The University of Manitoba campuses are located on original lands of Anishinaabe, Cree, Oji-Cree, Dakota, and Dene peoples, and on the homeland of the Métis Nation.

The University of Manitoba is committed to a renewed relationship and dialogue with First Nations, Métis, and Inuit peoples based on the principles of mutual trust, respect, and reciprocity. We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of reconciliation and collaboration.

The University of Manitoba is committed to ensuring that First Nations, Métis and Inuit knowledge, cultures and traditions are embraced and reflected in the pursuit of its mission.
The University of Manitoba’s Fort Garry Campus and the historic Red River.
EXECUTIVE SUMMARY

The University of Manitoba is committed to being a sustainable development leader. Our teaching and research contributes to global knowledge of sustainability and the actions and decisions we make build a healthy, inclusive community that respects the Earth.

The University’s Sustainability Policy outlines a commitment to leadership, integrated sustainability planning and a participatory approach. The University’s first Sustainability Strategy, created in 2012, drove action across the University community. Progress was recognized by the achievement of a Manitoba Excellence in Sustainability Award in 2014 and a Sustainability Tracking, Assessment and Rating System (STARS) Silver rating from the Association for the Advancement of Sustainability in Higher Education in 2015.

The strategy presented here focuses on the next 3 years with inclusion of longer-term activities to continue momentum and imagine the path forward. The vision and overall direction of the strategy remain consistent with that set in 2012, and its goals have been updated to be reflective of the University’s strategic priorities as stated in Taking Our Place Strategic Plan 2015-2020.

The strategy identifies 70 actions related to resource conservation and efficiency, transportation and accessibility, ecology and environment, land use, climate and campus life that touch on all aspects of University programs, operations and community. A robust set of performance indicators is also included to enable impacts and overall progress to be tracked.

Collectively, these actions will create new opportunities for students, deliver social benefits for our community, affirm and maintain our position as a school and an employer of choice, and contribute to the sustainable financial management of the University. If fully implemented, the strategy will result in a Gold rating under the STARS 2.0 system.

Achieving the University’s sustainability vision will require involvement and commitment from all members of our community. Partnerships with the community, the private sector, governments and other universities and colleges will be essential to growing and sharing knowledge that supports efficient progress and also for the University of Manitoba to share our experience, innovation and leadership with others.
SUSTAINABILITY BIG MOVES

Sustainability Strategy 2016-2018 includes eight big moves that will drive integration of sustainability into new areas or substantially broaden the reach of current initiatives.

• Sustainability Research in Action Program: An applied research opportunity that establishes the campus as a living lab for the study and advancement of sustainable development and could grow to support community research placements.
• Green Office Program: Participants can select actions and approaches that advance office sustainability goals related to waste, energy, water, transportation and kitchens.
• Sustainable Transportation Plan: A plan to enhance and promote the range of infrastructure and services available to support healthy, safe and sustainable mobility options for our community.
• Organic Waste Management: Exploring ways to safely and affordably use organic waste as a resource will support greenhouse gas emission reduction, waste reduction and nutrient management.
• Visionary (re)Generation Fort Garry Campus Master Plan: This new plan will be a framework for the University’s largest campus to develop into a connected, transformative, sustainable, destination community.
• Indigenous Design and Planning Principles: Developed through community dialogue led by the University’s Indigenous communities, during The Visionary (re)Generation planning process these principles will support Indigenization and promote understanding, inclusion and reconciliation.
• Advancing the Strategic Research Plan: The research themes and signature areas in this 5-year plan represent significant contributions to global sustainability.
• Green Operations & Maintenance: Renewing policy around green buildings will support the creation of learning and work environments that foster wellness, productivity and that meet the needs of the community today and tomorrow.
MESSAGE FROM THE PRESIDENT AND VICE-CHANCELLOR

I am pleased to introduce the University of Manitoba’s Sustainability Strategy 2016-2018. This Strategy will further activate the University’s commitment to being a leader in sustainable development and to delivering world-class teaching, learning, and research while respecting and regenerating the planet.

Working together, our community has successfully advanced sustainability in a number of key areas over the last three years: energy demand reduction and energy efficiency continue to improve, our grounds management team is using integrated pest management to reduce the need for pesticides, and sustainable transportation options have increased. Sustainability is integrated into new areas such as orientation and office programs, and a range of priority initiatives are underway to support social sustainability in areas of Indigenous achievement, mental health and active living. As well, the University’s Strategic Research Plan, completed in 2015, includes a range of themes and signature research areas that will continue our contribution to building global sustainability knowledge.

Looking ahead, the actions in Sustainability Strategy 2016-2018 will see the creation of new opportunities to deliver social benefits for our community, affirm and maintain our position as a school and an employer of choice, and contribute to the sustainable financial management of the University. These actions will provide both short and long-term benefits to the University and its endeavour.

I would like to thank University community members for the collaboration, creativity, and dedication that has carried us this far, and to empower you – as trailblazers and visionaries – to be part of the next steps we take together.

David T. Barnard, Ph. D.
President and Vice-Chancellor
MESSAGE FROM THE SUSTAINABILITY COMMITTEE CHAIRPERSON

Since 2011, the University of Manitoba’s Sustainability Committee has worked to transform the University of Manitoba into a more ecologically, socially and economically sustainable place in which to learn, work and play. We have provided advice and guidance to the University, and particularly to the Office of Sustainability, in support of a wide range of exciting sustainability initiatives.

The work of the Sustainability Office and all the students, staff and faculty that have helped them in the last couple of years cannot be overstated. That effort has got the University community where we are now, which includes a prestigious institutional rating of Silver from the Association for the Advancement of Sustainability in Higher Education (AASHE) and a commendation for being a “top performer” in several areas in the AASHE annual review of 2015.

The Sustainability Committee envisions the University’s sustainability plan as a living document, to be reviewed and renewed regularly. As the successor to Sustainability at the University of Manitoba: A Vision for Action (2012), the Sustainability Strategy 2016-2018 is a critical step in realizing UofM’s sustainability vision and in addressing some of the most pressing issues we face as an institution, as a community and as a society. Sustainability Strategy 2016-2018 sets out an ambitious agenda for the integration of sustainable development into all University activities.

Every member of the Sustainability Committee looks to the future with great optimism in terms of continuing achievement on sustainable development at the University, while taking on new and pressing sustainability challenges.

In this, we act to fulfill the responsibilities of institutions of higher learning to create, maintain and share knowledge for national wellbeing and to develop and advance sustainability locally.

Dr. John Sinclair
Chairperson, University of Manitoba Sustainability Committee
Professor, Natural Resources Institute
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The UMSU garden grows healthy food, social connections, and education opportunities.
VISION

The University of Manitoba simultaneously pursues ecological, social and economic sustainability through its programs and operations. Our teaching and learning, research and community engagement supports regeneration, participation and resource efficiency. We grow opportunities: our present actions ensure future generations can achieve levels of well-being that are at least as great as those achieved now.
OUR PERSPECTIVE ON SUSTAINABILITY

The University views sustainability as having three interrelated and mutually supportive dimensions: environmental, social, and economic. Planning to address these dimensions of sustainability will protect the long-term resiliency of the University in terms of its programs, people and its physical resources.

Social sustainability includes the preservation and strengthening of cultural identities; the decreasing of social inequities; the empowerment of marginalized groups; and an emphasis on collaborative, participatory, and inclusive decision-making processes. There is also a particular commitment to social sustainability that builds and expands an Indigenous presence and visibility at the University that will result in improved access, recruitment, retention, and completion for First Nations, Inuit and Métis learners. The University is dedicated to becoming a place where all Indigenous students have a home.

Environmental sustainability includes maintaining and increasing ecological functions, ensuring that natural resources and ecosystems are not utilized beyond their regenerative capacities, transitioning from non-renewable to renewable natural resources and energy, and preserving and enhancing biodiversity. The way we design the built environment has implications for the long-term reduction of greenhouse gas emissions. For example, designing a more walkable dense urban environment can reduce car dependency and allow for more land dedicated to the natural systems that both human and non-human species rely on.

Economic sustainability necessitates making economic decisions that reflect environmental and social effects, and requires prudence and care in creating efficiencies and locating new revenue streams to ensure that resources continue to be available to pursue the University’s overall mission. Overall, the University wishes to ensure that its present actions do not decrease the chances for future generations to achieve levels of well-being that are at least as great as those achieved now.
INTRODUCTION

CONTEXT

Welcome to the University of Manitoba’s Sustainability Strategy. This is the second sustainability strategy for the University, and it builds from the vision established in Sustainability at the University of Manitoba: A Strategic Vision for Action, developed in 2012. Like its predecessor, Sustainability Strategy 2016-2018 offers a shared vision for sustainability—a vision for the community, from the community. Through dialogue and consultations across the University including the Visionary (re)Generation initiative the University of Manitoba community has put forward a picture of the place we want for today and for tomorrow.

The vision for leadership and integration of sustainable development into all University activities is an ambitious one, but we are primed for success: we have a caring, committed, creative and connected community and have recently confirmed sustainability as a core value and integrated it into Taking Our Place, our strategic plan. These factors and others have given us a proven capacity for achievement, evidenced by the progress made over the last 3 years.

PURPOSE

This is the first renewal of the University’s inaugural sustainability plan. It is also the first of two anticipated renewals that will support achieving the ambitious goals of Taking Our Place, the University’s overall strategic plan (which extends until 2020). Taking Our Place confirms sustainability as a core value of the University, along with related values of accountability, respect, equity and inclusion. Achieving the University’s strategic priorities of inspiring minds, driving discovery and insight, creating pathways, building community and forging connections will require that we:

• Efficiently and effectively steward our human, natural and physical resources to meet future needs – planning for the seventh generation and beyond
• Prevent waste, conserve and enhance our environment to provide opportunities for future generations to create, innovate and succeed
• Ensure community participation in support of shared responsibility and understanding, reconciliation and collaboration
• Acknowledge our global responsibility and promote equitable and integrated solutions to social, environmental and economic challenges

Priority actions (2016-2018) are intended for action within horizon of this strategy.
Medium term actions are next steps and may be advanced before 2018 as resources permit.
Long term actions serve to guide direction, signal intention, and provide inspiration.
Together, the Sustainability Committee and the Office of Sustainability are responsible for the sustainability strategy’s development and implementation. Guided by the University’s Sustainability Policy and Procedure, the Vice President (Administration) and Vice President (Academic) & Provost established the Sustainability Committee in 2011. This committee is charged with responsibility to:

- Develop a University of Manitoba Sustainability Action Plan identifying recommended sustainability goals, initiatives, actions and target dates to support the Sustainability Policy
- Assist the Office of Sustainability to educate the University community and to communicate and promote implementation of the sustainability policy action plan

The Committee was integral to the development of the first sustainability strategy and provided leadership on both form and content of this Strategy. As a multi-stakeholder, inter-disciplinary group, the Committee contributes valuable stakeholder analysis and strategic intelligence to the work that the Office of Sustainability does.

Through the Office of Sustainability, the University of Manitoba reports on its progress in addressing ecological, economic and social sustainability through regular reports to government, to its peers (Sustainability Tracking, Assessment and Rating System — STARS, updated at least every 3 years), and to internal and external communities (Annual Reports).

The University’s Sustainability Strategy is intended to be a living document, with updates to strategies made as new information and opportunities present themselves. Although vision and goals are intended to remain fixed within the strategy’s horizon, innovation, partnerships and feedback loops will determine, to some extent, the specific order and structure of strategies applied. For this reason, endorsement of the Strategy in principle by the University’s Board of Governors will be sought.

At the conclusion of this planning interval (2018), a thorough review of sustainability vision and goals as well as strategic actions will be undertaken, as contemplated with the University’s sustainability vision was first developed.
ENGAGEMENT

STAKEHOLDER ENGAGEMENT

The Sustainability Strategy benefited from teachings, ideas and advice from many members of the University community over a ten month period, including:

• The student, faculty and administrative representatives of the University of Manitoba Sustainability Committee, who guided the overall structure of the plan and were instrumental to aligning goals with the University’s overall sustainability vision
• Members of the President’s Executive Team
• The Campus Planning and Design Committee
• Members of the University’s Indigenous community
• Visionary (re)Generation working groups, consultant team, and all of the students, staff and neighbours who provided input to the campus master planning project
• More than fifty program managers, faculty members and student leaders engaged by the Office of Sustainability during the Sustainability Tracking, Assessment and Rating System (STARS) benchmarking exercise
• Students and staff who participated in open houses
• Indigenous Achievement
• Board of Governors
• Student Affairs Professional Development Workshop
• Middle Managers Group
• Ancillary Services Management Team
• Senior Management Group
• Associate Deans (Undergraduate)
• Associate Deans (Graduate)
• University of Manitoba Graduate Students Association Council
• University of Manitoba Students’ Union Council

COMMUNITY ENGAGEMENT

In addition to students and staff at the University, this strategy has benefited from community input received through visitor feedback, including those who participate in sustainability events like the International Winter Cycling Congress (2014) and annual Bike to Work Day activities. Formal engagement structures like the Neighbourhood Network coordinated by the University’s Campus Planning Office provide further feedback. Additional input and feedback on drafts was provided by members of the Manitoba Sustainability Coordinators Network and the Canadian Alliance of College and University Sustainability Professionals.

In concert with the University’s priority to connect with community, raising awareness of sustainability opportunities and challenges and seeking advice and collaboration from the community will continue through the activities of the Office of Sustainability and other University units. In addition to future events and working groups, social media will continue to be a platform for engagement. The conversation about University of Manitoba sustainability is ongoing at SustainableUofM (Facebook), SustainableUofM (Twitter) and um_sustainability (Instagram).

Hands-on engagement of the University community will be supported through interactive programs such as a Green Office initiative and Sustainability Research in Action living lab program. The former will support green champions to take action on integrating University sustainability directions into their work; the latter will provide students with applied research opportunities that contribute to campus and community sustainability. The Sustainability Research in Action program will benefit from further integration of sustainable development education into course and research offerings and from the University’s highly-utilized co-curricular volunteer program.
The University has benefited from partnerships with industry, utility providers, government, community and peer institutions. In support of innovation, leadership and the University’s global mission, the role of partnerships will only increase going forward. In particular, a partnership approach will be critical in areas such as:

- Continuing to reduce demand and promote efficient use of energy
- Decarbonizing the University’s energy profile
- Enhancing sustainable transportation for commuters, visitors and business travelers
- Increasing the resiliency of infrastructure in the face of a changing climate
- Growing access to world class sustainability education opportunities
- Staying on the leading edge of research for sustainable development

PARTNERSHIPS

The University community played a critical role in generating, testing, and prioritizing sustainability actions.
The University of Manitoba has a proud history of education and research excellence in many sustainability-related fields including environmental studies, environmental science, agriculture, community health and engineering. Teaching sustainable development theory, method and action is critical to addressing current and future global challenges. Today, approximately 7% of all courses offered at the University are sustainability-focused or related. The University offers a variety of sustainability-focused immersive experience learning opportunities including the Churchill Travel Study Course (12 days) and a wide range of Service Learning programs.

The Sustainability Strategy builds on these strengths with actions related to resource conservation and efficiency that create informal and non-formal learning opportunities; foster collaboration and increase applied learning opportunities on campus.

In Taking Our Place: University of Manitoba Strategic Plan 2015-2020 the University identifies five strategic priorities. Action on these priorities is essential for us to achieve our vision of an institution that is able to deliver excellence in teaching and research; is student-focused, responsive, transformative; that continues to support Indigenous achievement and is an employer of choice. The Sustainability Strategy has been carefully integrated with these five priorities.

The University’s contribution to local and global knowledge is furthered by an impressive record of impactful research on sustainability questions. Achievement in these areas is in keeping with the University’s mission to create, preserve and communicate knowledge, and thereby, contribute to the cultural, social and economic well-being of the people of Manitoba, Canada and the world. The Strategic Research Plan supporting Taking Our Place brings a strong focus to sustainability research in a diverse range of fields.

The Sustainability Strategy includes a creation of a Sustainability Research in Action program that treats campus as a living lab. This program will foster partnerships between operations staff/programs and academic programs to study sustainability performance and support innovation and learning.
Creating Pathways to Indigenous Achievement

Sustainable development requires participation and achievement opportunities for all. Incorporating Indigenous perspectives into our learning, discovery and engagement processes will help transform the lives of both Indigenous and non-Indigenous peoples and communities and make Manitoba and Canada a better place to live. An inclusive and supportive learning environment will foster the development of the next generation of Indigenous leaders and promote social and cultural sustainability.

Listening and dialogue with Indigenous communities and Indigenous planning and design principles will support actions in the Strategy. Projects related to Indigenous Achievement and Indigenization will be encouraged through the Sustainability Research in Action program.

Building Community that Creates an Outstanding Learning and Working Environment

Exceptional academic and scholarly work benefits from a safe, diverse, connected, healthy and inclusive environment. The University is working to create a learning and work environment that meets the needs of the University’s future, recognizes Indigenous cultures of Manitoba, integrates with surrounding communities and supports environment and resource sustainability.

Goals and actions in the Sustainability Strategy emphasize ensuring that safe, healthy and sustainable spaces, food and transportation options are available to all community members. Accounting for a changing climate will enhance the resiliency of our place.

Forging Connections to Foster High-Impact Community Engagement

Connections fostered through partnerships, engagement and openness are central to fulfilling the University’s mission. Working with alumni, external partners and communities adjacent to our campuses offers opportunities to advance sustainability initiatives on and off campus for the benefit of all Manitobans. Community-based applied learning opportunities for students are key to implementing, testing and innovating in the field of sustainable development.

The Sustainability Strategy sets a direction to grow community research partnership opportunities and to enhance physical connections to the community through sustainable transportation networks.
GOALS, STRATEGIES & PERFORMANCE MEASURES
Members of the University of Manitoba community pledge their support for sustainability during Orientation Days 2015/16.

Working together, we can achieve our sustainability vision.
**BASELINE SUSTAINABILITY METRICS**

Key performance indicators for sustainable development are listed below. This group of measures reflects University of Manitoba strategic priorities and top-line performance in key areas. Substantial additional performance assessment was completed in 2015 and is planned to be done triennially through the Association for the Advancement of Sustainability in Higher Education's Sustainability Tracking, Assessment and Rating System (STARS) that includes over seventy indicators.

The Sustainability Strategy plans on the basis of what we know. The University will work to develop baseline information for the indicators identified as new or needing further development (shown in grey text).

<table>
<thead>
<tr>
<th>Operational Metric</th>
<th>2014-15</th>
<th>Annual Trend (vs. prior year)</th>
<th>Trend vs. Baseline</th>
<th>Baseline Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy demand (kWh)</td>
<td>333,412,799</td>
<td>5%</td>
<td>5%</td>
<td>2013/14</td>
</tr>
<tr>
<td>Energy use intensity (kWh/gsf)</td>
<td>49.79</td>
<td>1%</td>
<td>1%</td>
<td>2013/14</td>
</tr>
<tr>
<td>Renewable energy (% of total)</td>
<td>32</td>
<td>1%</td>
<td>1%</td>
<td>2013/14</td>
</tr>
<tr>
<td>Energy use per weighted campus user** (kWh)</td>
<td>13,351</td>
<td>5%</td>
<td>5%</td>
<td>2013/14</td>
</tr>
<tr>
<td>Potable water use (ML)</td>
<td>726.3</td>
<td>4%</td>
<td>42%</td>
<td>2001/02</td>
</tr>
<tr>
<td>Potable water use intensity (L/gsf)</td>
<td>123.6</td>
<td>4%</td>
<td>16%</td>
<td>2001/02</td>
</tr>
<tr>
<td>Potable water use per weighted campus user** (L)</td>
<td>29,085</td>
<td>4%</td>
<td>8%</td>
<td>2001/02</td>
</tr>
<tr>
<td>Total waste generated (t)</td>
<td>2,145</td>
<td>1%</td>
<td>1%</td>
<td>2008/09</td>
</tr>
<tr>
<td>Waste to landfill (t)</td>
<td>1,688</td>
<td>4%</td>
<td>15%</td>
<td>2008/09</td>
</tr>
<tr>
<td>Waste diverted from landfill (%)</td>
<td>27</td>
<td>3%</td>
<td>15%</td>
<td>2008/09</td>
</tr>
<tr>
<td>Waste to landfill per weighted campus user** (kg)</td>
<td>67.6</td>
<td>3%</td>
<td>3%</td>
<td>2008/09</td>
</tr>
<tr>
<td>Drive-alone rate (% of total)</td>
<td>35*</td>
<td>Not assessed</td>
<td>No change</td>
<td>2012/13</td>
</tr>
<tr>
<td>University vehicle fleet composition (% that is zero or low emission)</td>
<td>6.0</td>
<td>No change</td>
<td>No change</td>
<td>2013/14</td>
</tr>
<tr>
<td>Campus walkability (accessibility, user experience)</td>
<td>TBD</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2015/16</td>
</tr>
<tr>
<td>Rainwater management (post vs. pre-development runoff; capture/reuse)</td>
<td>TBD</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2015/16</td>
</tr>
<tr>
<td>Operational Metric</td>
<td>2014-15</td>
<td>Annual Trend (vs. prior year)</td>
<td>Trend vs. Baseline</td>
<td>Baseline Year</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------</td>
<td>---------</td>
<td>-------------------------------</td>
<td>-------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Ecology and land management (% of grounds certified organic or protected; % of grounds with indigenous or adaptive species)</td>
<td>TBD</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2015/16</td>
</tr>
<tr>
<td>Pesticides applied to core campus grounds (L)</td>
<td>0</td>
<td>No change</td>
<td>260</td>
<td>2008/09</td>
</tr>
<tr>
<td>Construction materials (% of total that is local, certified, recycled/reclaimed)</td>
<td>TBD</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2015/16</td>
</tr>
<tr>
<td>Procurement (% of purchases in key categories that are 3rd-party certified)</td>
<td>TBD</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2015/16</td>
</tr>
<tr>
<td>Classroom utilization rate (% of available time)</td>
<td>46</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2014/15</td>
</tr>
<tr>
<td>Green buildings (gsf meeting standard, % of total)</td>
<td>84,700 or 2%</td>
<td>No change</td>
<td>No change</td>
<td>2013/14</td>
</tr>
<tr>
<td>Scope 1 and 2 greenhouse gas emissions (t CO₂e)</td>
<td>TBD</td>
<td>113,944.6*</td>
<td>No change</td>
<td>2013/14</td>
</tr>
<tr>
<td>Emission intensity (kg CO₂e/gsf)</td>
<td>TBD</td>
<td>19.4*</td>
<td>N/A (new measure)</td>
<td>2013/14</td>
</tr>
<tr>
<td>Greenhouse gas emissions per weighted campus user** (t)</td>
<td>TBD</td>
<td>4.57</td>
<td>No change</td>
<td>2013/14</td>
</tr>
<tr>
<td>Local/sustainable food purchases (% of total spent)</td>
<td>21</td>
<td>N/A</td>
<td>4%</td>
<td>2012/13</td>
</tr>
<tr>
<td>Implementation of Mental Health Strategy</td>
<td>In progress</td>
<td>Strategy created</td>
<td>N/A</td>
<td>2013/14</td>
</tr>
<tr>
<td>Self-reported mental health (survey results; % of students reporting feeling hopeless)</td>
<td>Not assessed</td>
<td>47% (no trend to be calculated)</td>
<td>No change (no trend to be calculated)</td>
<td>2013/14</td>
</tr>
<tr>
<td>Active gym memberships (student) (count)</td>
<td>12,801</td>
<td>60% ↑</td>
<td>60% ↑</td>
<td>2013/14</td>
</tr>
<tr>
<td>Active gym memberships (student) (% of headcount)</td>
<td>43%</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2014/15</td>
</tr>
<tr>
<td>Active gym memberships (staff) (count)</td>
<td>1,075</td>
<td>4% ↑</td>
<td>4% ↑</td>
<td>2013/14</td>
</tr>
<tr>
<td>Active gym memberships (staff) (% of headcount)</td>
<td>10%</td>
<td>N/A (new measure)</td>
<td>N/A (new measure)</td>
<td>2014/15</td>
</tr>
<tr>
<td>Sustainability education opportunities (% of course offerings that are focused or related to sustainability)</td>
<td>7%</td>
<td>No change</td>
<td>No change</td>
<td>2013/14</td>
</tr>
<tr>
<td>Research for sustainability (% of researchers engaged in sustainability research)</td>
<td>20</td>
<td>N/A (new measure)</td>
<td>New measure</td>
<td>2014/15</td>
</tr>
<tr>
<td>Sustainability certification (STARS rating)</td>
<td>Silver</td>
<td>N/A (assessed tri-annually)</td>
<td>Bronze (estimated)</td>
<td>2012/13</td>
</tr>
<tr>
<td>Investments (formal responsible investment strategy in place)</td>
<td>No</td>
<td>No change</td>
<td>No change</td>
<td>2014/15</td>
</tr>
</tbody>
</table>

¹ Energy consumption data for heating was normalized using a weather normalization factor based on the Heating Degree Days for each year.
*Estimate that may be revised pending further research/data verification
**The “weighted campus user” formula accounts for residential and distance education students and is based on a standard formula developed by the Association for the Advancement of Sustainability in Higher Education (AASHE).
1. RESOURCE CONSERVATION AND EFFICIENCY

Background
Over the last 25 years, the University of Manitoba has worked to introduce new green practices to many aspects of building design and operations in an effort to reduce demand for resources. A long-term commitment to optimizing efficiency, promoting demand reduction and prioritizing maintenance activities has resulted in some impressive results. Nonetheless, there remain significant opportunities to formalize current practices and to strengthen or broaden integrated planning.

Vision Statement
Reduce campus-wide resource demands through reduction (including both demand reduction and efficiency measures), reuse and recycling programs and strategies.

Key goals and objectives
1. Reduce energy consumption (kWh/m2) by 5% each year
2. Increase use of renewable energy for buildings to 80% by 2040
3. Reduce water consumption by 10% in the next 3 years
4. Reduce waste to landfill and diversify reuse and recycling options.
5. Reduce demands for virgin resources required for University operations
6. Reduce construction resource needs and consumption impacts
7. Establish, implement and maintain minimum sustainability specifications for goods and services

Strategies
Priority actions for 2016-2018:
1. Develop & implement a University green building policy/strategy (for construction and operations); support with renewed standard specifications:
   • Energy performance standards for all new construction projects
   • Water conservation and efficiency standards for all new construction projects
   • Building-level renewable energy generation feasibility in all new construction projects
2. Develop/ones building occupant engagement campaign.
3. Pilot occupancy-driven energy management systems (in partnership with Faculty of Engineering).
4. Explore partnerships for building energy reduction projects and delivery models.
5. Complete a biogas/biomass energy feasibility study.
6. Research business case for on-campus, in-vessel compost system and other organic waste management solutions.
7. Develop a waste prevention strategy, including access to drinking (tap) water.
8. Establish sustainable purchasing tracking program to include: electronics, cleaning products, office paper, inclusive/local products and life cycle cost analysis and sustainable business partners.
9. Develop and implement a baseline data capture and tracking strategy for third party sustainability certifications of purchased goods and services.
10. Develop building-level metering strategy.
11. Develop building-level metering strategy for energy intensive spaces, in keeping with a green lab approach.
12. Portfolio-wide water use assessment to identify water saving opportunities.

**Medium-term actions:**
1. Solar photovoltaic/solar thermal feasibility study and project identification.
2. Establish sustainable purchasing tracking program for construction, renovation & demolition projects, making use of existing Leadership in Energy and Environmental Design (LEED) tracking tools.
3. Establish and implement tracking method for laboratory hazardous materials, as part of a green lab approach.

**Long-term actions:**
1. Develop coordinated tracking for light bulbs, oil, paint, solvents.
2. Establish a program and implement heat island reduction strategies (green roofs, shading).

**Accountability**
- Energy- and water-related strategies will be managed by Physical Plant (Architectural & Engineering Services) with support from Campus Planning Office, Office of Sustainability and utility, industry and government partners.
- Consumption and waste reduction strategies will be managed by Physical Plant (Waste Prevention Office & Environmental Health and Safety Office) with support municipal/industry partners.

**Community Engagement Highlights**
- Developing healthier, more comfortable buildings and spaces that foster productivity will require understanding occupants’ needs and goals – dialogue and feedback loops will be part of the process.
- Occupant engagement will support waste reduction and energy/water efficiency initiatives.
- Conversations with suppliers and buyers will guide procurement initiatives to ensure solutions are practical, user-friendly and reflect market realities while supporting transformation.

**Monitoring and follow-up procedures:**
- Annual reporting on key performance indicators will guide implementation of the plan. Indicators include:
  1. Total building energy use
  2. Total potable water use
  3. Waste production and diversion
  4. Purchasing reports relating to third-party sustainability certifications, reclaimed/recycled content
- Continuous monitoring of market transformation opportunities will be important; stimulating/supporting the development and availability of new offerings for sustainable energy, waste management and construction products will influence the University’s success in this area.
2. TRANSPORTATION AND ACCESSIBILITY

Background
The University is striving to be a destination and to be connected to the community, goals that will rely on an effective transportation system. Observations of current transportation behavior at the University reveal the impact of a longstanding commitment to supporting sustainable options, with growing number of community members choosing to bus, bike and walk. Continuing work to address gaps in policy and infrastructure will broaden available transportation options, address seasonal challenges and seek to improve overall system efficiency; Visionary (re)Generation will set direction on many aspects of this work.

Although today the University’s vehicle fleet only includes a handful of hybrid or electric vehicles, fleet renewal planning will seek to integrate appropriate clean vehicle technology.

Vision Statement
Sustainable transportation options are prioritized and available for all University community members; negative impacts from transportation are continuously reduced.

Key goals and objectives
1. Reduce drive alone rate by 5% in next 5 years
2. 15% decrease in carbon intensity of average passenger trip from baseline
3. Increase share of zero-emissions, low-emitting, and fuel efficient vehicles in fleet and among commuters, move 10% of fleet to low or zero emission vehicles in next 5 years
4. Increase campus walkability

Strategies
Priority actions for 2016-2018:
1. Establish and implement a regular campus transportation demand survey.
2. Develop a sustainable transportation strategy with community involvement; including actions designed to reduce single occupant vehicle travel demand. Such as support for active transportation, carpooling and virtual/tele services.
3. Implement bike parking strategy.
4. Partner with student groups/users to develop a bike share/bike library program.
5. Implement campus car share program.
6. Expand carpool parking options.
7. Implement electric vehicle charging/parking program.
8. Establish and implement a regular campus walkability and accessibility survey/audit.
9. Research provision of a transportation allowance program for staff to support mode choice and sustainable lifestyle options.

Medium-term actions:
1. Initiate fleet life-cycle cost analysis requirement with Physical Plant/Administration-managed fleet; expand to all University vehicles in future phase.

Long-term actions:
1. Develop carbon intensity visualization/planning tools to support personal decision-making.
Accountability
• Sustainable transportation and walkability strategies will be managed by Office of Sustainability and coordinated with Campus Planning Office and Physical Plant (Architectural & Engineering Services).
• Vehicle parking strategies will be managed by Parking Services and coordinated with Human Resources.
• Development strategies, including space optimization work, will be managed by Campus Planning Office.

Community engagement highlights:
• Continued dialogue with the City of Winnipeg and community stakeholders will ensure walking and cycling routes seamlessly connect through University lands and connect to destinations valued by the community.
• Collaborative planning with Winnipeg Transit will help optimize public transit services, including Handi-Transit and rapid transit options.
• Outreach efforts and capacity building initiatives such as Commuter Challenge and student orientation activities will be critical to supporting community members to try sustainable ways of moving.

Monitoring and follow-up procedures:
• Annual reporting on key performance indicators will continue and in some cases be expanded:
  1. Drive alone rate
  2. University fleet composition and fuel use
  3. Greenhouse gas emissions associated with transportation
• An important monitoring tool will be a regular (bi-annual) transportation survey.

In May of each year, the University of Manitoba participates in the Commuter Challenge, a weeklong sustainable transportation challenge. Staff from the UMSU bike shop offer free community workshops aimed at building capacity.
3. ECOLOGY AND ENVIRONMENT

Background
The natural environment is the basis for our society and economy, and the University’s values of respect, accountability and sustainability are manifested in our relationship with the environment that is home to our campuses and the places we conduct our teaching, learning and work.

Vision Statement
Through monitoring, planning and integration of best practices continuously reduce ecological and environmental harm resulting from University activities; work to rehabilitate and restore natural systems.

Key Goals and Objectives
1. Plan for biodiversity; prevent, manage, or remediate damage to natural habitats and sensitive areas
2. Maintain air quality through emissions management
3. Enhance the University’s pest management strategy
4. Gear land management practices to increasing diversity, growing carbon sequestration, reducing irrigation water demand and responding to climate
5. Reduce noise pollution on surrounding community
6. Reduce light pollution
Strategies

Priority actions for 2016-2018:
1. Establish parking lot development standards and implementation plan.
2. Formalize integrated pest management practices.
3. Propose appropriate formal protection/management status for select areas of ecological significance, in concert with Visionary (re)Generation campus master plan.
4. Establish vegetation and tree baseline data.
5. Establish baseline biodiversity information.
6. Develop conservation & biodiversity plan and zone(s) with community involvement.

Medium-term action:
1. Implement energy conservation plan to reduce airborne pollutants.
2. Develop urban forestry strategy, including planting strategy.
3. Construction noise reduction programs.

Long-term actions:
1. Electric vehicle fleet roll-out, including deliveries, etc.
2. Installation of noise barriers in high-traffic and exposed areas.
3. Develop a light pollution metric with specific target for lumens/ exterior fixture angles, etc.

Accountability

- Development strategies will be managed by Campus Planning Office.
- Biodiversity assessment and planning will be managed by Office of Sustainability and coordinated with Campus Planning Office.
- Land management (including pest management) policy development will be led by the Office of Sustainability in collaboration with Physical Plant (Operations).
- Parking lot lighting and noise strategies will be managed by Campus Planning Office, in coordination with Physical Plant and Parking Services.

Community engagement highlights:
- Biodiversity assessment is an opportunity to engage University researchers, faculty and students, as well as interested external community members.
- Community input on light and noise pollution reduction strategies will be requested.
- Education and awareness about sustainable grounds management practices will enhance their acceptance and have a multiplier effect as the community exports practices to their own yards, balconies and organizations.

Monitoring and follow-up procedures:
- Several performance indicators in this area require baselines assessments to be completed before regular reporting can occur.
- Annual reports will track progress of this assessment process as well as specific actions supporting Ecology and Environment goals.
4. LAND USE

Background
All of the University’s campuses are located in Treaty One lands and in the traditional territories of the Anishinaabe, Cree, Oji-Cree, Dakota, and Dene peoples, and on the homeland of the Métis Nation. Acknowledging this and working on reconciliation will require listening to and collaborating with Indigenous peoples in every step of our sustainable land use journey.

The Fort Garry Campus Master Plan and Bannatyne Campus Master Plan guide land use planning for the University’s two largest urban campuses, and each includes an emphasis on land development that is efficient, orderly, respects landscape and seeks to create optimal conditions for human development. With these new plans and the relatively recent establishment of a Campus Planning Office, it is possible to assess the sustainability performance of University lands through measures such as rainwater flows, heat island effect and space optimization.

Vision Statement
Ensure that University lands are planned, developed and used in an integrated and sustainable way that respects the ecology, history and inheritance.

Key goals and objectives
1. Reduce or make use of storm water runoff
2. Implement space management plan to improve fit-to-function, rationalize footprint, improve adjacencies, maximize opportunities for resource sharing build only when it makes sense
3. Limit heat island effect through measures such high-albedo materials, greenspace, shaded hardscape and roofs
4. Promote development and planning process that are aligned with campus master plans and support University priorities

Strategies

Priority actions for 2016-2018:
1. Once finalized, support implementation of the University’s Fort Garry Campus Master Plan including proposed Indigenous Design and planning principles.
2. Establish baseline rainwater data.
3. Define space management strategy and desired outcomes. Set short, medium, and long-term targets to achieve those goals.
4. Regularly report on implementation of campus master plans.

Medium-term actions:
1. Develop rainwater management plan.
2. Develop and implement space standards.
3. Establish a program and implement heat island reduction strategies (green roofs, shading, cool roofs, etc.).
Accountability

• Rainwater management actions will be managed by Campus Planning Office and coordinated with Physical Plant.
• Space management strategies will be managed by Campus Planning Office.
• Planning, land use and development strategies will be managed by Campus Planning Office.

Community engagement highlights:

• Changes to rainwater management practices may bring opportunities for partnerships related to both design and maintenance of green infrastructure.
• User input into new space planning and booking tools will be essential to developing a system that works for our community.

Monitoring and follow-up procedures:

• Several performance indicators in this area require baseline assessments to be completed before regular reporting can occur.
• Annual reports will track progress of this assessment process.
• Reporting on implementation of the Fort Garry Campus Master Plan and Bannatyne Campus Master Plan will provide additional details related to sustainable land use goals.
5. CLIMATE

Background
The University of Manitoba’s Fort Garry campus has reduced its natural gas consumption by over 39% per square foot and electricity consumption by over 35% per square foot since 1990/91 despite significant expansion. This has also dramatically reduced greenhouse gas emissions per square foot. While the University has taken action on key sources of emissions in its portfolio, we have not yet produced a comprehensive accounting of our emissions nor a comprehensive plan for action to reduce our absolute emissions. The Sustainability Strategy includes actions to address these gaps and build on past progress.

Vision Statement
Be a responsible climate steward; take action to mitigate climate change and manage climate change risks.

Key goals and objectives
1. Inventory and transparently report on greenhouse gas emissions produced by the University of Manitoba
2. Act to mitigate climate change by:
   • Reducing emissions from sources that are owned and controlled by the University of Manitoba (Scope 1 emissions)
   • Reducing emissions from sources within our boundary but not under our control, for example emissions associated with generation of energy purchased by the University (Scope 2 emissions)
   • Reducing emissions produced off-campus in support of University of Manitoba work (commuting, professional travel, materials, etc.) (Scope 3 emissions)
3. Ensure that the University is prepared for our changing climate

The University’s largest campuses feature efficient district energy systems that can make use of recovered waste heat.
Strategies

Priority actions for 2016-2018:
1. Complete and publish a Scope 1 & 2 emissions inventory using the Climate Registry’s General Reporting Protocol or similarly rigorous standard.
2. Complete a climate action plan, with a 5-year target of a 5% absolute emission reduction as compared to 2014 baseline.

Medium-term actions:
1. Develop a plan for reporting on Scope 3 emissions in key areas.
2. Establish a plan and metrics for tracking campus resilience; consider integration with green building strategy.

Long-term actions:
1. Plan for a 40% absolute emission reduction by 2040.

Accountability
• Emission measurement and reporting will be managed by Office of Sustainability.
• Climate change vulnerability and risk management will be managed by Office of Sustainability in collaboration with Risk Management and Physical Plant (Architectural and Engineering Services).

Community engagement highlights:
• As the most pressing sustainability issue of our time, involvement from all quarters will be required to expedite progress on climate protection. Innovative approaches, applied student research and creative partnerships will all be invited.
• Community input will be required to develop a climate change action plan and adaptation strategies; many strategies will rely on community-based or community-led action.

Monitoring and follow-up procedures:
• An inventory will be published and regularly updated.
• Updates on key emissions drivers such as fossil fuel use and solid waste production will be included in annual sustainability reports.
6. CAMPUS LIFE

Background
The University of Manitoba has a long and proud history of education and research for sustainable development. The University works to integrate the approaches we teach and the innovations we research into the day-to-day experience of campus life and the institution’s operations. There are notable highlights in some areas such as curriculum, for example, where 7% of courses are sustainability-focused or related. In others, the University has an opportunity to lead by planning for sustainable wellbeing, responsible investing and safe, healthy, just and sustainable campus food systems.

Vision Statement
The University is known as an exceptional place to learn, teach, research, work and live sustainability values.

Key goals and objectives
1. Deliver safe, nutritious food that contributes to resilient local food systems.
2. Deliver adequate high-quality air to interior spaces
3. Improve the health and well-being of University community members
4. Increase participation in planning and learning related to sustainability
5. Advance sustainability through university-based education & research
6. Incorporate sustainability into University research, education, student experience and other learning objectives
7. Promote the University of Manitoba as a leader in the field of sustainability
8. Recognize social and environmental aspects of investing

Strategies

Priority actions for 2016-2018:
1. Engage strategic research priority leads in dialogue around sustainability opportunities.
2. Review, improve and communicate current air quality management processes.
3. Develop proactive indoor air quality strategies based on Leadership in Energy and Environmental Design (LEED) or International Well Building Institute standards.
4. Establish and implement a tracking plan for green building materials and incorporate into standard specifications.
5. Establish short-term monitoring plan for participation in sustainability initiatives (applied student research, presentations and event counts) with metrics for success.
7. Establish a Sustainability Research in Action living lab program.
8. Communicate/promote and enhance sustainability course offerings.
9. Establish collaborative campus food strategy.
10. Establish student and employee sustainability educators programs (peer-to-peer).
11. Move childcare forward at the University.
12. Develop an employee diversity strategy.
13. Develop an Indigenous employee recruitment, development, and retention strategy.

Medium-term actions:
1. Fully implement mental health strategy and advance an employee wellness strategy.
2. Promote/incent research on sustainable development.
3. Establish and deliver a sustainability literacy assessment.
4. Sustainable life skills education.
5. Invite dialogue with Board of Governors about opportunities to develop a responsible investment strategy.

**Long-term actions:**
1. “Greening the curriculum” – promote/support integration of sustainability into new academic areas.
2. Themed semesters/ first-year experiences.

**Accountability**
- Food system planning will be managed collaboratively by Ancillary Services, food service partners, health and wellness coordinators, Office of Sustainability, land managers and student leaders.
- Air quality strategies will be managed by Physical Plant (Architectural & Engineering Services and Environmental Health and Safety Office).
- Education-related strategies will be managed by the Office of the Vice-President (Academic) and Provost.
- Research-related strategies will be managed by the Office of the Vice-President (Research and International).
- Peer education programs will be led by the Office of Sustainability, in collaboration with Learning & Organizational Development, Student Life and student groups.
- Sustainability Research in Action programming will be led by the Office of Sustainability in collaboration with Campus Planning Office.
- Investment-related strategies will be driven by the Trust Investment Committee.

**Community engagement highlights:**
- Campus life is a social product created by the more than 35,000 students, staff, partners and visitors that engage with the University on any given day. Changes to programs and to our culture will require ongoing listening, dialogue, and negotiation. These processes will occur through formal program reviews, engagement and outreach exercises and through the organic processes of community development.

**Monitoring and follow-up procedures:**
Annual reporting on key performance indicators for this area will include:
- Number and percentage sustainability courses available
- Responsible investment strategy (yes/no)
- Budget spent on sustainability related research; courses offered in sustainability; grants awarded for sustainability research; Number of Sustainability Research in Action opportunities created
- Availability of a range of learning opportunities such as service learning, applied research programs, peer-to-peer student programs, etc.
- Percentage of purchased food that is local, organic, and humane
- Mental health well-being of students (self-reported); number of active Recreation Services memberships
- The University’s Sustainability Tracking, Assessment and Rating System (STARS) rating (platinum, gold, silver, bronze)
MOVING FORWARD

The implementation approach for the University of Manitoba Sustainability Strategy 2016-18 will mirror the components of the University’s Sustainability Policy: leadership, integration and participation.

Leadership:
• Take bold actions; apply visionary thinking.
• Spearhead initiatives with community-wide benefits.
• Listen and observe – learn from experts, stakeholders and the diverse perspectives in the community.

Integration:
• Continuously improve education, research and business practices to foster human development and reduce ecological footprint.
• Respect the roles of all members of our community; share the responsibility for sustainability development.
• Use evidence to drive improvement - build monitoring and reporting into the way we operate.

Participation:
• Seek partnerships to promote knowledge exchange, hasten implementation and share risks and rewards.
• Provide opportunities for all community members to engage with sustainability at the University.
• Focus on communications – awareness and knowledge are foundational to meaningful engagement and collaboration.

The primary method of tracking implementation of the Strategy will be annual Sustainability Reports prepared by the Office of Sustainability. Near the end of the planning horizon (i.e. 2018), a comprehensive performance review, by way of an updated Sustainability Tracking, Assessment and Rating System (STARS) evaluation, will be undertaken. At the same time, a full-scale review of the University’s sustainability vision and direction will take place, as contemplated when the first sustainability strategy (Vision for Action) was adopted in 2012.
Coming together to address sustainability challenges is critical to achieving leadership, integration, and participation.
REFERENCES

1. The University of Manitoba Sustainability Policy requires integrated planning and decision making, community participation, and formalizes the University’s aspiration to be a sustainability leader.

2. The University of Manitoba Purchasing Policy integrates considerations of environmental sustainability into procurement decisions.

3. The University and College Presidents’ Climate Change Statement of Action for Canada, signed by President David T. Barnard in 2008.

4. The Talloires Declaration, of which the University is a signatory, which aims to harness the educational focus of universities to support sustainable development.

5. Sustainability Guidelines for Local Governments, School Divisions, Universities, Colleges and Regional Health Authorities (Regulation 4/2004 to the Sustainable Development Act) establishes guidelines for program evaluation and procurement.

6. Bannatyne Campus Master Plan, describes a vision for a compact, vibrant, sustainable and urban live/work/learn/play campus community that emphasizes health, active living, and safety for its students and staff, and also for the broader community.

7. Visionary Regeneration Fort Garry Campus Master Plan (under development in 2015-16), establishes a vision and framework for the evolution of the entire Fort Garry campus over the next 25 years. Community engagement results and planning studies from this planning process were also used to support development of the Sustainability Strategy.