a focus on strengthening our sustainability governance and accountability mechanisms.

Central to these efforts will be the fuller integration of campus development planning with campus sustainability targets. Establishing and ensuring an integrated approach to campus planning that takes a whole-campus view of absolute energy, water, and GHG impacts is a prerequisite to all other campus sustainability efforts moving forward. In addressing these governance needs, we recognize as an institution that it is now time to look closely and seriously at alternatives to natural gas for heating campus buildings. We have made excellent strides in energy efficiency. The next step is to play an active role in establishing viable alternatives to Manitoba's conventional energy sources.

As always, and perhaps even more than ever, ensuring that student learning includes participation in the sustainability governance process is crucial. As students across the continent are increasingly calling on universities to examine their investment and financial management policies to respond to climate change, and as the importance of high-level problem solving abilities are being increasingly emphasized by employers, UWinnipeg students stand to benefit from strong and active engagement in evolving campus sustainability governance and management.

Ensuring multiple opportunities for experiential learning about campus sustainability promises to support students in their efforts to pursue meaningful careers. Just as importantly, ongoing collaboration with our students can continue to challenge and inspire University staff to question assumptions, interrogate the status quo, and pursue excellence in campus sustainability governance, accountability and, of course, performance.

Appendix A: Results of FY 2012-13 Action Plans

A.1 Air, Energy and Water

Target: Reduce GHG emissions to 6% below 1990 levels by 2012, and to 10% below 1990 levels by 2016.
Target: Reduce energy intensity of operations by 18% relative to 2009 baseline by 2016.
Target: Reduce water consumption.

Action	Timeline	Status
Control, ventilation, and heating system changes to existing buildings (1200 TCO_2e) completed.	Phase I 2011/2012 Phase II by FY2015	Ahead of schedule. All Phase I initiatives complete. Phase II underway. Majority of Phase II work completed over spring/summer 2013.
Develop & implement UWinnipeg-specific 'Green Building Standards' to apply to all new building projects.	FY2011/2012	Contractor Brief & Green Building Dashboard established. Director, CSO has had meetings with Field House building team to ensure/monitor implementation. Significant challenges related to integrating this process with value engineering process. Dashboard likely introduced too late in process to provide meaningful contribution to project. Field House Energy Model suggests higher GHG emissions than hoped for. Lack of integration of broader sustainability planning with development projects continues to be a challenge.
Ensure that all new building acquisitions undergo an evaluation of their impact on the energy and GHG profile of campus.	Immediately/Ongoing	GHG evaluation criteria included in draft procurement procedure. Require further steps re: implementation
Utility data for owned and leased space is collected directly from utility providers.	FY2011	Ongoing challenges. Contact information for leased space has been compiled and progress made on securing utility data for leased space; however, building operations in some leased locations suggest that this information may not be obtainable.
Water consumption tracking challenges addressed.	FY2011	Many challenges addressed. Need to determine a way to better align reporting cycle with billing cycle. In FY2013, University will be testing a new type of water meter that may address this challenge.

Action	Timeline	Status
Washroom retrofit project complete.	FY2012	Ongoing progress; however, not yet complete. Projected completion: October 2013.
Green Office Certification program.	See Goal #8	Criteria included for water, energy & GHG reduction.

A.2 Waste, Grounds & Cleaning

Target: Achieve 65% waste diversion by 2016.

Action	Timeline	Status
Improved waste, recycling, and composting volume tracking system in place.	FY2012	Waste weight data collection re-established; better weighted-average for compost bins still required. Recycling data is sound.
Compost collection sites in all food service areas and main thoroughfares.	FY2012	Ongoing bin servicing & collection challenges have stalled progress on waste diversion initiatives. Major bin infrastructure upgrade project underway.
Recycling bins in all classrooms, hallways, and offices throughout campus.	FY2011	Ongoing bin servicing & collection challenges have stalled progress on waste diversion initiatives. Major bin infrastructure upgrade project underway.
Zero stand-alone garbage bins on UW campus.	FY2011	Bins removed over summer 2012; however, many continually reappear. Major bin infrastructure upgrade project underway.
Establish UW as community battery recycling drop off location.	FY2011	Done.
Establish UW as community E-Waste drop off location.	FY2012	Stalled. Key challenge: location.
Green Office Certification program includes criteria for composting, recycling, e-waste, and battery waste.	See Goal #8	Criteria included.
Student peer-to-peer waste stream education programming in place.	See Goal #9	Scheduled to begin over spring/summer of 2013. Lack of funds available for staff in CSO has delayed this project. If fundraising is successful, initial stages or program development will take place over the fall of 2013.

A.3 Procurement & Waste Reduction

Target: Reduce solid, hazardous, and electronic waste.
Target: University strives for better practices in sustainable procurement.

Action	Timeline	Status
Investigate options for Mass/Volume/Composition based procurement tracking system.	Summer 2012 – hire summer student to develop basic tracking tool. Fall 2012 – assess feasibility of implementing basic tracking tool.	No changes since February due to work load challenges in CSO & because next steps require further integration of sustainability data monitoring priorities with other institutional data-related efforts. Campus-wide data management improvements are currently underway.
Revised administrative policies relative to procurement reflect better practices in sustainable procurement practices.	FY2012	Sustainability content recommendations included in new procedure.
Investigate opportunities to replicate Diversity Foods model for other areas of campus operations.	FY2011/2012	Class project in the Faculty of Business and Education investigated potential business models for a social enterprise cleaning company. Presentations delivered at end of academic year. Findings in line with internal research conducted elsewhere. Social enterprise not viable for cleaning at the time.
Green Office Certification program includes criteria for waste reduction.	See Goal #8	Criteria included.
Student peer-to-peer waste reduction education programming in place.	See Goal #9	Scheduled to begin over spring/summer of 2013. Lack of funds available for staff in CSO have delayed this project. If fundraising successful, initial stages or program development will take place over the fall of 2013.
University computer purchases EPEAT Gold Certified.	FY2012 – 60%	Director, Purchasing tracking computer purchases. Current compliance under review, compliance very likely.

Action	Timeline	Status
Increase post-consumer content of all paper products purchased on campus (pending quality testing, increase to: 50% post-consumer content for office paper and letter head; 100% recycled content for business cards).	FY2012	Exceeded target: New shipment of FSC certified 100% post-consumer fibre Certified EcoLogo, Processed Chlorine free paper manufactured using biogas energy received. This represents a saving of approximately 1389 trees per year. Leslie Uhryniuk, Coordinator of Printing & Parking Services, awarded 2013 Campus Sustainability Recognition Award.
Negotiate product discounts for greener office supplies in office supply contract.	FY2013	Replaced with: "Identify greener office supply options as priority products for UWinnpieg office supply orders." in Action Plan.
Maintain commitment to purchase 100% EcoLogo certified cleaning products.	Ongoing	Challenges related to compliance continue. Currently working to acquire quarterly information on the specific cleaning products and quantities of products used on campus. Ongoing discussions between CSO and Facilities departments to address challenges through improvements in cleaning contract, staff training, and other measures.
Develop a vendor code of conduct outlining UW expectations for environmental and social responsibility.	FY2012	Under review. Plan to be developed in FY2013.

A.4 Transportation

Target: University strives for better practices in sustainable transportation.

Action	Timeline	Status
Sustainable commuting criteria included in Green Office certification program.	September 2012	Criteria included.
UWinnipeg established as car co-op site.	FY2012/2013	Peg City Car Coop car onsite behind the Buhler Building as of May 9, 2013.
Adequate bicycle parking in place in all UW buildings.	Ongoing	No new racks over winter. Challenges emerging over spring 2013 re: provision of secure parking for University staff. Director CSO & Bike Lab collaborating to develop proposed solutions.
Ongoing UWSA Bike Lab programming in place. Tracking system in place for GHG impacts from commuting to and from campus.	Ongoing FY2012	Regular hours in place & number of programs in the community. Initial research completed over summer 2012; student project over winter term. No progress to report, project stalled due to lack of funds for staff in CSO.
UPass and EcoPass transit options revisited as opportunities arise.	As possible	UWSA currently investigating potential private sponsors of UPass initiative. City of Winnipeg Public Works Committee approved UPass in principle, pending budget review.

A.5 Finance, Governance & Administration

Target: Sustainability Planning and Governance reflects better practices in Campus Sustainability and is integrated into University Planning and Governance procedures and processes.
Target: University provides tools and resources for greening University administrative systems.

Action	Timeline	Status
Deliver a written submission to The University of Winnipeg Strategic Review consultation process.	By January 13, 2012	Done.
Register UWinnipeg to report GHG emissions through The Climate Registry.	FY2011	Registered. Report to be filed by June 8, 2013.
In compliance with College & University Presidents' Statement on Climate Change Action, publish UWinnipeg Climate Action Plan.	April 2012	CAP posted on CSO website as required.
Become participating member of STARS (Sustainability Tracking Assessment & Rating System).	FY2012 – register FY 2013 – first report FY 2015 – second report	Registration will be delayed to wrap up first phase of consultation with Senate in June 2013. Not yet started.
Green Office Certification in Place.	September 2012 - implemented FY2014 – revised system to respond to roll out of needs assessment	Pilot launched in fall 2012, 2-3 participating offices over year. Scheduling challenges through the fall. Full rollout planned for fall 2013.
Needs assessment of administrative systems tools for greening processes complete.	FY2012 – needs assessment FY2013 – action plan roll out	Admin system needs identification process incorporated in modified Green Office program as a result of pilot results.
Sustainability related professional development needs are identified and an action plan is rolled out.	FY2012 – needs assessment FY2013 – action plan roll out	Professional Development needs identification process incorporated in modified Green Office program as a result of pilot results.

A.6 Academics

Target: Active culture of sustainability teaching, learning, research, and work.

Action	Timeline	Status
Student peer-to-peer co-curricular education programming in place.	FY2014	Scheduled to begin over spring/summer of 2013. Lack of funds available for staff in CSO have delayed this project. If fundraising successful, initial stages or program development will take place over the fall of 2013.
Establish means of tracking STARS academic indicators.	FY2011/2012	Director, CSO to present proposed first phase of academic data collection to Senate in June.
Provide opportunities for students to engage in campus-based sustainability learning through the CSO.	Ongoing	6+ students worked on campus-based projects through CSO during 2012-2013 academic year.

Appendix B: FY 2013-14 Action Plans

B.1 Air, Energy & Water

Target: Reduce GHG emissions to 6% below 1990 levels by 2012 and to 10% below 1990 levels by 2016; reduce energy intensity of operations to 18% below 2005 levels by 2016; reduce water consumption.

Action	Champion	Other key participants & their roles
Install smart meters (water, gas & hydro) and energy dashboard software.	Controls Technician	Chief Engineer; Director, Physical Plant(operational support); Associate Vice-President Finance & Operations (financial approval)
Next phase of sustainability retrofits planned and funding secured. Probably focus on building envelope.	Chief Engineer; Controls Technician; Director, Physical Plant	Associate Vice-President Finance & Operations (financial approval); Director, CSO (fundraising if necessary)
Explore possibility of a design competition to solicit ideas for how UW main campus could make deep (~80%+ below 1990) cuts to GHG emissions.	Director, CSO (planning); Director, University Advancement (fundraising)	Chief Engineer; Director, Physical Plant; Controls Technician; Associate Vice-President Finance & Operations
Finish Water Retrofit.	Director, Physical Plant	University plumber
Implement identified opportunities to further improve RCFE energy efficiency.	Controls Technician; Chief Engineer; Director, Physical Plant	Associate Vice-President Finance & Operations (financial approval); Biology & Chemistry departments (operational approval of plans)
Start tracking rented & leased space utilities.	Director, CSO	Associate Vice-President Finance & Operations/Manager, Real Estate Planning and Development (updates on rented/leased spaces); Leased buildings managers (data/permissions)
Advocate for 'cold' rents for future residential development.	Manager, Real Estate Planning and Development	Director, CSO (external sustainability communications); Managing Director UWCRC (external campus development communications)

Action	Champion	Other key participants & their roles
Celebrate Kyoto Achievement.	Vice-President, Human Resources, Audit & Sustainability	Sr. Executive Officer & Advisor to the President; Student (TBA); Director, CSO; Member of Faculty (TBA)
Finish current building retrofit projects (T21 boiler, HVAC in C/H & L/H, Controls Upgrades).	Chief Engineer; Controls Technician; Director, Physical Plant	Associate Vice-President Finance & Operations (financial approval)

B.2 Waste, Grounds & Cleaning

Target: Achieve 65% waste diversion by 2016; University demonstrates best practices in cleaning and grounds keeping.

Action	Champion	Other key participants & their roles
Purchase a cardboard baler.	Director, Physical Plant	Director, CSO (technical advice/research); Service workers (service worker input)
Purchase a food dehydrator or other organics handling machine.	Director, CSO	Director, Physical Plant (operational approval); Associate Vice-President Finance & Operations (financial approval)
Establish UWinnipeg as community E-waste drop off.	Director, CSO	Tech services; Physical Plant; CSO; Communications…
Upgrade compost/recycling/waste t bins in main campus buildings and revise collection/servicing practices on main campus.	Outreach & Office Assistant, CSO	CSO (best practice assurance, communication & education, sign development); Physical Plant (approval of operational plan); UWSA (student input, communication); Compost collection contractor (confirm functionality with existing compost collection capacity); Cleaning contractors (bin servicing plan buy-in); Communications (communication support and sign development); external partners (funding)
Establish process for Physical Plant and CSO to receive quarterly reports of all quantities and types/brands of cleaning products used on campus. Ensure return to use of 100% EcoLogo products (address potential need for exceptions on a case-by-case basis).	Director, Physical Plant	Director, CSO (technical advice/research); Cleaning contractor (compliance/reporting)
Ensure cleaning staff are trained to support waste diversion and green cleaning.	Outreach & Office Assistant, CSO	Director, Physical Plant; Cleaning contractor (advice/cooperation in training development and roll out)
Landscaping advisory group created and providing guidance on University grounds, planting, and maintenance (includes faculty, students, staff, and community).	Director, CSO,; Executive Director, Facilities	Associate Vice-President Finance & Operations; Director, Physical Plant; Service workers

Action	Champion	Other key participants & their roles
Ongoing pesticide-free grounds keeping.	Director, Physical Plant; Executive Director, Facilities	Service workers

B.3 Procurement, Finance & Waste Reduction

Target: University strives for better practices in sustainable procurement (& finance).

Action	Champion	Other key participants & their roles
Review procurement indicators. Purpose: establish a baseline.	Director, CSO	Director Purchasing Services
Develop sustainability elements for RFP evaluation grids.	Director Purchasing Services (final decision, owner)	Director, CSO (technical/research support)
Identify greener office supplies as priority products for UW office supply orders.	Director Purchasing Services (final decision, owner)	Director, CSO (technical/research support)
Maintain EPEAT tracking for computers (target 75% EPEAT Gold in FY 2013).	Director Purchasing Services (final decision, owner)	Director, CSO (technical/research support)
Determine best approach for meeting STARS criteria for a vendor code of conduct outlining UW expectations for environmental and social responsibility.	Director Purchasing Services (final decision, owner)	Director, CSO (technical/research support)
Ensure GHG impacts are incorporated into new online travel claim system.	Director, CSO	Financial services; Institutional analysis; Procurement
Maintain reimbursed travel tracking.	Outreach & Office Assistant, CSO (data entry)	Director Purchasing Services (administrative authority)
Maintain Fair Trade Committee/ Discussions with Fair Trade Canada.	Director, CSO	FT Committee Members

B.4 Transportation

Target: University strives for better practices in sustainable transportation.

Action	Champion	Other key participants & their roles
Develop Active Transportation design vision for UWinnipeg campus.	Head, Urban & Indigenous Services, Library; Manager, Real Estate Planning and Development; BikeLab Advocate	Director, CSO
Engage in advocacy for extended rapid transit service and other city-level transportation issues.	Director, CSO; BikeLab	TBA
Continue to pursue UPass.	VPA (UWSA), CFS	Director, CSO (provide support as needed)
Expand Bike Lab programming to better engage student and staff volunteers.	BikeLab	BikeLab Steering Committee
Develop locker use process for staff using showers for AT commuting.	Vice-President, Human Resources, Audit & Sustainability	Director, CSO
BikeLab to continue regularly counting bikes on campus and providing this data to CSO.	BikeLab	Director, CSO (to receive, compile & report on data)
Install secure parking at Rice, RCFE & Buhler, advertise secure parking at Duckworth better.	Director, CSO; BikeLab	TBA
InfoBooth to track sales of post-secondary bus passes.	Retail Manager, UWSA	Director, CSO
Participate in Bike to Work day/Week (winter & summer).	BikeLab	Outreach & Office Assistant, CSO
Participate in Workplace Commuter Challenge.	Outreach & Office Assistant, CSO	BikeLab

Action	Champion	Other key participants & their roles
Participate in Campus Commuter Challenge.	BikeLab	Outreach & Office Assistant, CSO
Explore possibility of holding 1st Canadian Tour de Fat.	EcoPIA	BikeLab, Director, CSO

B.5 Governance, Finance & Administration

Target: Sustainability Planning and governance reflect better practices in campus sustainability and is integrated into University planning and governance procedures and processes; University provides tools and resources for greening university administrative systems.

Action	Champion	Other key participants & their roles
Policy and Indicator Review planned for FY2014.	Director, CSO	Executive Director, Corporate Secretary and General Counsel Office, Corporate Secretary and General Counsel (Legal Counsel), A new Sust. Policy working group
Complete GHG Inventory verification process with The Climate Registry (report filed in June 2013).	Director, CSO	Chief Engineer; Finance; Housing; Individuals with responsibility over University vehicles
Register with STARS and compile first report.	Director, CSO; point people for each area to be identified	TBD
Develop solution to ongoing disconnect between capital planning, capital project management, and sustainability planning/management.	Vice-President, Human Resources, Audit & Sustainability	Director, CSO (technical advice/research); VP Finance and Administration and Chief Administration Officer; Managing Director UWCRC
Improve data quality and cross-departmental integration of data collection, collation, and auditing.	Institutional Analysis	Director, CSO (outline of CSO data needs); Physical Plant (utility data); TSC (network support etc…); Financial Services (financial data)
Roll out Green Office program.	Director, CSO	Office Assistant, CSO; Outreach & Office Assistant, CSO
Increase access and resources for campus communications.	Outreach & Office Assistant, CSO	Communications
Launch discussions and movement toward ethical investment options in University pension funds .	Outreach & Office Assistant, CSO	Pension trustees

Action	Champion	Other key participants & their roles
Ensure CSO participation in revised travel and entertainment policy/procedures.	Associate Vice-President Finance & Operations	Director, CSO (input)
Ensure CSO participation in selection and implementation of new financial / resource management system (feasibility stage in 13-14).	Associate Vice-President Finance & Operations	Director, CSO (input); Financial Services; Director Purchasing Services

B.6 Academics

Target: Active culture of sustainability teaching, learning, research, and work.

Action	Champion	Other key participants & their roles
Compile inventory of sustainability research and courses as discussed with Senate.	Director, CSO	Departments & Faculties (cooperation); Academic Working Group (input, feedback); CSO staff (administrative support)
Establish a Campus Sustainability course (emphasis on experiential learning).	Faculty Member, Environmental Studies and Sciences	ELIN (potential collaboration); external partners; internal partners (CSO & others TBD)
Establish co-curricular transcript.	VPA (UWSA)	Senate
Develop institutional 'definition' of greener teaching methods (i.e. paperless course evaluations, delivery etc.).	Director, CSO	Academic Working Group on Sustainability
Begin developing student peer-to-peer education program.	Director, CSO	UWSA (consultation/collaboration); Outreach & Office Assistant, CSO (research); Student Services (consultation/collaboration); Housing (consultation/collaboration); Diversity Foods (consultation/collaboration)