Environmental Sustainability Report

2021

UNIVERSITY OF
WATERLOO

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Prepared by the President's Advisory Committee on Environmental Sustainability

INTRODUCTION
About this Report

TERRITORIAL ACKNOWLEDGMENT:

The University of Waterloo acknowledges that it operates on the traditional territory of the Attawandaron (Neutral), Anishinaabeg, and Haudenosaunee peoples. The University of Waterloo is situated on the Haldimand Tract, the land granted to the Six Nations that includes ten kilometers on each side of the Grand River.

Overview: This report highlights examples of progress towards each of the 27 objectives that were established in 2017 through Waterloo's Environmental Sustainability Strategy. The report has sections on Academics, Operations, and Engagement, and describes relevant projects and initiatives that have occurred at the University of Waterloo throughout 2020, up to and including June 2021.

Each objective includes a progress summary, as well as specific indicators that offer more information on the progress.

*For full data and details on each objective and indicator, consult the interactive data dashboards and methodologies, available at **uwaterloo.ca/sustainability/report***

Definitions: By definition, sustainability means maintaining the integrated health of the environment, society, and economy for today and into the future. While this report focuses primarily on environmental indicators relevant to the University of Waterloo, it recognizes that there are mutually reinforcing connections with financial and social sustainability. For brevity, the term "sustainability" will refer to environmental sustainability in this report.

Framework: The University of Waterloo aligns the action areas and data within this report and within the Environmental Sustainability Strategy to those of the Sustainability Tracking, Assessment, and Rating System (STARS) developed by the Association for the Advancement of Sustainability in Higher Education (AASHE).*

Sustainable Development Goals: Within the report, the University of Waterloo also maps its actions towards advancement of the global United Nations Sustainable Development Goals (UN SDGs).

Reporting Boundary: This report covers all University of Waterloo campuses, unless otherwise noted. The report indicators do not reflect information from Affiliated and Federated Institutions of Waterloo, although information is included in the detailed data tables for transparency.

Contact: Please address any questions about this report to the Sustainability Office (*sustainability@uwaterloo.ca*).

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[1] For full details on STARS, see Association for the Advancement of Sustainability in Higher Education (2017). Sustainability Tracking, Assessment, and Rating System. Accessed June 2018 from stars.aashe.org

INTRODUCTION
Message From the President

While the global pandemic continued to dominate headlines this year, the escalating risks of the climate crisis have also grown in public consciousness – the impacts of extreme weather, drought and wildfires could not be ignored. The pandemic has exposed and heightened many pre-existing challenges in our society such as social and economic inequities. In the same way, the climate crisis compounds existing inequities, creating additional hardships for already marginalized groups. Our response to the pandemic has demonstrated that as a society we can collectively mobilize on an existential threat, a lesson we should apply to the challenges of the climate crisis.

As communities and societies look to rebuilding in a post-pandemic world, we have a real opportunity to address global challenges in ways we haven't before.

In this global context, environmental sustainability and addressing the climate crisis remain a key priority for the University of Waterloo, more than ever. This year we continued to reinforce our commitments to address climate change, including through the launch of Shift: Neutral, the University's plan to achieve carbon neutrality; our climate emergency declaration; and recommendations from the Board of Governors to integrate climate change into investment decisions.

Throughout the report you will also read about some of the tangible environmental actions we have taken this year, such as expanding EV charging stations across campus, launching a new secure bike cage, creating a new degree program to link sustainability and financial management, updating our building design guidelines to pursue carbon-neutral design, and strengthening our sustainable procurement policies and processes. We look forward to accelerating our action further on several key commitments, particularly on reducing the University's direct emissions.

I encourage all members of the University of Waterloo community to embed the goals and objectives outlined in this report into your own actions – whether as a department or as an individual. Thank you for your ongoing commitment to building a more sustainable future for the University and our global community.

I am pleased to
present Waterloo's
2021 Environmental
Sustainability Report,
which tracks our
actions and progress
over the past year.

Sincerely,

VIVEK GOEL

PRESIDENT AND VICE-CHANCELLOR
UNIVERSITY OF WATERLOO

PROGRESS
Summary of Progress

The past year created unprecedented changes for the University of Waterloo. As the world responded to the multiple waves of COVID-19, almost all domains of activity on campus shifted. Teaching and research went online, buildings closed, employees and students interacted primarily through screens, and the campus became quiet.

These changes have had major impacts on Waterloo's sustainability efforts. This report documents the actions and impacts as they have unfolded over 2020 and early 2021, and two key themes are emergent across most topic areas:

COVID-19: Programs, projects, and collaborations had to change, sometimes creating new ways of working toward sustainability objectives, but more often creating new barriers

Performance indicators fluctuated considerably: Usage of the campus shifted many metrics, often for the better as shown by the status improvements on a number of objectives; a key takeaway from this report should be to understand these fluctuations as temporary without further intervention

Waterloo did not lose sight of its sustainability commitments during the pandemic. Over the past year, new programs and initiatives were launched, as documented in case studies throughout the report. At the same time, new challenges and risks emerged.

Accelerated focus on climate change:
A mix of stakeholder concerns, market forces, policy pressure, and operational needs have accelerated climate change conversations on campus. Over 2020/21, Waterloo published *Shift*:Neutral, its first climate action plan, hosted a town hall on climate change, developed and approved recommendations from the Responsible Investment Advisory Group on climate considerations in investments, declared a climate emergency, and entered into global partnerships, just to name a few.

New ways of doing business:
The pandemic transformed institutional practice in areas that were previously difficult to shift, and that can have a lasting and positive sustainable impact if effectively prioritized, including, for example, virtualization and travel minimization.

Timing and investments:
Waterloo has under four years to hit its 2025 climate change targets, and action needs to scale rapidly, as is noted in the climate emergency declaration; delayed investment will very quickly make it impossible to reach our goals.

Going back to "the old normal":
Many of the positive changes are temporary, and they require intentional efforts to avoid defaulting back to the old way of doing things before the pandemic; the fatigue of responding to constant change makes this even more challenging.

Global peers and competition:
As more campuses initiate sustainability actions, Waterloo must stay ahead of industry best practice. Although Waterloo remains in the top 100 globally in the Times Higher Education (THE) Impact Ranking, for example, increasing participation and increased peer action is adding competition.

Overall, the pandemic has made sustainability efforts more difficult – on campus and globally. There are new challenges and barriers that will need to be overcome to work toward the same critical sustainability outcomes.

There is, nonetheless, enormous potential to succeed. With bold action, targeted investments, and support across the campus community, Waterloo's spirit of innovation can make critical contributions to society by **being a leader in sustainability education and research, operating the campus sustainably, and embedding sustainability in campus culture.**

The table to the right summarizes the number of Environmental Sustainability Strategy objectives at various stages of completion, including those with tentative/temporary fluctuations, as of June 2021.

STATUS	2020	2021
Not started	1	0
Started	8	5
Somewhat completed	6	4
Mostly completed	9	9
Completed	3	9

ACADEMICS

By its very nature, a university sits upon the foundations of teaching and research. The integration of sustainability within the academic mission is one of the most impactful contributions that a higher-education institution can make. This integration allows a university to stimulate innovation to solve our world's most pressing problems. As a global institution, Waterloo endeavours to be a leader in sustainability education and research.

Global sustainability challenges, including the themes embedded within the UN Sustainable Development Goals, are complex and interactive. Effective solutions require deep understanding, interdisciplinary collaborations, evolving skills and talents, and accelerated knowledge mobilization to deployment.

COVID-19 led to significant shifts in the delivery of courses and in research throughout 2020, but there remained concerted efforts to launch new academic programming and continue research innovations to meet global sustainability challenges.

Going forward, the University is considering the launch of a formal Voluntary University Review of the SDGs, a process that is increasingly common across higher education. This would help identify deeper opportunities for integration and prioritization within learning and discovery, in ways that are meaningful and relevant within and between disciplines.

Teaching and Learning

FINANCING SUSTAINABILITY

Climate change and sustainability transitions will impact businesses in every industry. Waterloo's new degree program on Sustainability and Financial Management will equip graduates with the skills and talents needed to help companies address these impacts by quantifying, reporting, and integrating sustainability risks and opportunities into corporate strategy and decision-making. The program runs collaboratively between the School of Accounting and Finance and the School of Environment, Enterprise, and Development.

READ MORE ABOUT THE PROGRAM › *uwaterloo.ca/news/media/canadas-first-degree-merge-sustainability-and-financial*

EMPOWERING STUDENT ENTREPRENEURS TO TACKLE CLIMATE CHANGE

Waterloo's Interdisciplinary Centre on Climate Change (IC3) recently partnered with Concept to launch the Climate Change Fund, which offers Waterloo students grant funding for business ideas aimed at solving climate change problems. Students can apply and pitch their project idea to a panel of judges for a chance to win a financial prize and access to a network of expert mentors that support the growth of the idea. To date, three student teams have been granted funding: UbiAir, an air quality monitoring ecosystem using sensors for air pollution surveillance; Innowind, an Airborne Wind Power System providing electricity to rural homeowners and remote communities around Canada; and Neutrify, a program empowering consumers in making sustainable and low carbon food purchasing decisions.

LEARN MORE › *uwaterloo.ca/climate-centre/training-and-education/climate-change-fund*

CONNECTING ENTREPRENEURS WITH GREEN TOOLS AND EXPERTS

From October through December 2020, the Entrepreneurship @ Environment office teamed up with the Commission for Environmental Cooperation to launch a six-part online workshop for students on green entrepreneurship. The program provided participants with tools and resources to support sustainability ventures, and drew in top expert speakers from government, civil society, and the business community to share their experiences. Over 1,000 people from 26 countries participated, including over 160 Waterloo students.

LEARN MORE AND VIEW THE RECORDINGS › *uwaterloo.ca/environment/entrepreneurship-environment/green-entrepreneurship-online-workshop-series*
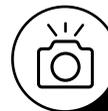
PROGRESS SNAPSHOT

OBJECTIVE A1: By 2019, ensure undergraduate students from any program of study will have the opportunity to learn about sustainability in their courses

Completed

INDICATORS:

308 Undergraduate courses focused on or related to sustainability

496 Total courses focused on or related to sustainability

OBJECTIVE A2: By 2025, identify and implement flexible strategies for 5 programs of study to more deeply integrate sustainability within the curriculum

Somewhat completed

INDICATORS:

3 New programs of study considering or integrating sustainability topics

NOTES:

Positive Trends/Actions:
› SDG curriculum mapping project broadens the environmental lens to include all dimensions of sustainability
› Genuine efforts from some programs, such as the School of Public Health Sciences, on discipline-specific sustainability integration
› Work is beginning on initiation of Voluntary University Review process to reflect on SDG connection and embedding across disciplines

Challenges/Opportunities:
› Fragmented information on curriculum makes mapping and analysis difficult
› Need for centralized partnerships and resources to support departmental and faculty efforts

OBJECTIVE A3: By 2025, every startup emerging from supporting programs at Waterloo will have access to tools and training to embed sustainability into their emerging business plans and models

Started

INDICATORS:

3 Resources and/or programs supporting integration of sustainability in entrepreneurship

NOTES:

Positive Trends/Actions:
› Launch of Velocity/Interdisciplinary Centre on Climate Change Fund
› Continued acceleration of Entrepreneurship @ Environment resources
› Ongoing support of GreenHouse social impact incubator through St. Paul's

Challenges/Opportunities:
› Ensuring support and resources are mobilized campus-wide

PROGRESS SNAPSHOT

OBJECTIVE A4: By 2020, celebrate sustainability research as a core thematic strength of Waterloo's reputation and identity

Somewhat completed

INDICATORS:

26% Percent of central news releases and research-focused Waterloo stories highlighting scholarship related to UN SDGs

NOTES:

Positive Trends/Actions:
› Focus area for Waterloo Innovation Summit
› Voluntary University Review of SDGs would increase profile

Challenges/Opportunities:
› Increasing public engagement with expertise and research accomplishments connected to sustainability

OBJECTIVE A5: By 2025, become a world leader for research excellence in five sustainability related themes

Somewhat completed

INDICATORS:

528 Faculty members conducting research advancing the UN Sustainable Development Goals

37 Canada Research Chairs conducting research advancing the UN Sustainable Development Goals (out of 65)

OBJECTIVE A6: By 2025, establish Waterloo as a "go-to" hub for knowledge and expertise on sustainability challenges

Mostly completed

INDICATORS:

99th Overall ranking in THE Impact Ranking globally

15th Overall ranking in THE Global Impact Ranking within Canada

-- Number of global University partnerships connected to sustainability (forthcoming)

NOTES:

Positive Trends/Actions:
› Reinforcing commitments through Climate Emergency Declaration
› Update to 2020 faculty SDG research inventory identified more SDG-connected researchers, particularly in health, with refined review of SDG targets/indicators
› Initiation of Voluntary University Review of SDGs could help expand focus areas
› Continued success of key research institutes, including Interdisciplinary Centre on Climate Change, Waterloo Institute for Sustainable Energy, and the Water Institute

Challenges/Opportunities:
› Limited third-party benchmarking tools available to independently understand progress
› Decrease in 2021 THE Impact Ranking shows need for concerted action, including in academics
› Mobilization of support for researchers/partnerships is needed to advance progress

OBJECTIVE A7: By 2018, implement three new sustainability-related project annually on campus using faculty and student expertise; by 2025, implement at least eight new projects annually

Complete '18

Started '25

INDICATORS:

1 Living Lab projects underway or completed during 2020/21

NOTES:

Positive Trends/Actions:
› Launch of mapping campus grounds project
› Preliminary design of Living Lab website
› Hiring of Living Lab Coordinator will offer coordination and project support

Challenges/Opportunities:
› COVID-19 restrictions significantly reduced experiential learning opportunities, which should be short-term

Supporting UN SDGs:

Research

## LINKING TRANSIT AND RIDESHARING TO IMPROVE SUSTAINABLE TRAVEL

Running public transit in sprawling suburbs is challenging and expensive. But what if there was a way to bridge the gap from home to a bus stop? Researchers from Waterloo's Faculty of Engineering focused on this challenge by adding ridesharing services to the transportation mix as part of a pilot study in the City of Waterloo. Participants took subsidized ridesharing trips to connect with transit, and the data tracked by researchers showed that two-thirds of trips successfully took riders to areas near bus stops. Although there is room for improvement, this innovation could help solve the "first and last mile" challenge of transportation planning.

READ ABOUT THE PROJECT › *uwaterloo.ca/news/engineering-research/future-transit-integration-not-competition*

RESEARCHERS CONNECTED TO UN SDGS*

SDG	Count
1. No Poverty	12
2. Zero Hunger	43
3. Good Health and Wellbeing	211
4. Quality Education	8
5. Gender Equality	37
6. Clean Water and Sanitation*	69
7. Affordable and Clean Energy	83
8. Decent Work and Economic Growth	50
9. Industry, Innovation, and Infrastructure	44
10. Reduced Inequalities	77
11. Sustainable Cities and Communities	94
12. Responsible Consumption and Production	95
13. Climate Action	94
14. Life Below Water	56
15. Life On Land	74
16. Peace, Justice and Strong Institutions	29
17. Partnerships for the Goals	20
Other Sustainability	22

*This is a preliminary scan based on public research profiles of faculty members, and reflects the evolving understanding of the SDGs and continuous improvement in the ability to identify SDG-connected research.

Research

MODELLING ECONOMIC IMPACTS OF CLIMATE CHANGE ON GREAT LAKES

The Great Lakes are a defining feature of Canada's geography and economy. A new model developed by researchers at the University's Water Institute can help policymakers and management authorities understand how a changing climate throughout the Great Lakes basin could impact the local economy and resources. While these water bodies may be taken for granted, the model sheds light on how risks, such as prolonged drought or water quality changes, could affect society and points to strategies to manage impacts.

LEARN MORE › *uwaterloo.ca/water-institute-research/issue-10/blue-economy/water-supply-and-climate-change-how-will-great-lakes-economy*

USING IOT TO MONITOR HEALTH IN THE CLIMATE CRISIS

The UbiLab is undertaking research that leverages the Internet of Things (IoT) and novel devices, like smart thermostats, to better understand how the climate crisis is impacting people's health, how people perceive risk during extreme heat events and how they heat and cool their homes. IoT technologies can be a non-invasive means to study real-world environments and have added benefits of energy and cost savings. This work has implications for policies around safe indoor temperature thresholds and heat warning system improvements. This work is being done in collaboration with partners in industry, public health, and international researchers.

READ ABOUT MORE UBILAB PROJECTS › *uwaterloo.ca/ubiquitous-health-technology-lab/*

SUPPORTING ECONOMIC RECOVERY THROUGH GREEN INNOVATION

The Waterloo Innovation Summit is a preeminent series hosted by the University to mobilize expertise and convene discussions around key focus areas. The Fall 2020 summit brought together business leaders, academics, and entrepreneurs to discuss the green recovery and how the pandemic offers opportunities to reimagine and redesign the future of work, communities, and the global economy.

READ MORE AND WATCH THE RECORDINGS › *uwaterloo.ca/news/rethinking-priorities-and-reinventing-economies*

LIVING LAB SPOTLIGHT: MAPPING CAMPUS GROUNDS

In 2021, Waterloo kicked off a new living lab project to develop an inventory of plant species across campus grounds. With support from the Sustainability Action Fund, three students are identifying and mapping trees, shrubs, and more, in a first step toward a campus-wide biodiversity assessment.

OPERATIONS

In addition to its teaching and research, Waterloo has important responsibilities and commitments to integrate sustainability within operational practices. The University's size and complexity as a large institution provide unique opportunities to demonstrate what a sustainable future can look like through the commitment to **operate the campus sustainably**.

COVID-19 created tremendous change in how the University operated. As the campus shut down in March and limited access to only essential activities wherever possible, many of the performance indicators related to sustainability shifted accordingly.

Some changes were positive from an environmental perspective, albeit for unfortunate reasons. This included reduction in water and energy use, decreasing carbon emissions from campus buildings, major drops in emissions from transportation and international travel, and reduction in on-campus waste.

Other changes were more concerning, including a reduction in sustainable procurement, decreasing waste diversion rates, and suspension of many sustainability-related programs. More importantly, the scale of the positive impacts were often small relative to the major reduction of activity on campus.

Given the extraordinary set of circumstances, the changes in 2020 represent a unique point in time and are not a reliable indicator of future progress. However, there remains need for intentional efforts to draw lessons from the pandemic to reimagine the future of campus and ensure that positive changes are reinforced, and that negative changes are managed.

The pandemic also reinforces an urgent role for institution-wide policy, programs, and investment and to drive change, not just in individual action, but particularly in major campus infrastructure and systems.

CLIMATE AND ENERGY CHANGE AND ENERGY

PROGRESS SNAPSHOT

OBJECTIVE O1: By 2019, develop a long-term Climate and Energy Action Plan to achieve carbon neutrality by 2050, with interim milestones for 2025 and 2035; Achieve a 17.5 per cent reduction in GHG emissions by 2025 from a 2015 baseline

Complete '19

Started '25

INDICATORS:

COMPLETE — Development of *Shift*:Neutral Climate Action Plan

4/46 — Actions from *Shift*: Neutral completed

+2.4% — Change in emissions from 2015 (Scope 1 & 2)

40,240 — Tonnes of GHG emissions (Scope 1 and 2)

42,335 — Tonnes of GHG emissions (all scopes)

TOTAL EMISSIONS (TONNES CO_2-e)

[Line chart showing emissions from 2010 to 2020. Y-axis ranges from 10,000 to 60,000. Two series: "Scopes 1 and 2" (yellow) ranging around 36,000–42,000, and "All scopes" (grey) appearing from 2018 around 53,000–55,000 then dropping to ~42,000 in 2020.]

Legend: Scopes 1 and 2 / All scopes
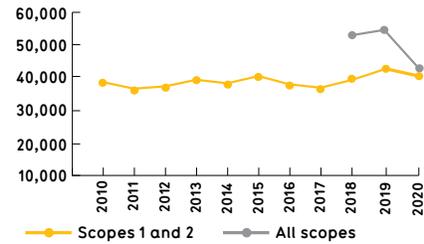
OBJECTIVE O2: Implement cost-effective and practical strategies to reduce or minimize growth in energy use on campus

Started

INDICATORS:

1.47 — (NekWh/m²) Weather-normalized energy intensity*

4% — Reduction in intensity from 2015

ENERGY INTENSITY (NekWh/m²)*

[Line chart showing energy intensity from 2010 to 2020. Y-axis ranges from 330 to 430. Two series: "Energy Intensity Raw" (grey) for 2010–2014, and "Energy Intensity HDD2015" (yellow) for 2015–2020.]

Legend: Energy Intensity Raw / Energy Intensity HDD2015
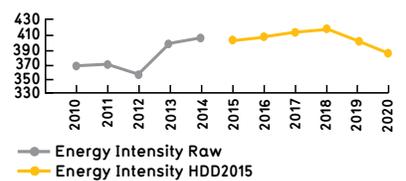
*Energy intensities are presented in raw/unadjusted terms through 2010–14, and since then normalized to 2015 heating degree days

Climate Change and Energy

Supporting UN SDGs:

DECLARING A CLIMATE EMERGENCY

In May 2021, Waterloo joined thousands of communities, institutions, and organizations around the world in declaring a climate emergency. This declaration recognizes the severity of climate change impacts, particularly on already disadvantaged populations, and strengthens the commitment to action across all areas of the campus.

READ THE FULL CLIMATE EMERGENCY DECLARATION › *uwaterloo.ca/climate-emergency-declaration/*

INTEGRATING CLIMATE IN INVESTMENT DECISIONS

In June 2021, Waterloo's Board of Governors endorsed recommendations from a Responsible Investment Advisory Group on changes to investment policies to address both the financial risks and opportunities from climate change. The commitment includes reducing the carbon intensity of Waterloo's investments, making investments that support climate innovation and transition, and avoiding material direct investments in fossil fuel exploration and extraction companies. These efforts build on Waterloo's existing commitment to integrate Environment, Social, and Governance (ESG) principles into investing, its becoming a signatory to the UN Principles for Responsible Investment, and ongoing reductions in active holdings in the energy sector.

READ MORE ABOUT THE COMMITMENT › *uwaterloo.ca/news/media/university-waterloo-commits-reduce-carbon-footprint-its*

IDENTIFYING OPPORTUNITY

Throughout 2020, the University of Waterloo partnered with local engineering consulting firm WalterFedy to complete a campus-wide audit of buildings to better understand energy use and identify opportunities to reduce energy and emissions. The audit identified a mix of projects and initiatives, from replacement of inefficient equipment, to management strategies, to everyday behaviours. Findings are being integrated into a technical roadmap to accompany the high-level roadmap in *Shift*:Neutral.

DESIGNING FOR NET NEUTRAL

Waterloo has prepared its first energy and climate change design guideline for new buildings. With an emphasis on passive design principles, the guideline prioritizes electrification and requires new buildings to meet ambitious energy efficiency criteria with flexibility for various building types. Integrating these criteria into new buildings will be critical to ensure the growth of the campus does not increase emissions over time.

READ THE NEW GUIDELINE › *uwaterloo.ca/sustainability/buildingguideline*

PROGRESS SNAPSHOT NOTES:

Positive Trends/Actions:
› Waterloo's total energy consumption decreased from 2019 by approximately 7%, primarily from electricity, which decreased by nearly 14%, while thermal energy from gas and fuel oil decreased by only 3%
› Fewer devices, appliances, and lab equipment in use on campus, as well as lower lighting loads, are assumed to have impacted electricity reductions
› Reduced water consumption (see below) reduced demand for water heating
› A milder winter required less heating energy compared to both 2019 and the 2015 baseline year
› Scope 1 and 2 emissions decreased 5.3%, or approximately 2,200 tCO_2-e, with the largest share of reductions coming from the decrease in thermal energy

Challenges/Opportunities:
› Increasing ventilation requirements to manage COVID-19 increased both electrical and thermal energy demand, although this effect was temporary and managed
› There was a uniquely beneficial set of circumstances leading to the 2020 decrease, whereas the trend since 2017 has been a general increase in energy and emissions
› To reach the 2025 target, significant investment and urgent action will be needed
› It is estimated that Scope 3 commuting emissions decreased by over 80%, or by 8,000 tCO_2-e
› Similarly, the reduction in flights also reduced emissions significantly, although estimation is imprecise and not currently disclosed under Scope 3 until measurement is improved
› Of additional concern is the rising use of gas within Ontario's electrical grid, which is pushing electricity emissions upward and will put targets at risk

This report will also integrate tracking of the *Shift:*Neutral Climate Action Plan going forward, as the implementation of actions are intended to achieve Objective O1.

AREA	ACTION	STATUS
Systems	1. Draft an executive statement on climate action and the need to advance the objectives of the *Shift:*Neutral roadmap	Completed
Systems	2. Integrate institutional key performance indicators on carbon reductions against established targets and energy efficiency, to ensure ongoing monitoring and transparency	In progress
Systems	3. Host a Town Hall with all senior administration and members of the campus community to catalyze awareness and support for climate action, and follow up with a survey of what additional training or support is necessary for university leaders	Completed
Systems	4. Designate a position within senior administration to support ongoing coordination, accountability, and decision-making	Completed
Systems	5. Phase in submetering of core utility streams across campus buildings over the next 5-8 years and integrate an energy management information system	In discussion
Systems	6. Establish ongoing dedicated central resources to catalyze carbon and energy efficiency measures across campus stakeholders and operators	In discussion
Systems	7. Embed lifecycle costing processes and tools into a formal University guideline, using standardized cost assumptions and integrating carbon and utility pricing "stress tests"	In progress
Systems	8. Advocate for funding bodies to integrate energy efficiency support within granting programs, and identify key carbon and energy projects requiring external funding support	Not started
Systems	9. Opportunities to pilot financial tools that would encourage energy efficiency will be considered	In discussion
Systems	10. Ensure staff complement supports timely, high-quality, and professional project management and implementation while exploring funding resources for support	In discussion
Systems	11. Initiate a training program for facilities operators covering energy and carbon management	Not started
Efficiency	12. Update design guidelines for all buildings to net-neutral thresholds or similar performance-based criteria	In progress
Efficiency	13. Efforts to optimize space should be considered before constructing new buildings	Not started
Efficiency	14. Complete an audit of campus buildings to determine a mix of short-term energy efficiency and carbon reduction projects (through 2025)	Completed
Efficiency	15. Prioritize whole-building redevelopment of Chemistry 2 as a high-intensity building with constant-flow fume hoods	Not started
Efficiency	16. Initiate a recommissioning program for top energy-consuming buildings to ensure controls and sequence of perations are operating as efficiently as possible	Not Started
Efficiency	17. Launch an environmental monitoring program to optimize and reduce air changes in labs spaces and vivarium	Not started
Efficiency	18. Complete the ongoing high efficiency lighting retrofit by 2021	In progress
Efficiency	19. Develop a checklist to integrate energy and carbon assessment and requirements into all construction or renovation projects	Not started
Efficiency	20. Calibration and optimization of building scheduling and setpoints should be considered on an ongoing basis	In discussion
Efficiency	21. Recladding of buildings with high-performance envelopes should be considered whenever undertaking large building retrofits	Not started
Efficiency	22. Initiate a heat recovery project from the Graham Data Centre in Math and Computers	In discussion
Efficiency	23. Continue fuel oil phase-out in the Central Plant	Complete
Efficiency	24. Initiate an assessment of the district heating system and feasibility of conversion from steam to high and/ or low-temperature district hot water	Not started
Efficiency	25. Develop a Utility Master Plan to synthesize feasibility studies and drive long-term investment into district heating & cooling and associated infrastructure	Not started
Efficiency	26. Heat recovery systems will be considered when making changes to HVAC equipment and infrastructure, at the building and district energy levels	Not started
Efficiency	27. Management of simultaneous heating and cooling will be an important consideration when connecting buildings and systems to the district energy system	Not started
Efficiency	28. Thermal and electrical energy storage systems will be considered as part of campus development to enable load-shifting, integration of renewables, and optimizing energy efficiency	Not started
Efficiency	29. Expand participation in Green Office and Green Residences programs, and launch a Green Labs program with an emphasis on fume hood management and efficient equipment use	In progress
Efficiency	30. Develop energy efficiency requirements for all major appliance and electronics purchases	In discussion
Efficiency	31. Launch and market a targeted incentive program for high-efficiency equipment	Not started
Efficiency	32. Develop a visual identity to raise the visibility of energy efficiency and carbon reduction projects	In progress
Efficiency	33. Stronger guidelines for shutdown procedures of IT equipment and personal computing equipment will be considered	In progress
Efficiency	34. Introduce and enforce an anti-idling policy for all campus fleet vehicles	Not started
Efficiency	35. Expand electric, hybrid, or hydrogen-powered vehicles within Waterloo's fleet through accelerated deployment	In progress
Efficiency	36. Pilot data-logging tools to generate actionable information about utilization, behaviour gaps and user feedback, and suitability for electrification	In progress
Low-carbon energy	37. Explore transition of REV from gas boilers to a ground source heat pump system as a pilot	Not started
Low-carbon energy	38. Conduct a feasibility study on renewable energy sources and an appropriate portfolio that would diversify Waterloo's energy supply, minimize emissions, and meet suitable portions of campus needs	Not started
Low-carbon energy	39. Air and ground source heat pumps will, where feasible, be considered for all new construction and for major retrofits to existing buildings or central systems	Not started
Low-carbon energy	40. Designated areas for potential future energy production sites, such as solar, wind, and geothermal should be considered as part of ongoing campus master planning	Not started
Indirect emissions	41. Develop an institutional Transportation Demand Management Plan to better evaluate options for and develop programs to support low-carbon commuting	Not started
Indirect emissions	42. Explore potential tools and guidelines that would reduce business travel where feasible, such as remote conferencing technology, and that would improve tracking of air travel impact	In discussion
Indirect emissions	43. Continue implementation of the Zero Waste Action Plan, which will support reductions of waste-related emissions	In progress
Indirect emissions	44. Integrate tools and resources to track embodied carbon	In progress
Indirect emissions	45. Integration of low-carbon materials into construction will be considered as part of future building design	In progress
Offsets	46. Develop a guideline to inform the long-term purchase or integration of carbon offsets	In progress

Waste

Supporting UN SDGs:

12 RESPONSIBLE CONSUMPTION AND PRODUCTION | **13 CLIMATE ACTION** | **14 LIFE BELOW WATER**

PROGRESS SNAPSHOT

OBJECTIVE O3: By 2025, achieve a 60 per cent diversion rate; by 2035, become a zero-waste campus (90 per cent diversion rate)

Started

INDICATORS:

29.4%
Waste diverted from landfill

1,686
Tonnes of waste sent to landfill

DIVERSION RATE AND LANDFILL WEIGHT

— Waste Diversion (%)
— Total Landfill (t)
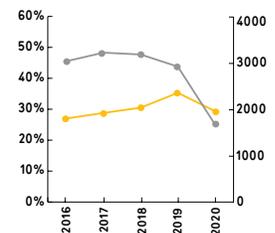
NOTES:

Positive Trends/Actions:
> Waste generated on campus decreased 40 per cent compared to 2019
> Increasing requirements for organics collection and single-use plastics phase-outs through federal and provincial policies
> Launch of new waste sorting app and tools, as well as continued expansion of organics services and waste receptacles
> All lobbies/foyers on track to have standardized sorting stations during 2021, with full building fit-outs through 2024
> Full-building outfitting of standard receptacles and deskside bins for M3, TC, EV1, EV2, EV3, and RCH
> Pilot of in-residence organics collection through the Green Residence program
> All signage on existing sorting stations updated to improve visual sorting cues

Challenges/Opportunities:
> Diversion rate also decreased by around 5% from 2019, as a larger proportion of waste went to landfill
> Large increase in single-use items, including PPE, during COVID-19, and suspension of reuse programs presents an uphill battle to reduce waste
> Unclear how much impact has simply been shifted to homes instead of on-campus collection
> Persistent challenges engaging all members of the campus community with waste sorting and reduction

Waste

SUPPORTING SUSTAINABLE FASHION WITH (NEW) USED CLOTHING STORE

The WUSA Sustainability Project (WSP) Clothing Store is Waterloo's first campus thrift store! The store collects donations from residences and the campus community for resale, offering students affordable and sustainable clothing options. It is run entirely by student volunteers, with proceeds going back into the store to cover operating expenses.

The store is located on the ground floor of SLC. With generous support from the Sustainability Action Fund, Student Life Endowment Fund, Math Endowment Fund, and Waterloo Environment Student Endowment Fund, the store aims to open in early 2022. Stay updated on their progress on the WSP social media channels!

TO LEARN MORE ›*instagram.com/wusasustainability*

REFLECTING ON WASTE DURING WASTE WEEK 2020

Waste Week: Home Edition encouraged the campus community to get creative with tracking their waste at home for one week. More than 125 campus members participated, reflecting increased awareness and encouragement to try low-waste swaps. Students and employees were also encouraged to take the Waste Warrior Quiz to test their sorting smarts. Impressively, nearly 50 per cent of the 130 respondents claimed the title of Waste Warrior! Finally, more than 40 campus members attended a virtual workshop on reducing food waste, hosted alongside Food Services and Maison Verte.

TO LEARN MORE › *uwaterloo.ca/sustainability/events/zero-waste-week-2020-home-edition*

GETTING THE SCOOP ON SORTING

"Where does this go"? Standing next to a waste sorting station, with an item in-hand, it's the question that often comes to mind. In 2021, Custodial Services led the launch of a new *Shift:*Zero sorting tool to help all campus community members properly sort waste, organics, and recycling specific to the University. The tool features a web platform, app, and sorting game to test your knowledge, and covers all campuses in Waterloo Region and Stratford. The tool is key to Waterloo's zero-waste journey and ensuring that recyclable and compostable items end up in the right waste streams.

CHECK OUT THE TOOL OR DOWNLOAD THE APP › *uwaterloo.ca/sustainability/sort*

WATER

PROGRESS SNAPSHOT

OBJECTIVE O4: By 2025, reduce water intensity by 5 per cent per square metre from a 2015 baseline

Complete (tentative)

INDICATORS:

30% Reduction in water use intensity since 2015

0.52 Metres cubed water use per square metre

WATER INTENSITY
(m³ consumed per m² of space)
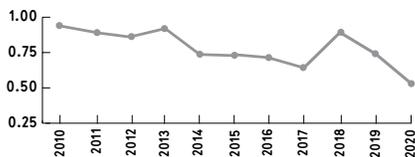
NOTES:

Positive Trends/Actions:
› Water consumption declined steeply in 2020 by about 30% from the 2015 baseline, far exceeding the established target
› Implementation of fish lab retrofit supported some water decreases

Challenges/Opportunities:
› It is unlikely that reductions will be maintained as activity on campus resumes
› There are no formal programs or services established to manage water efficiency

OBJECTIVE O5: By 2025, expand the deployment of stormwater management technologies to targeted areas

Mostly complete

INDICATORS:

3 New stormwater management features on campus

14 Stormwater features implemented on campus

NOTES:

Positive Trends/Actions:
› Integration of green roof on SLC will improve water retention
› Actions include 4 green roofs, 3 permeable pavement sites, a stormwater cistern, and 5 stormwater ponds on North and Northwest Campus

Water

Supporting UN SDGs:

RETROFITTING THE AQUATIC FACILITY

Waterloo's aquatic lab facilities underwent a major transformation recently, modernizing equipment and infrastructure to create a state-of-the-art facility for cross-faculty researchers. In the redesign of the lab, significant efficiency gains were made to reduce cleaning and maintenance requirements, and dramatically reduce water consumption. While the project increased the water capacity available for research by 75 per cent, the new facility reduces water consumption by 97 per cent, saving over 14,000 gallons of water per day.

READ MORE ABOUT THE PROJECT › *uwaterloo.ca/research/research-excellence/research-support-fund/renovations-lead-environmental-benefits-and-cost-savings*

TRANSPORTATION

PROGRESS SNAPSHOT

OBJECTIVE O6: By 2025, increase to 90 per cent the proportion of sustainable commuting trips from a 2016 baseline of 85 per cent

Complete (tentative)

INDICATORS:

93% Combined student and employee trips* to campus using a sustainable mode

98% Student trips* by walking, cycling, carpooling, transit, or online learning

90% Employee commuting trips* by walking, cycling, carpooling, transit, or telework

NOTES:

Positive Trends/Actions:
› Sharp increase in work from home exceeds campus target for sustainable travel, reducing over 8,000 t CO_2-e
› Supporting larger level of remote work/ learning than pre-pandemic can help maintain target

Challenges/Opportunities:
› Most remote working changes are likely short-term; a decrease in the indicator is expected
› Survey results show increased hesitancy around public transit and carpooling requires monitoring

OBJECTIVE O7: By 2020, increase electric and alternative-fuel vehicle use on campus

Complete (tentative)

INDICATORS:

2.5% Of vehicles used to commute to campus are electric or plug-in hybrid electric

18 Publically available EV charging stations

NOTES:

Positive Trends/Actions:
› Increase in reported EV use from 2018, which is validated by pre-pandemic use of EV charging stations
› Launch of 15 new charging stations through NRCAN grant

Challenges/Opportunities:
› Data collection on EVs during pandemic received lower response rates, and it is unclear how return-to-campus will impact in the short term

Transportation

Supporting UN SDGs:

EXPANDING ELECTRIC VEHICLES

In March 2021, Plant Operations – Design Services added the first fully electric vehicle to Waterloo's fleet. Their team saw a perfect opportunity to support site visits and project work while reducing emissions. Waterloo has several hybrids in the campus fleet, and the new EV will support fuel reduction targets as well as reduce air pollutants. Keep an eye out for the new Nissan Leaf around campus!

CHARGING UP JUST GOT EASIER

Waterloo was thrilled to announce in June 2021 the expansion of EV charging stations thanks to a successful grant through the Zero Emissions Vehicle Infrastructure Program of NRCAN. The project will see a fivefold increase in EV charging stations on campus, with the installation of 15 new Level 2 chargers. The grant application was developed collaboratively with Wilfrid Laurier University, who will receive an additional 5 stations. Chargers at Waterloo are expected to be operational in Fall 2021.

VISIT THE SUSTAINABLE TRANSPORTATION PAGE FOR MORE INFO › *uwaterloo.ca/sustainability/transportation*

LOCKING UP YOUR RIDE

Waterloo's new secure bike cage has now launched! Located between ML and EV3, the new bike cage has covered storage over 48 bike parking spaces to help students and employees feel more comfortable bringing their bikes to campus. The cage requires fobs to access and is monitored by security cameras. Students and employees can access the cage for $10/month.

VISIT PARKING SERVICES FOR ACCESS › *uwaterloo.ca/sustainability/bikecage*
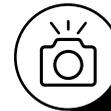
PROGRESS SNAPSHOT

OBJECTIVE O8: By 2025, reduce fossil fuel consumption across the campus fleet by 25 per cent from a 2015 baseline

Mostly complete (tentative)

INDICATORS:

24% Reduction in fleet fuel use since 2015

164,137 Litres fuel consumption

SUSTAINABLE TRIPS* TO CAMPUS (% OF TOTAL)

- Employees
- Students
- Combined
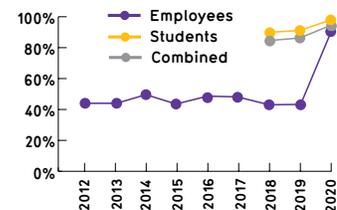
FLEET FUEL USE (LITRES)
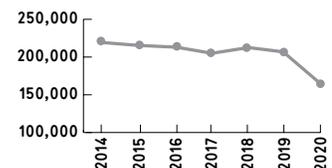
NOTES:

Positive Trends/Actions:
- › Purchase of first fully electric fleet
- › Almost met target in 2020 due to fuel decrease
- › Pilot of fleet telematics devices in 2021 will identify behaviour and electrification options

Challenges/Opportunities:
- › Given pre-pandemic trends, most fuel consumption is expected to rebound without concerted effort to support efficiency/electrification

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*"Trips" is used generically to refer to how students and employees move to a place of work or study from their place of residence. This includes, for example, trips from students living in residences as they travel to academic buildings, as well as "avoided trips" from remote learning or work-from-home activity.

GROUNDS

PROGRESS SNAPSHOT

OBJECTIVE O9: By 2025, all University grounds will be maintained according to sustainable landscaping standards, and plans developed for remediation and preservation of specific natural areas of concern

Mostly complete

INDICATORS:

-- Per cent compliance with sustainable landscaping standard forthcoming

100% Grounds managed to integrated pest management principles

NOTES:

Positive Trends/Actions:
› Strong collaborative efforts between Grounds Services and the Sustainability Office to research and develop sustainable landscaping standards
› Initiation of new efforts to comply with Regional Sourcewater Protection Plan requirements on salt management and minimization

Challenges/Opportunities:
› Integrating landscaping standard requirements into all workflows will take time

Grounds

Supporting UN SDGs:

PLANTING SEEDS ON CAMPUS AND AROUND THE WORLD

In March 2021, the Ecology Lab delivered a virtual interactive workshop focused on native plants and their role in supporting biodiversity. Participants were sent the materials ahead of time, including a mix of native plant seeds, potting soil and a container, and tuned in to a virtual planting demonstration from home. The workshop was very well received, with nearly 50 students participating in the session. Many have followed up since the workshop with pictures of their container gardens growing, expressing their excitement in supporting local pollinators.

The workshop was delivered as part of the annual ENVigorate festival in the Faculty of Environment and was supported by the Go Wild School Grant program from WWF-Canada.

FOOD

PROGRESS SNAPSHOT

OBJECTIVE 010: By 2025, 40 per cent of all Food Services food and beverage purchases are produced on-site, locally, or are third-party certified for sustainability

Mostly complete

INDICATORS:

28% Of all food and beverage purchases are local, produced on-site, or third-party certified for sustainability

FOOD PURCHASES MEETING TARGET CRITERIA (% OF TOTAL)
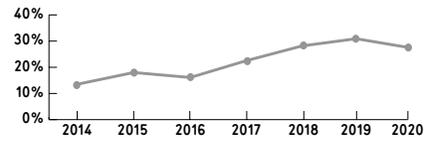
NOTES:

Positive Trends/Actions:
› Continuing to build relationships with local farmers
› Exploration of various on-campus gardens is underway

Challenges/Opportunities:
› Major changes to food systems during 2020 changed purchasing patterns in the short term that led to slight decrease in indicator, but this is expected to improve

OBJECTIVE 011: By 2018, achieve and maintain a Fair Trade Campus designation

Complete

INDICATORS:

COMPLETE Fair Trade Campus Designation received May 2019

NOTES:

Positive Trends/Actions:
› Continuing to maintain designation

Challenges/Opportunities:
› Ensuring Fair trade products are maintained as on-campus activity resumes will be critical

Food

Supporting UN SDGs:

ENGAGING FOOD CHOICES FOR PEOPLE AND THE PLANET

Food Services continued to champion healthy and sustainable food choices throughout 2020 and 2021. Not only did they expand plant-based food options on their menu, but they also continued to develop and deliver virtual programming for students and employees.

On social media, Food Services shares weekly nutrition tips from their registered dietitian, easy and nutritious recipes from their chefs, and other resources to support sustainable eating. They have also expanded nutrition resources on their website, including meal planning and prep, healthy snacking, and balanced plate recipes. Finally, they delivered and supported a number of workshops on sustainable food, including sessions on healthy and sustainable choices, growing microgreens, and reducing food waste.

LEARN MORE › *uwaterloo.ca/food-services*
or follow them on social media
@uwaterloofood

PROGRESS SNAPSHOT CON'T

OBJECTIVE 012: By 2020, deliver multifaceted programming to grow student and employee awareness about healthy and sustainable food choices

Complete

INDICATORS:

18 Projects or initiatives to increase food health and sustainability awareness

NOTES:

Positive Trends/Actions:
› Hosting of four major workshops between Food Services and the Sustainability Office in 2020
› Initiation of systems to track plant-based purchases will improve efforts to support sustainable food choices

Challenges/Opportunities:
› "Delivering information to a broad audience of food consumers on campus

PROCUREMENT

PROGRESS SNAPSHOT

OBJECTIVE O13: By 2020, evaluate life cycle cost and require sustainability disclosure from suppliers for all purchasing decisions over $100,000

Complete

INDICATORS:

COMPLETE
Development of guidelines is underway

13 Major suppliers participated in pilot sustainability disclosure process

NOTES:

Positive Trends/Actions:
› Campus launched a disclosure regime for successful RFP respondents to improve supply chain transparency and enable further action
› Lifecycle Costing Guideline was developed for targeted procurement categories

Challenges/Opportunities:
› Identifying ways to effectively integrate disclosure items into weighted procurement criteria will be an important next step
› Training on implementation of life cycle costing will be needed for key practitioners

OBJECTIVE O14: By 2018, establish baseline data and targets to improve the percent of campus-wide purchases that meet third-party standards for paper, electronic equipment, and cleaning supplies

Mostly complete

INDICATORS:

38.5% Of all paper purchases have FSC certification and/or recycled content

82.7% Of all major electronics purchased are certified to EPEAT Bronze or higher

51.7% Of all janitorial cleaning and paper products have an environmental certification

PURCHASES MEETING SUSTAINABILITY CRITERIA

Legend: FSC/Recycled Paper — EPEAT Electronics — Green Custodial Products
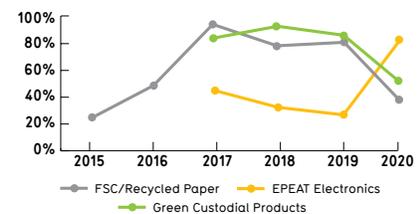
NOTES:

Positive Trends/Actions:
› Major increase in EPEAT certified electronics, although this was largely due to improved analysis of Apple purchases

Challenges/Opportunities:
› Major declines in sustainably certified janitorial products, likely as a response to COVID cleaning needs and decrease of many janitorial supplies such as paper products which were fully certified
› Major declines in FSC-certified or recycled content paper, but it is unclear whether there is a structural change or whether this is temporary with COVID

Procurement

Supporting UN SDGs:

INCREASING SUPPLY CHAIN DISCLOSURE

Procurement and Contract Services worked collaboratively with the Sustainability Office to develop a disclosure checklist for all new major vendors to complete upon contract award. In addition to questions about sustainability of products and services procured, the checklist evaluated sustainability-related corporate practices and commitments to increase the transparency throughout Waterloo's supply chain. Results will be analysed throughout 2021 and evaluated for opportunities to leverage the campus' purchasing to increase support for sustainable procurement.

TAKING THE LONG VIEW ON PROCUREMENT

Policy 53: Environmental Sustainability, the Environmental Sustainability Strategy, and *Shift:*Neutral all emphasize the importance of evaluating lifecycle costs in addition to up-front purchasing costs. This makes for prudent financial decisions, but also increases management transparency of actions and helps prioritize efficiency. The lifecycle costing guideline, developed in 2020 and released in 2021, provides clarity for campus users on processes to follow and tools to use to complete lifecycle cost analyses.

GREENING IT

Technology is critical to a modern campus, but production and use of computing equipment has major environmental impacts. Over the past year, Waterloo participated in a pilot program with Green Economy Canada on embedding sustainability in IT procurement, alongside several peer public sector institutions. The program featured presentations from sustainable procurement experts, a self-assessment tool, and key resources. The findings are now being translated into operational practice related to procurement and IT usage through an ongoing collaborative project between IST and the Sustainability Office, and will re-launch the Green IT Advisory Committee.

BUYING SUSTAINABLY

Centralized policies are crucial for sustainable procurement, but everyday decisions by employees and students are equally necessary. In 2020 and early 2021, the Sustainability Office published a new digital Sustainable Procurement Guide to help Waterloo navigate sustainable procurement choices. Check out the recommendations and resources on credible eco-labels, important questions to ask, and options to consider when making purchases, whether on campus or at home. Initial categories include cleaning products, IT, paper, furniture, and cleaning supplies, with more to come!

SEE THE PROCUREMENT GUIDE › *uwaterloo.ca/sustainability/projects-and-initiatives/sustainable-procurement*

ENGAGEMENT

Waterloo's people are the most important part of campus sustainability. Engaging the passion, creativity, and unique mixes of talent across academics and operations is foundational to embed sustainability practices into campus culture.

Employees across campus are also residents, neighbours, and community leaders. Students are employees, visionaries, and citizens, whether they are on campus, on work placements, or are alumni. Building values and sustainable living skills across more than 40,000 students and employees connected to the campus presents myriad opportunities on and beyond the campus borders.

Over the past year, sustainability engagement programs adapted to the pandemic reality. Virtual events, online collaborations, and remote program delivery were critical. New communication tools attempted to connect people and groups in innovative ways.

Undeniably, the campus community faced major challenges coping with the scale of change and urgency of the pandemic. Students and employees experienced burnout, "Zoom fatigue," uncertainty, and both personal and professional losses. Engaging on sustainability issues was far more difficult in this context, and as such many of the indicators used to measure campus progress require some adaptation or cautionary consideration.

Communications

Clear, concise, and timely communication is critical to engaging the campus community on sustainability efforts. In January 2021, the Sustainability Office launched their monthly newsletter, which includes regular updates on campus news and announcements, highlights from academic, operational, and engagement activities, upcoming workshops and events, and supporting resources. Each issue explores a different sustainability theme and provides practical tools and information for readers.

SUBSCRIBE TO THE NEWSLETTER › *uwaterloo.ca/sustainability/newsletter*

WAT'S SUSTAINABLE, WATERLOO?

In April 2021, the Sustainability Office launched the WAT's Sustainable? podcast to expand accessibility of sustainability information and resources. The podcast explores various sustainability topics such as climate change, transportation, food choices, and waste, and focuses on big picture challenges, campus connections, and tangible takeaways for each. The podcast was piloted in April 2021 and formally launched in spring 2021. It includes a mix of solo and guest episodes, with special guests from across campus and the Waterloo Region community.

CHECK OUT THE WAT'S SUSTAINABLE PODCAST › *uwaterloo.ca/sustainability/blog/post/wats-sustainable-podcast*

BUILDING BETTER AT ECO SUMMIT 2020

In November 2020, the Sustainability Office hosted the seventh-annual Eco Summit to reflect on our sustainability progress and new opportunities for the year ahead. The event featured the launch of the annual sustainability report, case studies from student, staff, and faculty representatives, and the highly anticipated Green Office awards. Attendees were also encouraged to participate in a pre-event trivia activity and to brainstorm one tangible sustainable action they would take following the event.

The event was hosted over Microsoft Teams, with more than 80 employees and students in attendance.

TO LEARN MORE › *uwaterloo.ca/sustainability/events/eco-summit-2020-building-better*

PROGRESS SNAPSHOT

OBJECTIVE E1: By 2020, Waterloo broadly distributes timely and audience-relevant information about sustainability initiatives and opportunities within the campus community

Mostly complete

INDICATORS:

19,000	Visitors on the sustainability website
4,329	Sustainability report views and downloads
22,997	Engagements on social media channels
3,147	Total followers on social media channels
4	Campus-wide engagement campaigns

NOTES:

Positive Trends/Actions:
› Launch of Sustainability Newsletter, Podcast, and "at home" resources
› Asynchronous engagement became possible with virtual events
› Participation in webinars remained strong throughout the pandemic
› Adapted Bike Month, Zero Waste Week, Eco-Summit, and Earth Month virtual campaigns

Challenges/Opportunities:
› Engagement campaign participation declined
› Meaningful two-directional communication became more difficult through virtual-only channels

STUDENTS

PROGRESS SNAPSHOT

OBJECTIVE E2: By 2020, additional programming is developed for incoming students during orientation and in residences to encourage sustainable living on campus

Mostly complete

INDICATORS:

-- Percent of first year students reached by sustainability programs

OBJECTIVE E3: By 2018, establish a sustainability leaders program in partnership with students from residences, clubs and societies, student government, and for students in off-campus housings

Complete

INDICATORS:

6 distinct pathways for student leadership, including through Green Residence program, Living Planet @ Campus, Student Groups, O-Week coordinators, SDG Student Hub, and formal advisory committees

NOTES:

Positive Trends/Actions:
› Green Residence Ambassador program was adapted with a virtual leadership development focus rather than peer engagement
› Student groups hosted events and hackathons
› WUSA Sustainability Commissioner began expanding student-to-student networks

Challenges/Opportunities:
› Quantitative progress against objectives was difficult to measure due to pandemic restrictions and significant difference in participation modes (expected to improve going forward)

Students

GREENING CAMPUS HOUSING

The Green Residence Ambassador program ran virtually in 2020-21 in partnership with Campus Housing, engaging more than 20 student ambassadors across campus residences, as well as six Green Residence program alumni ('mentors'). Students participated in weekly or biweekly discussions and reflections on various sustainability topics, and supported three sustainability initiatives in Winter 2021:

> › Clothing donation drive collected 20 bags of warm clothing to support local organizations in need
> › Organics collection pilot diverted nearly 130 bags of organics from landfill in University of Waterloo Place
> › Virtual Earth Hour trivia event quizzed attendees on sustainability-related topics and shared ideas on how to unplug for Earth Hour

A huge thank you to the dedicated ambassadors for volunteering their time and energy to the program!

TO LEARN MORE › *uwaterloo.ca/sustainability/greenres*

HACKING FOR CHANGE AT THE SDG IMPACT CHALLENGE

In March 2021, the SDG Student Hub (also known as Impact Alliance) organized the first virtual SDG Impact Challenge in partnership with Global Spark. This solution-based hackathon featured SDG-linked problem questions from partner organizations – the Interdisciplinary Institute of Climate Change (IC3), Food4Kids Waterloo Region, and the Waterloo Institute for Sustainable Energy (WISE). The event provided a fantastic opportunity for students to learn more about the SDGs, work with diverse stakeholders, and develop meaningful ideas. Teams had 24 hours to develop and pitch solutions to a judging panel for a chance to win a cash prize and support to implement their proposed solutions.

TO LEARN MORE › *uwaterloo.ca/sustainability/events/sdg-impact-challenge*

INTRODUCING THE WUSA SUSTAINABILITY COMMISSIONER

Waterloo Undergraduate Student Association (WUSA) hired the first Sustainability Commissioner in January 2021! The primary role of the commissioner is to advocate on behalf of the undergrad student body on issues of sustainability. Whether that be through supporting student clubs, representing WUSA on advisory councils, or fostering projects, they work to further student wellbeing and sustainability on campus. Winter term was focused on launching a sustainability directory of student groups and establishing the WUSA Sustainability Project (WSP) brand. Moving forward, WSP will pivot to an action-based mandate, spearheading tangible infrastructural or systemic improvements on campus.

TO LEARN MORE › *wusa.ca/services/wusa-sustainability-project*

EMPLOYEES

Employees

CELEBRATING THE 250TH SUSTAINABILITY CERTIFICATE GRADUATE

The Sustainability Office was thrilled to award the 250th certificate for the Sustainability Certificate program. For the last 10 terms, the Sustainability Office has facilitated the workshop series to engage employees on big picture sustainability challenges, local directions, and resources for taking action on campus and at home. As of April 2021, more than 280 employees have completed the certificate, and more than 100 others have started the course. The Sustainability Office continues to run synchronous group sessions virtually (with hopes of resuming some in-person learning soon), as well as an asynchronous, independent offering on LEARN.

uwaterloo.ca/sustainability/certificate

PROGRESS SNAPSHOT

OBJECTIVE E4: By 2025, increase from 5% to 25% the proportion of university departments that are Green Office

Mostly complete

INDICATORS:

18% University departments achieving at least Green Office Bronze

~6% Participation in Sustainability Certificate

NOTES:

Positive Trends/Actions:
› Continued growth in Green Office certification year-over-year despite COVID-19 challenges
› Launch of Green Labs pilot program to address unique lab needs
› Continued interest in sustainability certificate, including both synchronous virtual and asynchronous LEARN offerings
› Integration through Keeping Well at Work campaign and other campus partner events

Challenges/Opportunities:
› Green Office departments were largely virtual and distributed, limiting many Green Office actions, and some hybrid format is expected to continue and will require ongoing evolution
› Virtual delivery of Sustainability Certificate, while still receiving overwhelmingly positive feedback, remains less engaging and interactivity is less possible compared to in-person

Waterloo's Green Office program continued to support departments as they worked to embed sustainability into (home) office culture. This included new work-from-home resources for the resource toolkit, a new lunch and learn series with case study presentations from participating departments, and a sustainability book club pilot with a small group of ambassadors.

As of June 2021, there were 54 participating departments, with more than 75 ambassadors and representing more than 2,200 employees across campus. Departments receiving Green Office certificates include:

GREEN OFFICE PLATINUM CERTIFIED

Green Office Platinum (3)

› Centre for Extended Learning
› Centre for Teaching Excellence
› Dean of Environment

GREEN OFFICE GOLD CERTIFIED

Green Office Gold (3)

› Library
› Plant Operations, Design Services
› Work-Integrated Learning (WIL) Programs

GREEN OFFICE SILVER CERTIFIED

Green Office Silver (14)

› Dean of Engineering
› Dean of Health
› Economics
› English Language Institute, Renison
› Food Services
› Knowledge Integration
› Office of the President
› Print + Retail Solutions
› Recreation and Leisure Studies
› School of Environment, Resources and Sustainability
› St. Jerome's University College
› Student Success Office
› Water Institute
› Waterloo International

GREEN OFFICE BRONZE CERTIFIED

Green Office Bronze (12)

› Centre for Career Action
› Faculty Association of the University of Waterloo
› Finance
› Institutional Analysis and Planning
› Office of Research
› Office of the Provost
› Plant Operations, Environmental Services
› Political Science
› Registrar's Office
› School of Pharmacy
› School of Social Work, Renison
› Social Development Studies, Renison

Lab spaces can have a large energy and material footprint on campus, and engaging labs will be critical to achieving our campus sustainability goals. That's why the Sustainability Office was very excited to launch the Green Labs program! Like the Green Office program, Green Labs will focus on building a network of lab ambassadors across campus, equipping them with the necessary tools and resources to support sustainable action in their areas, and providing a mechanism for tracking progress – and celebrating successes! – over time. Research and consultations took place throughout 2020 with operational and lab stakeholders, and the pilot launched in May 2021 with four labs. The program is expected to launch more widely across campus in early 2022.

uwaterloo.ca/sustainability/greenlabs

COMMUNITY
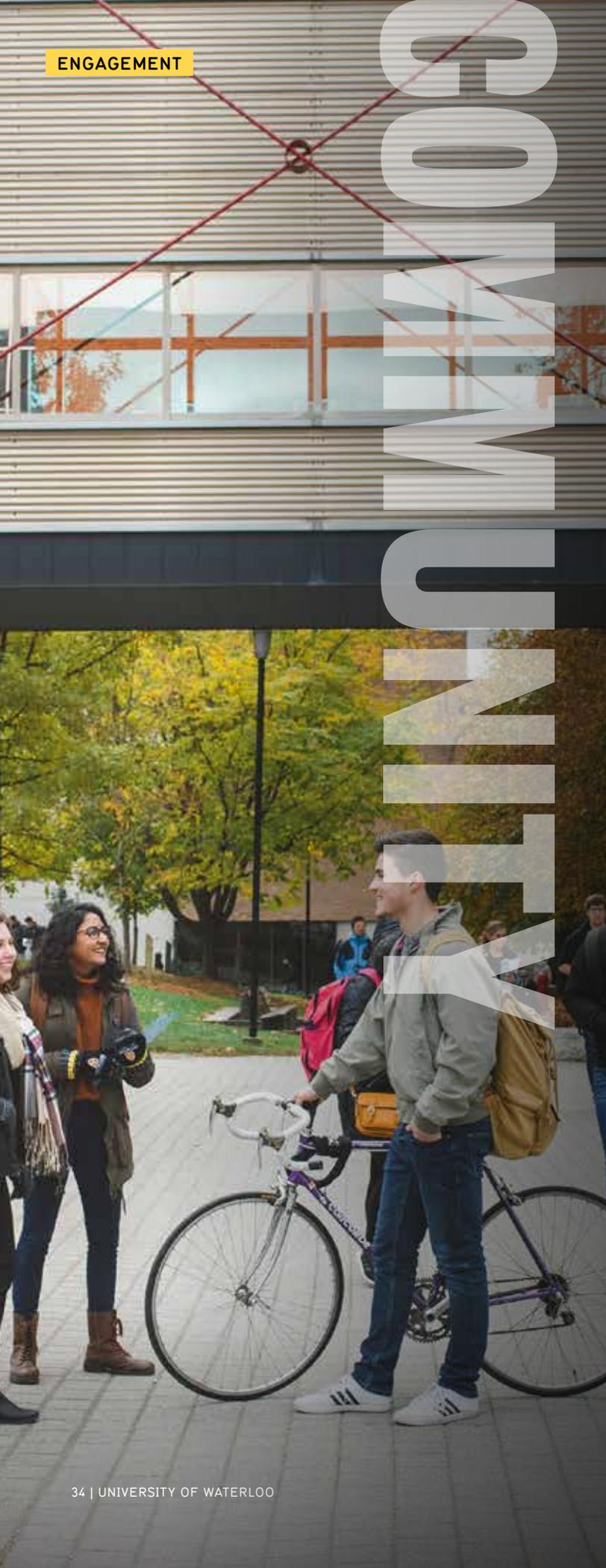
Community

PROGRESS SNAPSHOT

OBJECTIVE E4: By 2020, Waterloo is recognized as a sustainability leader in Waterloo Region

Complete

INDICATORS:

4 Local sustainability awards since 2016

16 Local non-academic community partnerships, memberships, board roles, or advisory involvement related to sustainability since 2016

NOTES:

Positive Trends/Actions:
› Receipt of Sustainable Waterloo Region Breakthrough Award in May 2021 highlights local leadership
› Continued integration in a network of partnerships between business, civil society, and government

Challenges/Opportunities:
› Many programs and partnerships were impacted by the pandemic and will need restarting or revisioning going forward

GAMING AROUND TO COMMUNICATE CLIMATE CHANGE

The Interdisciplinary Centre on Climate Change (IC3) at Waterloo launched Illuminate to help people understand climate change science, risks, and (most importantly) solutions. Released in January 2021, Illuminate is an educational simulation game where players learn about the impacts of climate change and explore ways to reduce greenhouse gas emissions (GHG) and respond to climate risks. IC3 developed Illuminate in partnership with Waterloo's Games Institute, and a multi-disciplinary team of students, staff and faculty from across campus. The game aims to teach players about the impacts of climate change while inspiring hope and motivating Canadians to take action and find effective solutions that will help shape our future.

PLAY ILLUMINATE › *uwaterloo.ca/climate-centre/training-and-education/illuminate-climate-change-simulation-game*
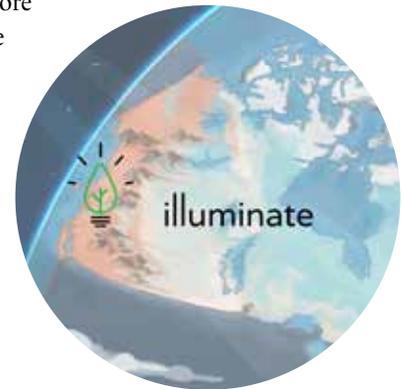
LOCALIZING THE GLOBAL GOALS

The UN SDGs are a pivotal global framework for advancing social, economic, and ecological sustainability. At the local level, the 17 SDGs are directly connected to community wellbeing. That's why researchers from the Faculty of Health have been working collaboratively with local governments to integrate the framework of the Canadian Index of Wellbeing (CIW) into important discussions around wellbeing and sustainability, drawing off their framework linking the CIW to the SDGs. From Oxford County to Yukon Territory, Waterloo expertise is helping shape community policy, planning, and progress indicators that improve wellbeing in all its aspects.

LEADING EXAMPLE FOR THE LOCAL COMMUNITY

Waterloo was honoured to accept the Breakthrough Award from Sustainable Waterloo Region (SWR) in May 2021 for the campus' publication of *Shift:*Neutral and development of carbon reduction targets. Waterloo is a member of the Regional Sustainability Initiative program through SWR, as well as the TravelWise program, and this community award helps demonstrate the leadership role the University brings to community climate and sustainability action.

READ MORE ABOUT THE AWARD ANNOUNCEMENT › *uwaterloo.ca/sustainability/news/waterloo-receives-sustainability-breakthrough-award*

GOVERNANCE AND BENCHMARKING

OBJECTIVE G1: By 2025, achieve and maintain a STARS Gold designation through the Association for the Advancement of Sustainability in Higher Education

Somewhat complete

INDICATORS:

SILVER STARS Silver Designation earned in November 2018

NOTES:

Positive Trends/Actions:
› Updating and renewing STARS submission during 2021

Challenges/Opportunities:
› Many actions are underway and a gap analysis will be conducted to identify opportunities to reach Gold, aligned with existing sustainability commitments

FORMAL POLICIES, MEMBERSHIPS, PRACTICES, AND COMMITMENTS

Internal:

› Adoption of Responsible Investment Advisory Group recommendations for carbon reduction measures and climate change considerations in investment activity (new 2021)
› Lifecycle costing guideline (new 2021)
› Net Neutral New Building Guideline (New 2021)
› Adoption of Responsible Investment Working Group recommendations for integration of ESG considerations in investment decisions (2018)
› Policy 53: Environmental Sustainability (2017)
› Environmental Sustainability Strategy (2017)
› Waste and recycling standard (2017)
› Centralized office printers defaulted to double-sided printing
› Campus Master Plan includes sustainability aspects as defining features of campus development (2009)
› High efficiency lighting retrofits mandated during renovations
› Eliminated use of chemical pesticides (1998)

External:

› Signatory to UN Race to Zero (new 2021)
› Member of the Regional Sustainability Initiative, managed by Sustainable Waterloo Region, and Bronze Pledging Partner for Waste (2017) and climate change (2021)
› Founding Member of University Global Coalition (2020)
› Signatory to Investing in Climate Change Charter (2020)
› Signatory to UN PRI (2020)
› Member and host institution for Sustainable Development Solutions Network Canada (2018)
› Signatory to 2017 Council of Ontario Universities commitment to design a roadmap to a low-carbon campus (2017)
› Member of the Association for the Advancement of Sustainability in Higher Education (2015)
› Member of TravelWise, managed by the Region of Waterloo and Sustainable Waterloo Region (2012)
› Signatory to Council of Ontario Universities Pledge, Ontario Universities, Committed to a Greener World (2009)

ACKNOWLEDGEMENTS

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