

University of Victoria

## **2021 FINAL REPORT**

# SUSTAINABILITY ACTION PLAN: CAMPUS OPERATIONS 2020-2021

May 2022

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#### Land acknowledgement

The University of Victoria acknowledges and respects the  $la\dot{k}^w$ aŋan peoples on whose traditional territory the university stands and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

#### Introduction

In 2020, the Office of Campus Planning and Sustainability (OCPS) developed the *Sustainability Action Plan (SAP): Campus Operations 2020-2021* as an interim plan for the period between the close-out of the 2019 plan and the development of the <u>Climate and Sustainability Action Plan 2030 (CSAP)</u>.

This report illustrates the final progress and achievements made towards the completion of each of the actions and reviews the status of the Plan's goals, leading up to the new CSAP. Progress on UVic's path to carbon neutrality is available in the annual <u>Climate Change Accountability Reports</u> and in the <u>Sustainability Tracking</u> <u>Assessment & Rating System (STARS) report</u> submitted in 2020.

The eleven SAP 2020-21 categories are:



When the interim plan was first released, it was not known that the world would soon be responding to multiple waves of the COVID-19 global pandemic. The university community had to pivot to online learning and research, buildings closed, and campus operations slowed down significantly. It was unclear how long these changes would last, and despite transitioning slowly to regular operations, many programs, projects, and engagement events have remained modified to adapt to these changes.

#### Progress on goals

This report highlights efforts over 2020-2021 academic year. The table below summarizes the status of the goals identified within the SAP 2020-2021. While many have been achieved, there are others that will be carried forward into the CSAP.

Status			2021
Completed		Goal has been achieved.	15
In progress	$\bigcirc$	Work has been undertaken; however, the goal has not yet been achieved.	7
Requires re-examination	$\bigcirc$	Work has been undertaken and it has been determined that the goal requires re-examination.	1
Not achieved	×	Goal has not been achieved.	1

#### 1.0 Planning, Coordination, and Administration

**Mission:** To create a campus culture that provides for sustainability to be integrated into operational, administrative and planning processes, and advanced through collaboration and coordinated decision-making across the university.

Goal 1.1: Develop a new Sustainability Action Plan that meets the highest standards of sustainability and explore opportunities to develop a comprehensive and integrated approach with researchers and academic units.



Over the years of 2020-2021, the development process for a new <u>Climate and Sustainability Action Plan 2030</u> (<u>CSAP</u>) was underway. While previous Sustainability Action Plans have been operational in nature, CSAP provides an accelerated and integrated approach to the challenges and opportunities afforded by climate change, and guides the university's approach to sustainability in every domain: Academics, Research, Indigenous, External Relations and Operations.

The university must respond to global climate change. The Intergovernmental Panel on Climate Change (IPCC) <u>Special Report Global Warming of 1.5°C</u><sup>1</sup> states we must limit global warming to 1.5°C to reduce risks to biodiversity, ecosystems, resources and their functions. The global community needs local, immediate action across regions to curb emissions and limit global warming. As well, the UN 2030 Agenda for Sustainable Development, <u>Transforming Our World</u>, provides 17 Sustainable Development Goals and 169 targets to address critical issues of importance to planetary wellbeing and humanity.<sup>2</sup>

UVic's *Climate and Sustainability Action Plan 2030* presents a path-based approach to the UVic's climate and sustainability targets, goals, strategies and actions.

Although this goal was intended to be completed by the end of 2021, due to the ongoing challenges related to the COVID-19 pandemic, the Plan was completed and published in Fall 2022. The planning process was guided and informed through extensive internal and external engagement, and most notably, engagement with Indigenous communities to emphasize the importance of valuing Indigenous ways of knowing and being, particularly on Vancouver Island.

<sup>&</sup>lt;sup>1</sup> IPCC Sixth Assessment Report: Impacts, Adaptation and Vulnerability 2022: <u>https://www.ipcc.ch/report/ar6/wg2/</u>

<sup>&</sup>lt;sup>2</sup> <u>https://sustainabledevelopment.un.org/post2015/transformingourworld</u>

#### Goal 1.2: Enhance responsible investment policies to reflect industry best practices.



In 2019, the Treasury Office, in consultation with student and faculty representatives reviewed the Short Term Investment Policy and the policy that guided it – the Responsible Investment Policy. The intent of the review was to ensure that UVic's investment objectives were achieved, responsible investment practices were updated, and each of the policies were aligned with the University's Strategic Framework (2018-2023).

UVic adopted both a new Responsible Investment Policy in 2020, and a new Working Capital Investment Policy for its \$225-million short-term investment funds to materially lower the carbon emissions across the entire portfolio by 45% in 2030, allocate 25% of the funds to thematic investments, and encourage better disclosure of carbon emissions and climate-related risks.

Achievements of these policies include:

- Abiding by and reporting on implementing the six guiding principles of responsible investing as a signatory of the Principles for Responsible Investment (PRI).
- Aligning the disclosure practices of investment managers with the Task Force for Climate-Related Financial Disclosures (TCFD) recommendations.
- Continuing to commit to collective engagement on climate issues through the University Network for Investor Engagement (UNIE).
- Transitioning \$80-million to the RBC Vision Fossil Fuel Free Short Term Bond Fund, freeing the working capital fund of any fossil-fuel investments.
- Increasing impact investing for sustainable projects, including:
  - ✓ \$500,000 investment into the Raven Indigenous Impact Fund, created by the Raven Indigenous Capital Partners, an Indigenous-led and owned financial intermediary that invests in Indigenous enterprises as a catalyst for social change and prosperity.
  - ✓ \$80,000 investment for the Vancouver Island Impact Investing Hub (VI3Hub), which is designed to help accelerate private investments into climate solutions and climate-focused innovation on the island. Combining climate action, sustainable finance and impact investing in a single integrated hub, its activities will include developing research insights and generating awareness for the public and within the world of investing on how to accelerate the transition to a net-zero inclusive future on Vancouver Island and beyond.
  - ✓ \$180,000 research partnership for the Climate Finance Project, funded by Uvic-led and hosted by Pacific Institute for Climate Solutions, in collaboration with British Columbia Investment Management Corporation. The goal is to co-develop decision-making tools and frameworks for integrating climate change risk evaluation and climate mitigation opportunities into investment portfolios.
  - ✓ \$10-million investment into the BlackRock's Global Renewable Power III Fund, which supports 250 renewable power projects across the globe. All projects in the fund align with the United Nations' Sustainable Development Goals (SDGs).
- Committing to report on responsible investment activities and their related goals at least annually:
  - ✓ 2020 Holdings Report
  - ✓ 2020 PRI Report

✓ 2020 Responsible Investment Report with progress updates on decarbonization and impact investment targets

The University of Victoria Foundation is a separate legal entity that manages long-term endowment funds to generate funds for the University to provide scholarships, bursaries and to use for other university purposes. In 2021, the University of Victoria Foundation released a new Responsible Investment Policy to consider the opportunity and risk that climate change presents and focuses on decarbonization across all investments and sectors. The list of Responsible Investment Beliefs was updated to recognize climate change as a key global issue of our time.

In November, 2021 the University of Victoria Foundation announced that as of Sept. 30, 2021 it no longer had holdings of companies in its equity portfolio involved in the extraction and processing of coal, oil or natural gas.

Key elements of the new policy include:

- Committing to reviewing UVic's decarbonization approach and carbon emissions reduction targets at least once every five years.
- Ongoing engagement such as the continued participation in investor coalitions and collaborations to enhance ESG standards and disclosure requirements by joining the University Network for Investor Engagement (UNIE) and supporting the Task Force for Climate-Related Financial Disclosures (TCFD).
- Continued selection of investment managers committed to climate change who actively, often through proxy voting, engage with companies to drive down emissions and increase disclosure.
- Increasing impact investing such as the continued financing of the new student housing and dining project (LEED V4 and passive house standards).

#### 2.0 Engagement

**Mission:** To provide opportunities for students, staff, faculty and community members to learn, share knowledge and collaborate through coordinated programs of engagement, events, training, education and celebration.

### Goal 2.1: Continue to develop and implement programs and activities that assist the campus community in contributing to the achievement of sustainability goals.

During 2020/2021 the Office of Campus Planning & Sustainability (OCPS) completed a review of previous engagement events and updated the department's Engagement Plan. Several engagement programming opportunities were identified for implementation on an ongoing basis and will be carried forward for consideration in the CSAP.

Due to the COVID-19 global pandemic, in-person engagement programs with other departments was extremely limited during the 2020/2021 academic year; however, efforts were made to collaborate virtually where possible.

Highlights include:

• Greater Victoria Green Team (GVGT) – over the duration of 2020/2021, the GVGT hosted twelve invasive species removal events between Mystic Vale and Cunningham Woods, engaging with 361 volunteers.

- Supplier Sustainability Assessment Tool UVic Purchasing Services and the OCPS collaborated on a pilot project using EcoVadis to carry out the evaluation of corporate social responsibility for UVic's suppliers. The one year pilot, which was also supported by the Campus Sustainability Fund, was successful and EcoVadis was approved for the 2022/2023 fiscal year.
- Energy Wise Network since 2016, UVic has been a member of the Energy Wise Network, a collaborative program run by BC Hydro and Fortis BC. In 2021, the university organized a Fall sustainability pledge campaign that involved several in-person mini campaigns related to topics like transportation, energy, waste reduction, etc. Modified Holiday Shutdown campaigns were also implemented during the holiday campus closure for both 2020 and 2021.
- Green Labs an ongoing program that encourages lab users to reduce waste and promote sustainable practices such as energy conservation, chemical substation, lab glassware recycling, and Mercury thermometer replacement projects.
- Default Veg supported by the Campus Sustainability Fund, this campus initiative involved participation from the OCPS, Food Services, and the Default Veg team to determine UVic's carbon footprint. There was a successful Chili Popup event in October 2021.

UVic continued to provide funding allocations for projects submitted and approved by the Campus Sustainability Fund, which was created in 2016 by an initial investment of \$100,000 by the VP of Finance and Operations. The purpose of the fund is to provide financial support to time-limited sustainability projects at UVic. Four projects were approved since 2020 that are anticipated to be finished by end of 2022 and almost all program funding has been allocated.

#### 3.0 Operations, Facilities and Services

#### 3.1 Buildings

**Mission:** To construct, renovate, maintain and operate campus buildings to green building standards and practices.

Goal 3.1.1: All new buildings will achieve the standard of LEED V4 Gold or equivalent certification. Major additions to existing buildings will also strive to achieve LEED V4 Gold or equivalent certification.

All nine new academic and administrative buildings constructed since 2007 have been designed to the LEED Gold building standard. The District Energy Plant was officially certified in summer 2020.

Construction for the new student housing and dining project began in January 2020 and will continue until mid 2023, with move-in for student residences taking place in September 2022 for Building 1 and September 2023 for Building 2. Design and construction of the buildings will meet LEED V4 Gold standards, as well as Passive House standards – the most rigorous global building standards for sustainability and energy efficiency. Completion of the project will contribute to reducing the university's greenhouse gas emissions through various different decarbonization strategies and will offer lessons learned as the university moves forward with its comprehensive plan to phase out fossil fuel energy for low-carbon energy.

The Engineering and Computer Science Building Expansion Project is the university's first major capital project to pursue the CAGBC Zero Carbon Building Standard and LEED V4 Gold certification. The new National Centre for Indigenous Laws is also targeting LEED V4 Gold certification.

# Goal 3.1.2: All new building projects and major building additions will provide for a high performance building envelope and passive design strategies to promote energy efficiency, climate resilience and greenhouse gas emissions reductions.

The National Centre for Indigenous Laws (NCIL) is targeting LEED V4 Gold certification. As part of the LEED certification, the project team is preforming energy modeling on the expansion. A lifecycle cost analysis report was prepared during the schematic design phase of the project to consider various heating and cooling plant options. The existing natural gas boiler will be replaced with an electric air source heat pump. The new heat pump will service both the original building and the expansion. Both major renovation/addition projects will offer valuable insight as to how the university can better align operational goals with provincial emissions reduction legislation. This is also being analyzed within the planning process to decarbonize building energy on campus. The project features mass timber construction practices, greatly reducing embodied carbon within the building structure. Construction is expected to be completed summer of 2024.

For the Engineering and Computer Science Expansion project, a new High Bay Research and Structures Lab will be constructed as a new building. The design phase of the project explored various sustainability strategies to promote energy efficiency, climate resilience, and greenhouse gas emissions reductions. Examples include: high performance building envelope with massing, air-side energy recovery, heat pump technology, thermally active slabs etc. In order to reduce the embodied carbon in both buildings, a series of strategies have been incorporated into the design that were identified within a life cycle assessment report (LCA). These include: mass timber, concrete containing supplementary cementitious material (SCM), low carbon cladding (terracotta). Mass timber has lower cradle-to-grave emissions compared to alternative building materials, such as steel or cement, and mass timber buildings have the potential to store carbon over long product lifecycles.

Due to construction cost pressures, the procurement process for the project was delayed until winter 2023. It is expected that the project will conclude by 2026.

Goal 3.1.3: Evaluate the suitability of capital projects at the project planning and project management phases for opportunities to integrate measures that improve energy efficiency and reduce greenhouse gas emissions.

The university's Manager of Energy Programs acts as a subject matter expert and is involved in various capital projects to determine complementary energy conservation measures with the ultimate objective to reduce the environmental impact of fuel, natural gas, electricity, and water use on campus. The department monitors and analyses data, researches and assesses opportunities to use cost-effective, low-carbon alternative energy measures that are compatible with campus energy infrastructure, and researches new technologies.

Information is provided to faculty and staff online, such as a list of technologies currently used to reduce energy and water consumption.

Over 2020-2021, the Manager of Energy Programs led a planning project to identify decarbonization strategies to guide Gordon Head campus development and operations to net zero. The plan will outline a technical pathway, combining specific and complementary energy measures, to achieve the plan's target of 50% reduction in emissions by 2030 and a strategy to achieve a net zero operations by 2040.

### Goal 3.1.4: Utilize sustainable operational and building maintenance practices in all campus buildings and facilities.

In January 2020, Facilities Management updated the Green Cleaning Policy to meet the requirements of LEED's Building Operations and Maintenance Rating System and Green Seal's Environmental Standard for Cleaning Services. It has been in effect as of January 1, 2021 and applies to the cleaning procedures, cleaning material purchases, cleaning equipment purchases, and cleaning services that take place on campus. The policy outlines a number of sustainability criteria that must be met as well as strategies and goals to reduce toxicity of chemicals used, conserve energy, improve staff training, and track overall performance.

The Maintenance and Operation unit in the Facilities Management department continued to maintain and improve the efficiency of building systems. These systems include the:

- Energy Management program, which provides data monitoring, analysis and continual re-commissioning of buildings.
- Modernization of campus lighting systems.
- Facilities shop that respond to thermal comfort requests.
- Grounds shop that manages the building landscapes according to Integrated Pest Management principles.
- Building water conservation program.

Building maintenance at UVic also includes the ongoing expansion of waste reduction and recycling services, and building air quality management through collaborations with other UVic units. Between May 2020 and February 2021 the construction of the student housing and dining building project achieved a total waste diversion rate of 94.66%.

More broadly, construction waste continues to be tracked for all LEED-certified building projects, which typically achieve a waste diversion rate greater than 90%.

Goal 3.1.5: Promote an extraordinary academic environment by evaluating all new buildings and major additions for opportunities for research, education, innovation and continuous improvement.

The university also continues to identify learning opportunities and student involvement in new building and major addition projects. Students were involved in the design development stage for the Engineering Expansion Project, in which undergrads studied specific technical issues and graduate students worked on case studies.

An important feature of this capital project is that the learning opportunities will be ongoing. Sensors will be incorporated into the structure to measure seismic activity, loading, heat, light, humidity, etc. The integration of green roofs and solar panels also will offer faculty and students the opportunity to study how green buildings operate and identify best practices/lessons learned. This demonstrates the university's commitment to the campus acting as a living laboratory.

#### 3.2 Energy

**Mission:** To maintain a campus that fosters an energy conservation culture that utilizes innovative technologies and promotes occupant engagement to continually improve building performance, as well as providing a comfortable learning and work environment.

### Goal 3.2.1: Achieve a total institutional greenhouse gas emissions reduction of 30% by Dec. 31, 2021, relative to 2010 as the baseline year.

The university tracks greenhouse gas emissions resulting from buildings (scope 1 and 2 emissions), fleet vehicles (scope 1 emissions) and select office paper (scope 3 emissions). In the 2020 Climate Change Accountability Report (CCAR), the university reported a 30% decrease in greenhouse gas (GHG) emissions relative to the 2010 baseline. There were above average reductions in scope 1 fleet emissions and associated scope 3 paper procurement emissions, likely due to the impacts of COVID-19 on the university's operations such as the transition to remote working in March 2020, and the reduction in research and field-schools.

Data collection to calculate the GHG emissions for 2021 commenced in February 2022. Factors such as fluctuating COVID-19 restrictions and the reopening of campus for the Fall 2021 term, including supporting hybrid work arrangements, were anticipated to have an impact on the university's emissions for the 2021 calendar year as well. Updates to align electricity emissions factors with CleanBC's Industry program approach were also made in June 2021 under the Carbon Neutral Government Program, impacting historical emissions data from 2010-2020. This will be reflected in the 2021 CCAR.

While remote and hybrid work arrangements may lead to significant reductions in direct (scope 1 and 2) emissions for the university, indirect (scope 3) emissions can increase, which is not widely measured. The District Energy Plant was also completed in summer 2019, which provides heat and hot water to 35 buildings across campus using natural gas. While the plant provides increased capacity to UVic's heating system, final commissioning of the district energy system are underway to improve overall efficiency and reduce campus natural gas consumption. Fossil fuels for university buildings accounted for 92% of GHG emissions (9,853 tCO2e) reported in 2020.

A planning process was initiated in 2021 to determine the appropriate technical pathway to transition the Gordon Head campus to low carbon energy. Recommendations will form the development of a comprehensive and long-term framework to guide campus development and operations and phase out of fossil fuel energy.

The university will continue to explore and support decarbonization opportunities, which will be integrated within the new Climate and Sustainability Action Plan 2030. A framework to begin benchmarking Scope 3 emissions not reported through the BC Carbon Neutral Program will also be explored. This includes accounting for reporting inconsistency, boundary incompleteness, and activity exclusion.



Figure 1 - UVic GHG emissions 2010-2021<sup>3</sup>

### Goal 3.2.2: Reduce campus electrical intensity by 18% by Dec. 31, 2021, relative to 2010 as the baseline year.

Electrical energy intensity is measured as the number of kilowatt hours consumed per year to power a square meter of building on campus. Figure 2 demonstrates the university's downward trend in electrical energy intensity.

The electricity consumption intensity reported in Figure 2 is not weather corrected, as only 12 per cent of the university's building portfolio utilizes electricity for space heating. Seasonal weather variation, therefore, has a marginal effect on UVic's overall campus electricity consumption. Data monitoring and analysis is conducted by Energy and Water Management Services.

<sup>&</sup>lt;sup>3</sup> Graph data was updated in June 2022 to align with the 2021 CCAR

Goal 3.2.2 was achieved in 2020 when the campus electricity consumption intensity was reduced by 26 per cent, relative to 2010. Electrical intensity increased slightly in 2021, likely due to the reopening of campus in Fall 2021; however, maintained a 23 per cent reduction relative to 2010 as the baseline year.



Figure 2 - Gordon Head campus electricity energy intensity 2010 to 2021

### Goal 3.2.3 Reduce campus natural gas consumption by 30% by Dec. 31, 2021, relative to 2010 as the baseline year.



Natural gas consumption intensity is measured as the number of kilowatt hours consumed per year to power a square meter of a building on campus. Although the university continued to achieve the 2019 target of a 12 per cent reduction, relative to 2010 as the baseline year, Figure 3 reveals that the target to reach a 30 per cent reduction by 2021 was not achieved. It was anticipated that once construction of the new District Energy Plant was completed in 2019, natural gas consumption would continue to decrease as a result of the high efficient gas boilers. By the end of 2021, the university reached a 25 per cent reduction.

The opening of the Modular Dining Facility (MOD) in September 2020 may be a contributing factor as to why the target was not achieved. The facility is serviced by natural gas and operated temporarily until July 2022, while the new dining hall was under construction.



Figure 3 - Gordon Head campus natural gas energy intensity 2010 to 2021

#### 3.3 Computing

**Mission:** To deliver computing services and infrastructure that meets the teaching, research and administrative needs of the campus community, while advancing the sustainability goals of responsible procurement, energy management and waste reduction.

### Goal 3.3.1: Ensure that green manufacturing standards and energy-saving criteria are applied to all computing services purchasing decisions.

Based on the actions identified in the SAP 2020-2021, preliminary progress has been made to achieve this goal. The final report for the previous SAP 2014-2019 identified that EPEAT no longer provides a sufficient tracking metric, prompting the need for additional reporting techniques/certification.

Reviewing the SAP 2020-2021 computing goals in order to meet the two actions while exploring emerging trends in sustainable computing practices was initially assigned to a summer co-op student in OCPS; however, due to COVID-19 global pandemic impacts and staff capacity, it was delayed.

Since EcoVadis was first approved as a supplier sustainability assessment tool, the university has gained visibility of their suppliers for IT related procurement. Moving forward, the university should explore developing policies that require suppliers meet specific sustainability criteria and use sustainability performance reports to make purchasing decisions.

#### **3.4 Dining Services**

**Mission:** To be an institutional model of sustainability, leading the way through innovative local purchasing initiatives and operational sustainable practices that minimize our carbon footprint and provide high quality, ethically sourced, nutritious and diverse food options that sustain the health and well-being of our community.

Goal 3.4.1: Prioritize waste reduction practices, while enhancing diversion in campus food outlets.

As highlighted throughout this report, the COVID-19 global pandemic has disrupted progress towards many of the SAP 2020-2021 goals and, in particularly, has skewed data, regarding waste diversion and reduction efforts.

Throughout 2020 and 2021, the university was not operating at normal capacity and a significant portion of campus users (students, faculty, staff) were at home. The increased volume of single-use items (e.g. plastic cutlery) as well as the reduction in overall waste produced (due to the fewer people on campus) will impact results.

Despite these factors, the university continued to implement waste reduction practices where feasible, while enhancing diversion in campus food outlets. In Fall 2021, campus users were welcomed back and Food Services began the process of transitioning back to 100% compostable/biodegradable cutlery and are currently having discussions with suppliers to seek more sustainable alternatives to plastic for many products and packaging.

Efforts include:

- Introduction of a standard price of \$2.00 to fill any size reusable mug with drip coffee or tea at the Bibliocafe;
- Customers receive a 25 cent discount on coffee when using their own mug at any Uvic Food Services outlets;
- Continued removal of all single-use plastic bottled water from Mystic Market Point-of-Sale kiosks;
- Introduction of glass containers in certain areas of Mystic Market (e.g. Jarritos and Mexican Coca Cola beverages);
- Utilization of the "FOOD TRAK" inventory management tool to reduce food waste. Food Services reviews monthly data to monitor food coming out of the kitchens.

On-going initiatives include:

- Working with current cold beverage campus partners (e.g. Coke and Ryan's Vending) to reduce, replace (with glass), or eliminate plastic beverage containers;
- Working with Coca-Cola to include a transition of all plastic bottled water containers to 100% rPET (100% recycled plastic); and
- Working with UVic Surfrider Club towards a Break Free from Plastics pledge, which includes a bottled water commitment for the university.

Future initiatives include:

- Expanding the \$2 fill up charge at Biblio Café to all Food Services outlets and introducing a fee for singleuse cups; and
- Implementing a reusable cup for fountain drinks and reusable food container program for the new student housing and dining facility, in which residence meal plan students will be given and incented to use a reusable cup and food container for takeaway meals.

Since the university returned to regular operations, the amount of waste produced is expected to increase relative to 2020-2021 and the use of single-use materials to decrease. UVic plans to continue to promote initiatives that support the ultimate goal to become a zero-waste institution. In alignment with this goal and best practices, UVic will explore ways to implement a holistic framework to measure waste reduction, including establishing a methodology to benchmark Scope 3 emissions, and move beyond waste audits as the sole measurement of diversion benchmarking.

Some of these considerations will be reflected in the Climate and Sustainability Action Plan 2030.

**Mission:** To create and maintain a campus landscape that minimizes environmental impacts, enhances biodiversity and maintains aesthetic values.

Goal 3.5.1: Protect and manage the ecological diversity of the natural areas on campus and enhance the use of native species in campus landscape management.

The University continues to work on the UVic invasive species management program and work on long-term program goals and strategies. Between January 2020 and November 2020, the Greater Victoria Green Team hosted 7 on-campus events at Mystic Vale. Due to the increased COVID protocols around events on campus, the remaining events under the previous partnership agreement were cancelled.

Since then, the University renewed its partnership with the GVGT to schedule 12 campus events taking place between July 2021 and July 2022 and five events were successfully completed in 2021. In 2022, events will take place at Mystic Vale and the Queenswood Campus.

A total of 887 volunteer hours were dedicated to restoration efforts, and more than 1410 m<sup>2</sup> of area was cleared of 123 m<sup>3</sup> of invasive plant species between January 2020 and November 2021. Invasive plant species largely comprised of English Ivy, Himalayan Blackberry, English Holly, and Spurge-Laurel. The program will continue into 2022 and native plantings will augment restoration projects to facilitate regrowth of native species from existing seed banks in the soil.

Also in 2020, a summer co-op student was hired at the University of Victoria to assess restoration efforts in Mystic Vale, prioritize areas for ivy management, and plan best practice monitoring strategies. The position was a success. The student produced a comprehensive map of ivy invasion through Mystic Vale, overlaid priority characteristics such as public visibility, access, and slope, and was able to produce a spatial map of areas that should be targeted by the Greater Victoria Green Team (GVGT) pull events. The information is available as spatial data files permanently stored with the Restoration of Natural Systems Program. The student also created monitoring plans and lay the groundwork for methodical tracking of restoration outcomes and trajectories.

In 2020, the Office of Campus Planning and Sustainability (OCPS) partnered with the restoration of natural systems program, which is a dynamic, interdisciplinary credit diploma program, to hire a CO-OP student to work on a biodiversity report for the STARS 2023 submission. The report includes a compilation of species and ecosystem data, curated to satisfy reporting requirements for the AASHE STARS Program, and currently serves as a baseline of current campus conditions to assist with natural area management planning and future study within the Campus' "Living Laboratory."

Other notable highlights for the 2020/2021 year include:

- Implementation of a minimum 2:1 ratio (or greater) for tree planting for all new projects on campus Phase 1 of the Ring Road South Pathway Project (Campus Cycling Plan);
- Demonstrated commitment to retaining and restoring naturalized landscapes on campus and within the surrounding community in new building and expansion projects – Student Housing and Dining, Engineering Expansion, Fraser Expansion; and
- Construction of the West Campus Greenway, which followed the Landscape Plan and Design Guidelines. Sustainability practices are embedded into every design solution within the document. The Campus Greenway expands to reinforce the connection between the natural and build environments and use restoration nodes to emphasize sustainability, and enhance environmentally significant natural areas.

### Goal 3.5.2: Develop a formalized Integrated Pest Management Plan as part of the overall grounds management system.

The university strictly controls the use of pesticides on its grounds and reports the use of chemicals as per the *BC Integrated Pest Management Act*. The university developed a draft Pest Management Plan (IPM) in 2018 and it was anticipated that a final document would be completed and implemented in 2020. This expectation was not met. The document remains in draft form in 2022 until it is made final; a consultant has been retained to finish the project. With an anticipated 2023 release, the document will identify current practices in pest management and will be reviewed annually based on ongoing monitoring in order to evaluate progress and identify areas of improvement.

### Goal 3.5.3: Reduce the quantity and improve the water quality of stormwater on campus that enters the local drainage and stream networks.

The university continued to participate in the Bowker Creek Initiative and provide support for the *Bowker Creek Blueprint: a 100-year Action Plan,* which includes providing information about ongoing stormwater management activities at UVic to include in their 10 Year Achievement Document. Blueprint 2.0 is being planned for in 2022 and outreach activities will continue.

Specific stormwater opportunities include:

- Where feasible, permeable paving solutions to allow runoff to infiltrate, provide moisture to the ground below, and reduce the stormwater infrastructure blueprint;
- Stormwater features to collect and filter stormwater prior to it percolating into the subsurface. Designs include shallow vegetated depressions with native plants to promote natural ecosystems; and
- Vegetated or rock bioswales at grade changes to slow runoff of stormwater. Designs include shallow, meandering channels, plants, roughened surfaces, and check-dams. These strategies should be avoided within the rootzones of mature existing trees.

New buildings on campus continue to follow LEED and municipal bylaw requirements for stormwater volume control. The new Student Housing and Dining building, Engineering and Computer Science Building, and Fraser Building all include stormwater management features in their design.

#### 3.4 Purchasing

**Mission:** To provide purchasing and supply management services to the campus community that achieve best value and apply triple bottom line principles to procurement initiatives, incorporating financial, social and environmental considerations to supply management decisions.

### Goal 3.6.1: Harmonize fleet purchasing with the Clean BC goal of 40% reduction in fleet emissions by 2030.

The Office of Campus Planning and Sustainability (OCPS) initiated a Fleet Purchasing Policies Research Project over the course of 2020-2021. The goal of the project was to collect and summarize background information related to fleet purchasing policies as well as guidelines in order to be presented to the University's Campus Security, Facilities Management, and Purchasing Services Departments – with the intent to begin formalizing a low emission vehicle purchasing policy. Procurement policies would be compliant with the CETA trade agreement

The low emission vehicle purchasing policy was not completed over the duration of this interim plan. Additional background work was warranted to first determine the current status of the university's fleet and identify a roadmap to electrification. This plan is currently being drafted and is anticipated to be completed by the end of 2022. The document will be used to inform a future low emission vehicle purchasing policy, which will also be consistent with the university's Supplier Code of Conduct and in alignment with the EcoVadis supplier assessment tool.

Overall, the use of EcoVadis has enabled the Purchasing Services Department to evaluate and improve the sustainability performance of UVic's trading partners. The goal of the pilot was to improve the sustainability performance of UVic's supply chain while ensuring that suppliers meet the requirements of the Supplier Code of Conduct. EcoVadis is a global services provider of business sustainability ratings.

The university will continue to utilize EcoVadis in its procurement processes, assessing suppliers based on 21 sustainability criteria that are grouped into four themes: environment, labour and human rights, ethics, and sustainable procurement. Broader sustainable procurement strategies and goals will be identified in the upcoming CSAP.

#### 3.5 Transportation

**Mission:** To offer sustainable travel options for every campus community member and visitors, and to act as a hub in a regional sustainable transportation network.

### Goal 3.7.1: Continue to increase the use of transit, cycling, walking and carpooling to 70% of the transportation modal split.

The University continues to increase the number of campus users choosing sustainability transportation options over driving alone through a combination of push (disincentives) and pull (incentives) policies. The next Transportation Survey, set to take place in Fall 2022, will formally calculate the most up to date modal split, which was 62% in 2018.

Following the development of the Campus Cycling Plan (2019), a number of pedestrian upgrades and end-of-trip facilities were implemented that were identified as short-term and ongoing projects and programs. The University Drive Connection Pathway officially opened in March 2021 after undergoing major upgrades, including the installation of a new two-way bike path, new lighting and crosswalk improvements. The project was the first of seven major active transportation network improvements to be completed as part of the Campus Cycling Plan and the first step in developing in All Ages and Abilities (AAA) Cycling Network on campus.

Construction also began in 2021 on the western most segment of the Campus Greenway from Gordon Head Road and Midgard to Ring Road near Fine Arts. This work was completed in December 2021 and a number of pathway design and crossing improvements were made.

Other notable highlights of the University's actions to increase sustainable transportation are:

- CARSA, McKinnon, and Centennial Stadium bike rack installations and Share the Space cycling and pedestrian zones adjacent to the CARSA building
- End-of-trip facilities located at the Student Health and Wellness building (change room and shower)
- Installation of a Capital Regional District Eco-Counter in 2021 located at the South Campus Entrance multi-use pathway north of Ring Road. A second Eco-Counter will be installed in 2022.
- BC Active Transportation Infrastructure Grant Program funding in the amount of \$316,380 to support the new two-way bike pathway and separate pedestrian pathway as part of the University Drive Connection Pathway project, thanks to a co-application with the District of Oak Bay.
- ICBC Road Improvement Program funding in the amount of \$25,000 for the cross-walk improvements at University Drive and Ring Road.
- Ongoing promotional events such as Go By Bike Week.

Parking services updated parking rates for September 2021 and the cost of an annual parking pass increased by 5%. The parking fee increase is an example of a push incentive that not only helps offset rising costs of operation/maintenance, but supports UVic's sustainable transportation programs. The Flexi-Pass Program continues to be available at \$150 for 25 single-day permits with no expiry date.

In September 2021, UVic employees were able to use their ONECard as a bus pass through the E-Pass Program

and purchase multiple months at a time (up to 4 months). The university continues to explore opportunities to have online purchasing as an option, rather than having to purchase at Campus Security during business hours.

Evo Car Share became available in Victoria, which provides a 100% hybrid fleet. Students are eligible for a free membership and 45 free driving minutes using the code "SCHOOLVIC" during registration. There are ten dedicated parking spaces for Evo parking, all located in parking Lot 2.

The action to explore opportunities for access to micro-mobility sharing network on campus has not progressed over the 2020-2021 duration. As of the publication of this closing report, no opportunities have presented themselves, as the University is waiting to partner with local municipalities as they develop their micro-mobility sharing networks.

In 2021, ownership and operations of the SPOKES Bicycle Program transitioned from an informal volunteer-led collective to a new formal program operated by the university. The university acknowledges the significant role that the program has had in providing affordable and sustainable transportation options for students, faculty and staff, and the positive impact the program has had.

The decision to transition the program to one that is formally operated by the University was made in order to ensure the long-term success of the program. Since its operation took place on university-owned property, policies/procedures related to financial management, privacy, safety and conduct had to be considered as part of UVic safety and risk management.

Additionally,

• The Office of Campus Planning and Sustainability was successful at receiving approval under the Strategic Framework Impact Fund in 2020 for \$13,500 to support a 2-year Employee E-Bike Program.

Initially the program was intended to launch in 2020; however, due to COVID-19 impacts, and staffing transitions, the project was delayed. It has since been extended until 2024 and the pilot program intake will launch Spring 2022. Under the pilot program, up to 100 of eligible employees will have the opportunity to apply for a max. \$3,000 loan towards the purchase of a new E-Bike, which would be repaid via regular payroll deductions during the 2-year program window.

• Ten (10) new public EV charging stations were installed and are scheduled to be operational by the end of February 2022. Five are located in parking Lot 4 and five are located in parking Lot 1. The University continues to plan for the installation of additional EV charging stations, as well as maintain/replace old charging stations.

### Goal 3.7.2: Harmonize fleet management with the Clean BC Plan goal of a 40% reduction in fleet emissions by 2030.



In 2021, Facilities Management began developing a fleet management/electrification plan (2022-2031), which is anticipated to be completed in 2022. Facilities Management will present recommendations for future budget planning and the results of the plan will help inform opportunities for fleet EV charging infrastructure opportunities and future fleet purchasing policies.

This plan addresses the SAP action to conduct an "E3 Fleet" energy savings and emissions reduction audit of fleet vehicles. "E3 Fleet" is a Canadian program that helps public and private sector fleets of vehicles meet green standards for performance. However, the university was able to action this internally.

The University continued to work with BC Transit to develop plans for transit infrastructure upgrades:

- U-Pass Electronic Fare Collection new contactless payment methods will be introduced in 2023
- Transit Exchange Upgrade Project 2021-2022 new upgrades will be coming to the UVic Exchange, amounting to nearly \$3.5 million. Upgrades include refurbishments, layover bays for buses, and bus shelters for commuters waiting for their bus. The surrounding area will also be upgraded for pedestrians – including improved pathways and additional bicycle storage. The project will be completed in Fall 2022.

The action to conduct two pilot projects addressing fleet functionality needs should be re-evaluated due to the limited availability of EV vans. Due to changes in priorities, progress was made on purchasing/modifying an equipment trailer for Nissan Leaf fleet vehicles, the Facilities Management department started to transition to electric versions of the equipment they currently use. The intent is to demo a few pieces of equipment and if successful, slowly transition all equipment over to electric. Examples include: hedge trimmer, lawn mower, leaf blower.

Recommendations on electrifying smaller fleet equipment will be included under the fleet management/electrification 2022-2031 plan.

#### 3.6 Waste





#### Goal 3.8.1: Increase the waste diversion rate to 82% by Dec. 31, 2021

Figure 4 - UVic waste diversion rate 2012 to 2021

The Waste Reduction Unit was established in 2009 and has helped the university increase its waste diversion rate, which has continued to improve between 2016 and 2019. By the end of December, 2021 the university reached an average waste diversion rate of approximately 80 per cent. This average reflects fluctuating monthly waste diversion rates over the course of the calendar year, which have ultimately been impacted by the COVID-19 global pandemic and remote/hybrid learning and working. The percentage of waste composted, though, has increased compared to previous years.

Additionally, waste diversion metrics do not consider when campuses eliminate disposals, and therefore does not measure waste reduction or accurately represent waste generated per person. The university should explore pursing a campus-specific zero waste plan.

Depending on the results of the rescheduled waste audit for 2022, this goal may need to be re-evaluated due to the impacts of the COVID-19 global pandemic.

### Goal 3.8.2: Reduce the total amount of waste produced as measured in kilograms per campus user (students, staff and faculty) by 2019, relative to 2010 as the baseline year.

The reduction/fluctuation of the campus users during 2020-2021, and increase in single-use products due to Provincial Health Orders related to COVID-19, ultimately affected many of the SAP actions related to waste reduction. The following were unable to be actioned during the 2020-2021 timeframe:

- Waste assessment audit on outdoor sort-it-out stations this will be completed in Fall 2022 as part of a campus-wide audit.
- Collaborative education and awareness campaign with Food Services focusing on waste reduction this action was initiated but has since been paused.

Due to COVID-19 impacts and the limited access to buildings, the University was unable to conduct the inventory of waste signage. However, two research projects were developed with OCPS work-study students to summarize waste initiatives taking place in other Canadian institutions, as well as a waste minimization behaviour report to summarize peer-reviewed articles on strategies for waste behaviour changes. Outcomes of both research projects will assist with the planning of future waste reduction campaigns and initiatives on campus.

Moving forward, the results of the campus wide waste audit in 2022 should inform a targeted collaborative education and awareness campaign focusing on waste reduction. A number of big changes are being proposed to commence in Fall 2022 with the opening of one of the buildings as part of the student dining and housing project. It will be an opportunity to tie research on best practices and data to inform behaviour change on campus.

Goal 3.8.3: Incorporate waste reduction engagement in the Residence Services resident survey or educational programming.

In 2021, the Office of Campus Planning and Sustainability met with Residence Services to discuss opportunities to include waste reduction engagement in the resident survey and other educational programming. Due to COVID-19 impacts, particularly the transition to online learning, this work was not completed. There are plans to re-engage Residence Services and work with the Residence Green Team to have waste and general sustainability questions included within the resident survey in 2022-2023. The results of the campus-wide waste audit will help inform these questions and influence educational programming.

#### 3.7 Water

Mission: To be an innovator in water use reduction, recovery, reuse and stewardship practices.

Goal 3.9.1 Determine the causes of increased water usage in 2018 and 2019.



Detecting and repairing leaks is a major component of water conservation. In 2020, Facilities Management completed an assessment to determine the source of major leaks that resulted in significant increases in water usage in 2018 and 2019. End-of-life and rusting/corroding underground infrastructure can cause underground leaks, triggering unexplained sudden increases in water use. However, without water meters, leaks are often only discovered and resolved when water reaches the surface or property is damaged.

Based on their assessment, major leaks were resolved at the following locations:

- Water main distribution system near McPherson Library
- Grey water distribution system
- CARSA

As shown in Figure 5, since 2019, the university has surpassed its 2019 goal of reducing water consumption by 25%. Between resolving the major leaks and the closure of campus throughout the COVID-19 pandemic, water consumption dropped significantly. By the end of 2021, water consumption was 31.6% less than 2010 as the baseline year.



Figure 5 - UVic water consumption 2010-2021

The exact root cause for the increased water usage in 2018 and 2019 may never be confirmed - due to the chance that leak(s) may remain undetected underground. As a method to detect water distribution system leaks, Facilities Management have begun to explore opportunities to use sonic leak-detection equipment, which should continue into the future.

In the meantime, additional water meters have been installed on campus which will help detect and resolve leaks sooner. It is planned to have water meters installed in all new buildings on campus.

Locations of water meters installed in 2020	Locations of water meters scheduled for 2021
McKinnon (MCK)	Clearihue (CLE)
• Elliott (ELL)	Cornett (COR)
<ul> <li>Engineering Lab Wing (ELW)</li> </ul>	Cunningham (CUN)
McLaurin A-Wing	• Petch (PCH)
<ul> <li>Business &amp; Economics Building (BEC)</li> </ul>	<ul> <li>Michael Williams Building (MWB)</li> </ul>
<ul> <li>Jamie Cassels Centre (JCC)</li> </ul>	<ul> <li>Modular Dining Facility (MOD)</li> </ul>
	Fraser (FRA)
	McPherson Library

The Facilities Management Department also engaged a consultant to complete a Hydraulic Water Distribution and Leakage Study, which will be completed later in 2022. The need for this study was identified through discussion with the District of Saanich in order to formally investigate building code requirements related to installing back-flow preventers designed to relieve water pressure at entry points.

Funding was allocated for the 2022/2023 fiscal year to implement projects that will be identified in the Hydraulic Water Distribution and Leakage Study as well as to support a campus storm water and domestic water condition assessment, and utility metering upgrades. In the future, additional funding will be required for other water reduction measures identified for several other buildings and to install water meters for the main pipes on campus.

As reported on above, it is evident that these efforts have had a significant impact on reducing the university's water consumption and validates that the university should continue to explore additional water saving measures. This includes investigating the development of an asset management plan for underground infrastructure that includes age, condition, and replacement timeline.

### Goal 3.9.2: Retrofit 25 water fountains in campus buildings for easy refilling of personal water bottles.

In January 2020, an OCPS work-study student completed an inventory of all water filling stations on campus. From this inventory, 19 potential retrofits were selected and completed in early 2021.

Locations of water fountain retrofits	Selected locations for new water fountains
<ul> <li>Clearibue B-Wing</li> <li>Clearibue C-Wing</li> <li>Elliot Building</li> <li>Engineering Office Wing (EOW)</li> <li>Engineering &amp; Computer Science Building (ECS)</li> </ul>	<ul> <li>Selected locations for new water fountains</li> <li>Medical Science Building</li> <li>CARSA</li> <li>Cornett A-Wing</li> <li>Cornett B-Wing</li> <li>Resource Center for Students with Disabilities</li> </ul>
<ul> <li>Human &amp; Social Development Building (HSD)</li> <li>MacLaurin, A-Wing (MAC)</li> </ul>	

Six new water fountains were also selected based on priority of either a request being placed by the administrative department in a building or by lack of water fountains available in the building. The 6 water fountains were ordered and placed in storage for future installation.

Budget for each installation will need to be confirmed based on drainage, venting, and water/power supply. The OCPS should continue to coordinate with the project management department to plan for the installations for the 2022-2023 fiscal year.

#### Conclusion

Of the Plan's 24 goals, 16 goals have been achieved, six are in progress, one require re-examination, and one goal has not been achieved. The global COVID-19 pandemic resulted in many challenges over the duration of the Plan. Despite this, progress was made in many areas – particularly related to integrating decarbonization strategies within major capital projects, and planning for the long-term future of a net zero campus. A number of exciting targets were reached, such as meeting the 30% reduction in GHG emissions, and exceeding the 2019 water consumption reduction target.

The last two years have reinforced the importance of "building back better," respecting and valuing Indigenous ways of knowing and being, and has positioned the university to rethink how future generations are prepared and educated for climate action. These are some of the themes that will be incorporated into the new CSAP, and the university is looking forward to accelerating actions through ambitious, creative, and integrated solutions.