

UBC Sustainability Scholars Program 2019

The UBC Sustainability Initiative (USI) is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing organizational sustainability goals.

For more information about the Sustainability Scholars Program and to apply to work on this project, please visit the [Student Opportunities](#) page.

Please review the application guide (PDF) before applying.

Applications close **midnight Monday February 25, 2019.**

PROJECT TITLE: Designing with Data: The Resilient Neighbourhood Design Framework

RESEARCH SUPPORTS THE FOLLOWING COV POLICIES:

The Resilient Neighbourhood Design Framework (RNDF) takes a holistic approach to understanding and evaluating how the design of our built environment can support more resilient communities.

As such, the RNDF synthesizes the full breadth of major city policy from across City departments (including the Greenest City Action Plan, the Healthy City Strategy and the emerging Resilient City Strategy), aligns it and applies it to the built environment at the neighbourhood scale.

SUMMARY OF WORK COMPLETED TO DATE

In 2017, the City Design Studio (CDS) began work, in collaboration with the Chief Resilience Officer, to develop a Resilient Neighbourhood Design Framework that embeds resilience into the planning and design of our neighbourhoods and provides a means of evaluating and tracking our performance over time in a consistent, holistic and defensible way.

Over the last year and a half, the CDS has conducted:

- 1) a preliminary review of the academic literature related to the evaluation of resilient neighbourhood design;
- 2) review and synthesis of existing policies related to resilient neighbourhood design, and
- 3) early identification of potential neighbourhood design indicators.

Through this process a number of research and policy gaps have been identified including how we evaluate:

- 1) resilient housing and employment design,
- 2) how built form and massing influences photovoltaic potential, embodied

- energy and urban heat island effect,
- 3) climate adaptive design (drought and flooding),
- 4) the influence of built form and massing on our seismic performance,
- 5) habitat connectivity and biodiversity, and
- 6) how streetscape design influences street level air quality.

SCOPE OF WORK:

- Review the work completed to date and elaborate upon research gaps described above (1 week);
- Undertake a review and summarize the academic literature specifically relating to the research gaps identified above (approximately 4 weeks);
- Based on the literature review and consultation with city staff, identify, evaluate and select potential neighbourhood design indicators and their associated performance thresholds (approximately 4 weeks);
- Test the resilient neighbourhood design indicators and benchmark performance thresholds (approximately 4 weeks)

WHY THIS WORK IS OF VALUE:

Resiliency is a paramount theory concerning a vast array of city-building criteria covered under existing policies. The city needs to continue strong support for initiatives which propose strengthening decision making through research-backed analytical and proven frameworks - such as the RNDF.

Simply put, the RNDF is a tool which strengthens decision making capacity toward resilient neighbourhood design and city building initiatives which are the foundation of both the Greenest City Action Plan and the Healthy City Strategy. Measuring is understanding, and with that knowledge, performance can be assessed and ultimately designed.

DELIVERABLES:

Working with the City Design Studio, the Greenest / Healthy City Scholar will author a paper that:

- summarizes the resilient neighbourhood design literature,
- makes recommendations related to resilient neighbourhood design indicators that support the City's sustainability, livability and social equity goals,
- indicates thresholds for success, and
- articulates methods of measurement.

TIME COMMITMENT:

- The scholar will complete 250 hrs. of work between April 29th & August 12th 2019.
- The scholar is to complete hours between 9am-5pm, Monday to Friday at approximately 20 hours / week.

SKILL SET / BACKGROUND REQUIRED / PREFERRED

- Excellent research and writing skills
- Excellent analytical skills
- Familiarity with research methodologies and survey techniques
- Familiarity conducting focus group research

- Ability to work independently
- GIS training or experience
- Familiarity with benchmarking methods and tools
- Familiarity with qualitative research methodologies and implementation
- Demonstrated interest in resilient city design and community resiliency theory
- Demonstrated interest in performance-based decision making processes

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Apply here:

<https://sustain.ubc.ca/student-opportunities>

To learn more about the program here:

<https://sustain.ubc.ca/ubc-sustainability-scholars-program>

Read the application guidelines to confirm your eligibility to participate in the program here:

<https://sustain.ubc.ca/student-opportunities>

Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions.