

Overview of Key Civic Innovation Lab Projects

Project: Mobility Access and Participation Project (MAP)

Purpose:

The MAP¹ project is a Social Sciences and Humanities Research Council (SSHRC)-funded partnership that began in 2019. The main goal of the MAP project is to support community organizations and municipalities to develop, evaluate, and implement researched-informed actions that contribute to the development of accessible, inclusive, barrier-free communities. Simon Fraser University (SFU) is one of the participant research institutions which also includes the University of British Columbia, and Université Laval. The lead SFU researcher is Dr. Atiya Mahmood from the Department of Gerontology.

Timeline:

The MAP project is a seven-year funded project by SSHRC. Burnaby has been a participant community since the beginning of the project in 2019, pre-dating incorporation of the Civic Innovation Lab.

Engagement:

One project of the MAP is the Stakeholders' Walkability/Wheelability Audit in Neighbourhoods (SWAN) project, which is led by SFU. Since MAP's initiation several iterations of the SWAN assessment tool have been deployed by Burnaby community members with a range of disabilities, on the local pedestrian environment. Via these data collection and community accessibility audit opportunities, over 40 Burnaby community members have been directly engaged.

The City of Burnaby has benefited from the data and findings generated through this process as it has informed capital planning budget processes in Transportation Planning/Engineering. Data and findings from the most recent phase of data collection, focused on the perspectives of community members living with dementia, will be presented to COB staff in Q3 2023 and will subsequently be shared with the City's Access Advisory Committee at a future meeting.

Associated Budget:

Burnaby's participation in the MAP project is currently being facilitated through the Civic Innovation Lab via in-kind (staff) resources.

¹ For more information, please visit: inclusivemap.ca

Project: Deer Lake Ecosystem Remediation Project

Purpose:

Deer Lake is a lake and wetland area in the central valley watershed of Burnaby in proximity to the City of Burnaby's cultural precinct and to Burnaby City Hall. The area is a vital ecosystem location for a wide variety of flora and fauna, and also connects to salmon bearing streams. Deer Lake, while still a 'jewel' of Burnaby, is often turbid and nutrient rich as a result of urban run-off, natural aging, and the accumulated droppings of waterfowl. It has long been a goal of the City of Burnaby to embark on ecosystem remediation for Deer Lake, to improve its habitat quality and with a long-term goal to make the lake swimmable again.

Timeline:

Recent efforts to improve the Deer Lake ecosystem include working through the CIL to engage SFU expert researchers. It is anticipated that this project will be a multi-year process (begun in 2023), with initial phases of work implemented under the advisement of Dr. Leah Bendell, Professor of Marine Ecology & Ecotoxicology in the SFU Department of Biology.

Engagement:

In May 2023, two research associates were hired to work with Dr. Bendell. The data collected will inform the compilation of a baseline assessment report outlining the current health of the lake from an ecosystems perspective and including a cataloguing of potential stressors. Once the baseline report has been completed, the research team will analyze the extent of this impact and explore potential remediation strategies to improve the ecosystem health of Deer Lake for the City's consideration. These findings are anticipated by Q2 2024.

A City of Burnaby staff technical working group, comprised of a variety of staff from Community Planning, Engineering, and Parks, Recreation and Culture (Parks Planning) has been convened to consult as needed on this project.

Associated Budget:

Initial funding for Phase 1 of the Deer Lake Ecosystem Remediation Project was included in the Council approved 2023-2027 Financial Plan to the amount of \$150,000.

Project: Community Centred Climate Innovation

Purpose:

The City of Burnaby and the Civic Innovation Lab are key partners in SFU's critical research priority Community-Centred Climate Innovation (C3I). One area of work focuses on leveraging Burnaby's unique economic position as home to a number of cutting-edge alternative energy researchers and industry partners, to investigate the potential use of environmentally friendly hydrogen power within existing infrastructure to diversify the City's energy resources. This work is emergent and ongoing with several SFU schools and departments.

Timeline:

The CIL's engagement in Community-Centered Climate Innovation is an ongoing commitment with initial project work anticipated to occur over a five-year period.

Engagement:

The City, via the CIL, is an active partner in SFU's efforts to build a green hydrogen hub on the Burnaby campus, to demonstrate and advance the many local technologies for hydrogen production, utilization and related applications. Green hydrogen is hydrogen produced via the electrolysis of water, with the input electricity coming from renewable sources. The hub once constructed is anticipated to deliver up to 1 MW of on-site clean hydrogen.

Also within this area of work, the CIL is enabling the City's partnership with Dr. Majid Bahrami a Professor with the Simon Fraser University, School of Mechatronic Systems Engineering and the Canada Research Chair in Alternative Energy Conversion Systems. More specifically, an opportunity to pilot Dr. Bahrami's patent-pending Sorption Heat Transformer technology within the Burnaby District Energy Utility has emerged. This technology is a waste-heat driven heat pump/air conditioner and long-term thermal storage systems that improves the efficiency of district energy systems.

Associated Budget:

Burnaby became both a funding and founding partner in the hydrogen hub project, with a \$800,000 contribution approved by Council at its February 27, 2023 meeting. Pending confirmation of additional, external funding sources the City's contribution will be allocated from the Operating Climate Action Reserve in the 2024 – 2028 Financial Plan.

Also pending confirmation of additional, external funding sources is a Council approved allocation of \$120,000 a year for five years (total: \$600,000) reallocated from the Burnaby District Energy Utility capital program included in the 2023-2027 Financial Plan. This funding was also approved at the February 27, 2023 meeting.

Project: Building Safer Communities

Purpose:

The City of Burnaby (Community Safety Department) has been approved to receive a total of \$2.9 million in funding over four years from Public Safety Canada's (PSC) Building Safer Communities Fund, specifically to support community-based prevention and intervention programming to reduce gun and gang related violence.

Timeline:

Final workplan approval was received from PSC in late June 2023, and implementation has begun, to occur over a four-year period.

Engagement:

To inform this work, CIL staff supported the initiation of connections between relevant COB staff and SFU researchers in the areas of criminology, crime reduction, and criminal justice. The ongoing collaboration is intended to ensure that future gun and gang prevention initiatives are informed and supported by innovative, evidence-based crime reduction initiatives and research.

Four robust proposed research projects have been identified involving six researchers from the SFU School of Criminology. The research projects are briefly summarized in Table 1 below.

Table 1.

<i>Building Safer Communities in Burnaby: Addressing Gun and Gang Violence</i>
This is a multi-year, tripartite undertaking to further enhance knowledge pertaining to the early identification of youth at risk who ultimately engage with the gangs and guns lifestyle. This will be utilized to strategically focus on related service programming in Burnaby.
<i>Role of Burnaby RCMP Gang Enforcement Team (BGET) in gang intervention and disruption</i>
The identified project will undertake evaluator activities to understand the specific activities undertaken by BGET officers to deter and disrupt gang activity and examine how these activities meet the needs of the community.
<i>Document & assess the impacts of gang prevention/intervention activities in schools</i>
The identified research will review and evaluate current gang prevention/intervention activities in Burnaby schools, including the role and impact of the RCMP Youth Section Officers.

Associated Budget:

All referenced activities will occur within the approved grant budget of \$2.9 million as distributed by Public Safety Canada.