

Below is a list of the Sustainability Scholars projects available for the summer 2019 program.

This list is current as at 11 February 2019.

Please check [online](#) for detailed descriptions of each project.

Applications accepted until midnight on February 25.

Direct questions to [sustainability.scholars@ubc.ca](mailto:sustainability.scholars@ubc.ca)

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**2019-02 Developing a measurement framework to evaluate the impact of recreational and park facilities on community wellness in New Westminster**

Lead the development of a measurement framework to count and track the impact of recreational and parks facilities on the health, wellness, equity, and security of New West's population. Lead the development, with assistance from Parks and Recreation staff and the Public Engagement Office, of a community-wide surveying process to understand the existing baseline impact of the City's facilities on a representative sample group of city residents. Assist in the creation of a mid-term strategy to replicate this work. City of New Westminster

**2019-03 Economic Impacts of Shared, Automated and Electric Vehicles (SAVEs) in Metro Vancouver**

Market review of the sectors that may be impacted by the rise of Shared, Automated and Electric Vehicles (SAVEs). This review will consider factors such as GDP and job loss (both numbers and types of jobs) as well as numbers of businesses impacted, and potential for secondary effects. The student will also consider all the needs and requirements of new technologies and the potential growth in numbers of businesses, jobs and value-added. Translink

**2019-04 Using Blockchain to enable a Sustainable (Transportation) Sharing Economy**

Research to help TransLink understand what blockchain technology is and how it can be used by transportation authorities to share data, facilitate payment, and plan for shared-use mobility services. Translink

**2019-05 Using Autopiloted Aerial Vehicles (Drones) to Provide Passenger Mobility and Freight Services**

Complete a high-level review of drone technology and its future applicability to move passengers and freight throughout the Metro Vancouver Region. Review the state of play of drone technology for passenger and freight-based services (Uber Air/Elevate, Amazon Prime Air Drones, Google's Project Maven Drone AI, etc.), including research on developments in drone electrification, automation and business models. Translink

**2019-06 Advancing the Marketing Strategy for Team Building Tours at the UBC Botanical Garden**

The Sustainable Communities Field School is a social enterprise managed by the UBC Botanical Garden. The objective of the marketing strategy is to support UBC Botanical Garden in advancing the economic sustainability of the Field School Program. By advancing our business and marketing strategy, the scholar will support the increase in the number of clients in the program by improving the marketing of the program and increasing brand recognition in the community. UBC Botanical Garden

**2019-07 Innovations in Radical Building Envelope Remediation: preparing for a Retrofit Code for existing buildings**

Explore strategies, to achieve whole building envelope renewal while overcoming some of Capilano University's infrastructure constraints that include, but are not limited to: Swing space designs and locations (temporary or

permanent). Second skins for buildings (replacement, attached or free-standing). Building expansion through phased renovation (densification.) Capilano University. 500 hours

### **2019-08 Developing value-added EV charging infrastructure at Capilano University**

Explore trickle-charging infrastructure and systems change requirements to implement EV type I (slow) charging at lamp stands. Explore high speed charging infrastructure and systems change requirements to implement EV type III (high speed) charging. These are non-trivial and involve thorough investigation. Explore marketing, consumer, and financial advantages and disadvantages of both systems, including demand management issues, power resale restrictions, infrastructure costs, on and off campus consumer benefits and marketing impacts. Capilano University. 400 hours

### **2019-09 Review Low Carbon Options to Supply Emergency Electricity During Power Outages**

Review existing regulations and bylaws to understand when emergency backup power is required (by building type and system) and for what duration. Review building resiliency guidelines to determine best practices for backup power to increase resilience. Review low-carbon options for backup. Develop a preliminary schematic design of the proposed low-carbon backup power options needed for a specific low-rise and mid-rise BC Housing building. Perform a cost/benefit analysis of the different options for the specific low-rise and mid-rise BC Housing buildings. BC Housing

### **2019-10 Development of Net-Zero Energy Ready Residential Buildings Resource Kits**

Identify the best available resources for planning, designing, building, and purchasing NZER homes. These resources will include non-partial, validated, action-oriented information, with a focus on recent, local, and relevant content provided by key BC or national organizations. Summarize and organize the resources and create resource kits for each key stakeholder group, including designers, builders, inspectors, homebuyers, and financial institutes. Zero Emissions Building Exchange

### **2019-11 Evaluate a New Forward-Looking Site-Specific Net-Zero Reference House Approach for Building Energy**

With the current reference house approach, energy modelling is used to compare the expected performance of the proposed building with a reference building modelled to the minimum code levels. But, the current approach has some limitations. In the proposed forward-looking site-specific net-zero approach, the reference building would be modelled to the net-zero ready standard, taking into consideration site constraints and climate resilience needs. The Scholar will first refine the exact rules/approach that would be used in defining the reference building. Once the approach has been established, the approach will be tested against the data that was created for Energy Step Code Metrics Research Project. BC Housing

### **2019-12 Lifecycle Costing Tool for Selecting New Fleet Vehicles**

The Township's fleet fuel accounts for 15% of corporate energy use and is the second largest source of corporate greenhouse gas emissions, accounting for 38% of emissions. As part of the Township's commitment to supporting efficient, low carbon electrification, a Lifecycle Costing Tool is planned for selecting new vehicles to accelerate the adoption of low-emission vehicles. The Scholar's work will commence the creation of the Lifecycle Costing Tool and, depending on the recommendations made in the research phase, may include either the acquisition or the development of the actual tool. Township of Langley

### **2019-13 Disrupting the heating business model**

Consultation with Metro Vancouver and member municipalities identified home retrofits, and particularly heat pumps as a priority area for further action because local governments do not have the capacity to dedicate to driving a market transformation in retrofits / heating for existing buildings. A market transformation is required in this space if local governments are to achieve the targets in their CEEPs. This project will build on existing work and will bridge the technical and business domains to outline business models. This project will provide guidance for local government and senior government policy / regulation changes to support business model innovation and position the region to begin prototyping business models. Community Energy Association. 350 hours

### **2019-14 Energy Star Labelling for new Part 3 Multi-family buildings**

Explore the feasibility of implementing Energy Star certification for buildings constructed under the Energy Step Code, and, if feasible, evaluate the cost and logistics required to establish a pilot program at UBC, and other interested BC local governments. Explore alternative labelling programs and compare and contrast them with the Energy Star certification program. Includes background research and stakeholder interviews. Key stakeholders from local, provincial, federal governments and utilities along with topic experts will be identified for interviews. UBC Campus & Community Planning

### **2019-15 Assessment of Existing Building policies and programs around Surrey**

Governments and utilities around the world are working hard to sort out how to achieve and scale up deep energy efficiency and fuel switching retrofits. The City of Surrey will be developing an Existing Building Strategy that builds on the Community Energy and Emissions Plan (CEEP) with key direct and enabling actions to systematically drive down GHG emissions in Surrey's existing buildings. The goal of the project is to conduct an assessment of policies and programs Surrey can access or learn from to achieve widespread adoption of retrofits in existing buildings. City of Surrey

### **2019-16 Developing Lowest Cost Strategies to Achieve Step Code Compliance in Affordable Housing**

Review and compile costing data from existing step code compliant affordable housing designs and Provincial Energy Step Code costing studies. Using the data, determine the best combination of design features and technologies that will allow projects to achieve step code levels in climate zones four, five, and six at the lowest possible cost. Ensure other sustainable strategies such as climate adaptability, minimized embodied energy, and minimized GHG emissions are considered. BC Housing 500 hours

### **2019-17 Investigating the development of an analysis tool to support the business case for medium- and heavy-duty ZEVs (zero emission vehicles) in local government fleets.**

Support a pilot study for the development of a toolkit for medium and heavy-duty vehicle fleets that will assist informed decision-making to reduce costs as well as expedite the procurement of ZEVs. Assist with understanding current fleet operations' energy efficiency and the potential to reduce GHG emissions. Develop a data collection plan that will be required for a medium and heavy-duty vehicle analysis tool. Develop an optimization strategy for the toolkit to provide meaningful decision-making output with minimum number of inputs. Fraser Basin Council

### **2019-18 BC Energy Step Code Local Government Needs Assessment**

The Energy Step Code Local Government Needs Assessment will enhance CEA's Energy Step Code Implementation Support project, which will provide individualized and group support to small and medium sized communities in implementing the Energy Step Code through: Staff and Council presentations/workshops,

facilitated industry training and engagement events, policy and planning support, regional coordination, and other means. Expanding on the 2019 BC Energy Step Code Local Government Survey (administered by BC Housing and CEA), the Needs Assessment will provide valuable data to CEA, BC Hydro, the Energy Step Code Council, and others in order to optimize support efforts and resources available to local governments and their stakeholders. Community Energy Association

### **2019-19 Local government policy and opportunities analysis for accelerating deep energy retrofits on Vancouver Island**

Provide insights for the Transition 2050 Residential Retrofit Acceleration Project. Focused on Southern to mid-Vancouver Island and the Gulf Islands, the Scholar will gather and analyse opportunities and best practices to inform local government building energy retrofit strategies, projects and programs. Identify opportunities and best practices from North America and globally that local governments can utilize to support and encourage residential retrofits that result in significant energy and emission reductions. Consider policy, regulation, leadership, communications, programming, etc. Capital Regional District (Vancouver Island) Most of the work can be done remotely.

### **2019-20 Review and analysis of the UBC Bioenergy Research and Demonstration Facility research program**

Collect and categorize all research studies that have been conducted in the context of the UBC Bioenergy Research and Demonstration Facility (BRDF), both within and outside of the on-site laboratory. Analyze the research studies and findings to identify key research results that can inform the future development of biomass and bioenergy technologies, identify enablers and barriers to undertake this type of applied research in an operational facility, and summarize relevant information that should inform the expansion of BRDF specifically. UBC Sustainability Initiative

### **2019-21 Understanding the applicability of the RELi rating system to UBC green buildings**

The RELi rating system is a new building certification tool that seeks to optimize building design and occupational practices to achieve sustainable and regenerative outcomes in addition to ground-breaking credits for emergency preparedness, adaptation and community vitality. The scholar will review the RELi rating system, its requirements and certification process, using an academic building as a case study to test the feasibility and applicability of the standard to a university context in general, and UBC in particular. UBC Sustainability Initiative

### **2019-22 Informing the development of a carbon-focused LCA methodology for UBC green buildings**

Review existing LCA tools, methodologies, and requirements for new buildings in local municipalities as well as regionally relevant green building standards (such as LEED v4 and the Zero Carbon Building Standard). Develop recommendations on potential boundaries and assessment criteria for the application of LCAs to UBC institutional buildings. This study will help inform the creation of a carbon-focused LCA methodology tailored for UBC. The results will support development of future policies to measure, report and reduce embodied carbon in campus buildings. UBC Sustainability Initiative

### **2019-23 Researching Health Care Chemicals of Concern**

The project contributes to Safer Chemicals Strategy in Health Care that seeks to improve understanding of current use of chemicals, exposures and risks to staff, patients and the environment. The Scholar will research chemicals of concern that patients and staff could be exposed to in health care facilities, including exposures during construction, maintenance and cleaning of facilities, as well as, during patient care and support services such as food operations. Project deliverables will help raise awareness about chemicals of concern in health

care, engage stakeholders, and start conversations on best ways to monitor usage and eliminate risks. Vancouver Coastal Health. 500 hours

### **2019-25 Developing a Data-Driven Baseline of Waste Diversion in Health Care**

Study 1 to 2 acute health care sites in order to create a detailed baseline of how all recycling waste streams are generated and disposed of. Collect data on the recycling streams over the duration of the internship. Research and analyze best practices in health care waste diversion. Propose an updated waste diversion rate reflecting all waste streams. Recommend methods to quantify and report on volumes of recycling being diverted based on learnings. Involves working with large amounts of data: facts, figures, and number crunching. Fraser Health

### **2019-26 Understanding diversity, equity and inclusion practices and approaches within Human Resources and the workplace.**

Enhanced human and ecological wellbeing is essential to the success of all students, staff, faculty, Indigenous peoples, and university neighbours. Fundamental in achieving this is increasing intercultural understanding. Embedding inclusive practices across and within our work and learning environments is foundational to our wellbeing, and for a stronger, diverse and inclusive community. UBC Human Resources in collaboration with UBC Equity and Inclusion are seeking to understand effective diversity, equity and inclusion practices and approaches in the workplace to advance our strategic and institutional priorities in increasing and embedding intercultural understanding. UBC Human Resources

### **2019-27 Assessment of alternative power sources for remote water infrastructure sites**

The project will identify new alternative energy technologies and evaluate their suitability for powering remote sites. Metro Vancouver's Water Services department manages several assets that are not connected to the BC Hydro grid, and thus require alternative sources of power. For these remote locations, Metro Vancouver has been considering either solar panels or thermoelectric generators (TEGs), which have advantages and disadvantages. Due to limited solar radiation in the winter, solar panels and associated batteries must be sized quite large. TEGs have low efficiency, but are preferred over heat engine generators for low-power remote applications because they have no moving parts, and thus require no maintenance and are reliable over a long service life. Newer emerging alternative energy options may be suitable and preferable to these existing options. Metro Vancouver

### **2019-28 Monitoring the impacts of climate change on the forests of the regional drinking water supply area**

Comprehensive literature and dataset (incl. GIS) review and reporting of anticipated implications for watershed forests and linkages to water quality as a result of climate change. The scholar's work will be used to contribute to a long-term monitoring and adaptation strategy for the watershed forests as they relate to such factors as changes in species composition, land cover classification, local climate adaptation, and biotic and abiotic disturbance resistance and resilience. Metro Vancouver

### **2019-29 Evaluate potential of microplastics in Metro Vancouver's drinking water**

This project will examine existing research to evaluate whether Metro Vancouver's drinking water source reservoirs are at risk of contamination by microplastics. The project will also evaluate analytical methods for measurement of microplastics. Metro Vancouver

### **2019-30 Investigating potential sources of fugitive methane emissions from Metro Vancouver**

#### **Wastewater Treatment Plants**

The purpose of the project is to identify potential sources of fugitive methane emissions at Metro Vancouver's wastewater treatment plants; estimate specific process-related fugitive methane emissions at one of Metro Vancouver's wastewater treatment plants; and conduct a literature search of measurement and mitigation methods relevant to Metro Vancouver wastewater treatment infrastructure and processes. Metro Vancouver

### **2019-31 Investigating potential sources of fugitive nitrous oxide emissions from Metro Vancouver**

#### **Wastewater Treatment Plants**

Current greenhouse gas inventory protocols do not yet incorporate fugitive nitrous oxide releases, although estimates of releases are already incorporated in consulting analyses, and are emerging in literature. Metro Vancouver would like to determine if any of our wastewater treatment plants have significant fugitive nitrous oxide emissions, and this project will help quantify any potential emissions. Once sources are identified and emissions are estimated, the scholar will investigate possible ways to mitigate these emissions. Metro Vancouver

### **2019-32 Research and evaluate the use of wastewater contaminant fees**

Metro Vancouver wishes to investigate options to develop a fee system for contaminants other than BOD and TSS. Current industrial permit holders that have low BOD and TSS discharges but high metals pay a significantly lower Industrial Treatment Fee even though they may make up a significant portion of the plant load for these other contaminants. In addition, Metro Vancouver conducts significant monitoring in the wastewater system and receiving environment for metals, pharmaceuticals and other parameters of concern. The purpose of the project is to review pricing strategies in other jurisdictions that charge for a wide range of contaminants other than biochemical oxygen demand (BOD), total suspended solids (TSS), and volume, and to evaluate these strategies in the Metro Vancouver context. Metro Vancouver

### **2019-33 Assessment of online marketplace for construction & demolition materials**

Evaluate the viability and potential implementation strategies for an online marketplace for C&D waste generators to connect with potential buyers and non-profit organizations to address the gap between the suppliers of reusable building materials and potential users. Gain an understanding of the market demand and identify potential users for an online marketplace to assess the effectiveness of the tool. Estimate the size of the initial user base required for the online market to grow effectively and define a strategy to reach a critical mass of users. Metro Vancouver

### **2019-34 Mapping compost markets for BC**

The purpose of the project is to develop location-specific data on current and future compost product markets and demand in BC. Provide data as a basis for (a) planning the most efficient public and private organics management infrastructure, and (b) eventually feeding into a broader integrated organic materials management plan that would include not just compost-related products, but also agricultural-related nutrient sources (e.g. manures, stover/chaff, etc.) and biosolids. Metro Vancouver

### **2019-35 Assessment of impacts of emissions from cannabis production**

The purpose of this project is to assess the multi-media environmental impacts of cannabis production including air emissions, water effluents and waste generation. Metro Vancouver

**2019-36 Updating the regional ground level ozone strategy: reviewing the state of the science**

The purpose of this project is to prepare a report that synthesizes the state of the science with respect to ground-level ozone. Metro Vancouver

**2019-37 Lower Fraser Valley visual air quality pilot study: synthesis of findings**

The purpose of this project is to draft a report that synthesizes the outcomes of the various elements of the Lower Fraser Valley visual air quality pilot study and, where possible, identify the key features of the study that could be relevant to developing recommendations for a visual air quality program. Metro Vancouver

**2019-38 Understanding industry opportunities to advance residential deep energy retrofits on Vancouver Island**

Understand relevant building energy retrofit programs to advance residential deep energy and emissions reductions on Vancouver Island (i.e. incentive programs, government policies, consumer marketing, industry programming, etc.). Help design and execute an industry engagement process on Southern Vancouver Island with the Transition 2050 project team. Industry includes, but is not limited to: heat pump/ HVAC, insulation, window/fenestration, and renovation/ general contractors. Capital Regional District (Vancouver Island) Most of the work can be done remotely.

**2019-39 Mapping and Analysis of Equity, Diversity, and Inclusion Courses**

This project will build a comprehensive understanding of UBC's curricular opportunities to engage with equity, diversity, and inclusion through an analysis of courses on offer at UBC that include a focus on equity, diversity, and inclusion. This project will help to identify UBC's strengths and trends, as well as the curricular gaps in the areas of equity, diversity, and inclusion. It will benefit institutional planning to promote student wellbeing through inclusion. It will also directly benefit students by providing increased information on how they can engage with issues of equity, diversity, and inclusion through their course choices. UBC Equity Diversity & Inclusion

**2019-40 Exercise prescription to support mental wellbeing at UBC Okanagan**

Conduct a literature review of exercise prescription programs to inform an evaluation plan. Work with relevant campus partners to refine an evaluation plan for the UBC Okanagan exercise prescription. Refine necessary tools for evaluation and obtain ethical approval for the evaluation. Conduct evaluation with campus partners and students participating in exercise prescription program. Analyze information collected through the evaluation. Develop a knowledge translation tool. School of Health and Exercise Sciences (UBC-O). Scholar must be able to work in Kelowna.

**2019-41 Piloting and Assessing the Centre for Community Engaged Learning's (CCEL) Community Resilience Framework**

Pilot the Community Resilience Framework assessment tool through a case-study of three academic courses that incorporate community-engaged learning as part of a significant overhaul of CCEL's evaluation and assessment strategies and practices. Test the effectiveness of the overall framework and indicators to better understand how we can utilize CRF and the assessment tool to both plan and evaluate our work. Help build the capacity of our Centre to better utilize and share out the concepts of sustainability and resiliency in our everyday work. UBC Centre for Community Engaged Learning

**2019-42 Developing a Wellbeing program for Teaching Assistants**

Build on work from Part 1 of this project (summer 2018 ) which gathered data concerning the wellbeing experiences of graduate student TAs at UBC-V. The project this year will research the particular sub-populations that were highlighted in last year's project as having particular needs (e.g. undergraduate TAs.) UBC Centre for Teaching, Learning and Technology

**2019-43 Identification of tools to support stress and wellbeing interventions for students (UBC Okanagan)**

This project is a joint effort with the University Experience Office to help train peer mentors to be able to work with incoming undergraduate students to understand the physiological stress response, the skills to decrease the stress response as well as to connect students to existing resources on campus to develop their own stress management toolbox. It is not sufficient in itself to help students to develop a sufficient number of coping skills - the tools and linking to current support mechanisms will help students develop and diversify their coping skills. School of Health and Exercise Sciences (UBC-O) Scholar must be able to work in Kelowna.

**2019-45 Jericho Lands: Global sustainability and major development best practices**

Create a best practice toolkit reviewing case studies of large-site sustainable redevelopment and sustainability in order to provide recommendations that will inform the policy statement for the Jericho Lands, a 90-acre site on Vancouver's Westside. (Interviews with global cities, survey of Vancouver's existing projects, and identification of topic-based criteria for comparison). City of Vancouver

**2019-46 Designing with Data: The Resilient Neighbourhood Design Framework**

Summarize resilient neighbourhood design literature; indicate thresholds for success and articulate methods of measurement to make recommendations on design indicators to support City's sustainability, livability and social equity goals. City of Vancouver

**2019-47 Calibrating the Data: Refining Resilient Neighbourhood Design Indicators through Post-Occupancy Evaluation**

Review academic literature, identify global case studies, and existing internal data on neighbourhood/ district-scale post-occupancy evaluations to identify metrics that support City goals and expand on existing data collections, monitoring and evaluation of district-scale plans & projects. City of Vancouver

**2019-48 North American Planning Incentives for Multifamily Energy Retrofits**

Research planning policies and practices in North America that encourage building energy and emissions retrofits in multifamily buildings. Interview COV staff and Industry professionals to understand bylaws and policies identified as barriers to retrofits. Recommend specific incentives that can fit within Vancouver's planning policies and practice which will increase the number of deep retrofits per year. City of Vancouver

**2019-49 Calibrating the Zero Emissions Building Plan and BC Energy Step Code**

Collect actual residential building energy use data from available sources & compare it to the assumptions in the CoV Energy Modelling Guidelines or related standards and codes, in order to make recommendations for potential improvements where practical to the guidelines. Analyze discrepancies between actual data and assumptions to determine potential causes and develop recommendations ( including interviews with industry experts in building energy use). City of Vancouver



**2019-50 Public space inclusivity research methods and best practices**

Summarize and evaluate the latest research methods to evaluate public spaces and develop criteria for 'healthy' public spaces. Develop methodologies to document and evaluate public spaces using established criteria to inform how Street Activities monitors Vancouver's public spaces. City of Vancouver

**2019-51 Small-scale neighbourhood retail in Vancouver: an inventory and assessment of existing stores and opportunities.**

Inventory, photo-document and map existing and former small-scale neighbourhood retail sites, Develop a typology of small-scale retail in Vancouver based on key variables. Undertake a literature review to contextualize the changing economic and social role of small-scale retail. Make recommendations vis-à-vis City goals related to walkable, compact, complete communities. City of Vancouver

**2019-52 Benchmarking the impacts and effectiveness of City of Vancouver Street Sweeping Programs**

Quantify the impacts & benefits of street sweeping programs in the local context (focusing on environmental and health), benchmark our program against that of other major cities around the world, and determine recommendations to improve the City's existing street sweeping program. City of Vancouver

**2019-53 Best Practices in Food Waste Avoidance & Rescue in the Commercial Sector**

Conduct a literature review, interviews, site visits and potentially ethnographic research on food waste avoidance best practices for grocery stores. Develop recommendations for pilot testing food waste avoidance practices that can be used by the City for its public engagement work with grocers on food waste avoidance and rescue. City of Vancouver

**2019-54 Comprehensive Feasibility Study of Soil Repurposing Solutions**

Conduct review of existing tonnage flow of soil to the Vancouver Landfill, research factors and criteria considered during a feasibility analysis of soil repurposing operation. Compile options and approaches for repurposing the existing stockpile of soils at the Landfill (i.e. soil blending, relocation, etc.). Create a comparative and comprehensive analysis based on the evaluation criteria identified in research. City of Vancouver

**2019-55 Exploring Alternative Delivery Models for Public Realm Green Infrastructure Establishment & Maintenance**

Conduct a public realm Green Infrastructure (GI) establishment & maintenance benchmarking study with a focus on alternatives beyond the traditional city staff/private contractor approach. This study will aim to help the city develop a maintenance program and potential delivery models for various GI asset types on public realm. City of Vancouver. 500 hours

**2019-56 Improving equity through increasing access to nature and canopy cover in the Downtown Eastside**

The Urban Forest Strategy adopted in 2018, sets a new priority to double street tree density in the Downtown Eastside by 2030. Aligning both the work of DTES LAP implementation and the Urban Forest Strategy, this project will directly work to develop a proactive plan to improve canopy cover and increase access to green space in order to bridge this equity gap in our park system. City of Vancouver

**2019-57 Groundwater Use Regulation for Non-Potable Use at the Site & District Scale**

Research cities that use groundwater for non-potable purposes and compile comparable case studies, survey current CoV groundwater use policy framework to identify challenges and opportunities, make recommendations on approaches and next steps for Vancouver. City of Vancouver

**2019-58 Reducing GHG Emissions from Food Consumption - Opportunities for Cities**

Conduct a best practice scan of diet-related climate change mitigation measures (policies, strategies, or public awareness campaigns that are culturally appropriate & grounded in a food justice and social equity approach) led by municipal governments or other institutions. Estimate emissions arising from City food services and procurement and developing estimates of emissions reduction potential for benchmarking purposes. City of Vancouver

**2019-59 Assessing engagement and best practices in food system change**

Review recent City consultations & synthesize food-related themes, identify gaps in feedback and gaps in populations consulted, and review literature to highlight areas that will be important to explore and address in an updated Food Strategy, Action Plan and/or updated definition of food assets. City of Vancouver

**2019-60 A Feasibility Study for On-Street Electric Vehicle Charging from Light Poles**

Create a feasibility study identifying possibilities for light-pole charging in Vancouver, including an internal review of present conditions, interviews with technical experts to identify requirements, and a summary of other light-pole charging projects and programs (applicability to Vancouver, status, outcomes, , contact information for project leads). City of Vancouver

**2019-61 Measuring the Value of Vancouver's Circular Economy of Food**

Customize existing circular economy tools (EMF tools) to Vancouver's localized food economy and gather data on circular activity happening in local food economy. Develop database of organizations participating in circular economy, including job numbers that contribute to food circularity. City of Vancouver

**2019-62 Modelling Public-Private Partnerships for EV Charging Stations**

Develop a business model for installing City-owned EVCS on privately-held commercial property to increase charging options for larger fleets and larger vehicles operated by private sector companies, City vehicles, and the general public (including 3-5 case studies of possible host commercial locations, summary of business engagement, and analysis of any data produced to date -such as usership). City of Vancouver

**2019-63 Supporting the transition to low carbon commercial kitchens (induction cooking business case and transition strategy)**

Document GHG and indoor air quality benefits of induction cooking, case study analysis of culinary and restaurant operational benefits and constraints, initial costing for one or more CA school retrofit, make recommendations on next steps. City of Vancouver.

**2019-64 Adapting to Sea-Level Rise in Vancouver's Employment Lands: Current Best Practices and Approaches in Planning**

Review global best practices of city planning for sea level rise in employment lands through a literature and interviews with city staff. Help develop inventory of economically significant infrastructures and industries impacted by sea level rise. City of Vancouver

**2019-65 Public Childcare Delivery: Learning from Examples of Direct Operation of Childcare by BC Local Government Agencies**

Review best practices of publicly operated childcare to compare with local context. Develop inventory of BC local government agencies (municipalities, park boards and school boards) that directly operate childcare. Conduct interviews with selected public operators to identify successful approaches, challenges and lessons learned.

Make recommendations to guide future City/Park Board/Vancouver Board of Education pilot of direct childcare operations. City of Vancouver

### **2019-66 Opportunities to Incorporate Indigenous Ways of Knowing into Outdoor-Based School Age Childcare**

Conduct a literature scan and site visits to identify wise practices for incorporating indigenous ways of knowing, decolonizing approaches, and cultural competency building into school-age childcare programming. Recommend opportunities to engage local organizations and individuals with interest or expertise in developing and/or delivering these elements in a manner that respects and honours protocol and avoids cultural appropriation. City of Vancouver

### **2019-67 Applying Indigenous Health and Wellness Concepts and Principles to Mental Wellness and Substance Use Data**

Research ways to incorporate Indigenous wellness concepts into the City's health indicators work on mental wellness and substance use, providing a valuable case study to help build toward more equitable understandings of health and well-being in the city. City of Vancouver

### **2019-68 Developing Anti-Blackness Equity Principles for Engagement and Practice in Vancouver**

Review best practices on anti-blackness policies, actions and frameworks within municipal planning context. Conduct interviews and dialogue sessions with diversity of City staff and Hogan's Alley Society membership. Develop summary report with high-level anti-blackness equity principles for ongoing engagement and practice. City of Vancouver. 500 hours

### **2019-69 Developing an Equity Framework Implementation Strategy for City Plan**

Review best practices on racial and gender equity principles and decolonizing methodologies and frameworks within a municipal planning context. Analyze existing City strategies and conduct interviews and host dialogues with diversity of city staff in Vancouver. Develop a high-level implementation framework for City Plan with equity as a key foundation. City of Vancouver