

## Summer 2025 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Hub is pleased to offer current UBC graduate students the opportunity to work on sustainability internship projects. Successful candidates work under the guidance of a mentor from the partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region. The pay rate for the summer 2025 program is \$31.25/hour or \$7,812.50 for a 250-hour project.

- Visit the [Sustainability Scholars Program website](#) to learn [how the program works](#) and to [apply](#).
- Be sure to review the application guide on the Apply page to confirm your eligibility before applying.

**Applications close at 11:59 pm on Sunday January 26, 2025.**

---

### **Project title: Extreme Heat Exposure and Vulnerability Mapping for Mainland Coast Salish First Nations**

#### **Project Background & Overview:**

The Emergency Planning Secretariat (EPS) is an a-political organization led by the Mainland Coast Salish First Nation to improve preparedness, capacity, and resilience for all hazards. To guide our work, EPS has a framework for climate and disaster resilience planning called Hílekw Sq'éq'ó which means “to get ready together.” This framework weaves Mainland Coast Salish worldviews with best practices around the world, with a focus on strategies to adapt to climate change hazards using the Sendai Framework for Disaster Risk Reduction.

In the face of climate change and the impacts of colonization there is much uncertainty around disaster frequency and severity. Hílekw Sq'éq'ó is meant to maximize the following for First Nations who have been disproportionately impacted by climate change: hazard reduction (reducing hazards at their source), biodiversity/landscape vitality (clean waterways and stable salmon populations), nature-based solutions, and mental well-being.

Given that Hílekw Sq'éq'ó is an all-hazards plan, EPS has begun work to understand risk associated with each hazard. This project will focus on extreme heat, so that First Nations can adequately prepare for a warming climate.

#### **Project description**

Climate scientists have predicted extreme heat temperatures, at a landscape level, for each First Nation community in the Lower Fraser region. Typically, these predictions are not enough for First Nations to adequately plan for extreme heat. When planning to reduce risks to climate impacts, communities need to understand their hazards, exposures, and vulnerabilities. Climate models are able to predict the hazard (frequency and severity of extreme heat) but cannot tell a community about their exposure and vulnerability. The purpose of this project is to begin mapping exposure and vulnerability to extreme heat in the Lower Fraser region using publicly available data.

Exposure is the extent to which a community is exposed to a hazard. When considering extreme heat, a community's level of exposure is related to proximity to forest canopies or waterbodies, types of buildings, level of insulation in buildings, access to recreational facilities (parks, community centres), access to air-conditioning units, etc.

Vulnerability is the degree to which an asset is susceptible to loss from extreme heat. From a First Nation context, vulnerability is often considered through the lens of people, community, food, culture, buildings, critical infrastructure, and environment. Vulnerability is meant to capture "what matters to the community." For example, elders are more vulnerable to extreme heat, so a community with many elders may assess extreme heat as a greater risk than communities with fewer elders.

The maps will be available for First Nations upon completion. At that point, communities would be able to add exposure and vulnerability that is community specific, with support from EPS. This work would give First Nations the immediate capacity to complete a risk assessment for extreme heat. The risk assessment would give First Nations the information they need to assess different mitigation and adaptation options to reduce their risk to extreme heat.

## **Project scope**

- 1) Literature Scan of Extreme Heat Methodology (EPS will provide key resources) so that the student understands the process of the mapping project.
- 2) Extreme Heat Exposure Mapping. Using GIS, the student will identify the locations within a reserve that are most exposed to extreme heat (key layers include buildings, forest canopy, recreational areas, waterbodies).
- 3) Extreme Heat Vulnerability Mapping. Using GIS, the student will overlay extreme heat hazard mapping with vulnerabilities that are publicly available. These may include Social Vulnerability Index, Salmon Habitat.
- 4) Final Report outlining the project objectives, background, methodology, research findings, analysis, and recommendations.

## **Deliverables**

- A final report containing a summary of the work completed
- A final report for the online public-facing [Scholars Project Library](#).
- A map of extreme heat exposure mapping
- A map of extreme heat vulnerability mapping
- A Draft Extreme Heat Risk Map

## **Time Commitment**

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 15.
- The Scholars is to complete their hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.

# SUSTAINABILITY SCHOLARS PROGRAM

## Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Familiarity with research methodologies and survey techniques
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Demonstrated experience with GIS and mapping practices
- Knowledge in environmental risk assessment is preferred\_
- Understanding of First Nation traditional knowledge, culture, teachings & importance of weaving Western Science with First Nation worldviews

Applications close at **11:59 pm Sunday January 26, 2025**

Apply here: [Click here to apply](#)

Contact Karen Taylor at [sustainability.scholars@ubc.ca](mailto:sustainability.scholars@ubc.ca) if you have questions

## Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 21, 2025. [Click here for details and to register.](#)

Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.

<https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae>

<https://www.grad.ubc.ca/current-students/graduate-pathways-success>

<https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services>