

Summer 2023 Sustainability Scholars Program Internship Opportunity

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 sustainability across the region.

- 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 midnight on Sunday January 29, 2023.

> This is a Fraser Estuary Research Collaborative Project <

The [Fraser Estuary Research Collaborative](#) (FERC) is focussed on advancing efforts to protect the Fraser River estuary in collaboration with key NGO and Indigenous partners. If you are interested in producing new knowledge and supporting Fraser estuary protection through scientific, technical, governance and policy innovations, the following project might be for you. Read on for more details.

Project title: Research and develop visualisations of flood mitigation options to inform decision making in First Nations communities

Project Background & Overview:

First Nations communities living along the lower Fraser River have been disproportionately impacted by flooding, with many communities typically expecting flooding in any given year. As the impacts of climate change increase, flooding, whether it stem from sea-level rise, changes to spring freshet, or more severe rain fall, will become more exacerbated.

First Nations want to protect their land, livelihood, culture, and way of life, but communities do not have the capacity to do this work alone either because of a lack of staff or funding. Furthermore, governments, whether they be at the provincial, federal, or municipal level, have been unable to meet the needs of First Nation communities.

Before flood mitigation and adaptation tools can be implemented, communities must become aware of the options that are available. At the same time, the mitigation and adaptation options should fit with the values, perspectives, and lived experiences of the First Nation communities. Different tools are better suited to different contexts, depending on geography, types of flooding, expected impacts of climate change, etc. This work is meant to increase the capacity

of First Nations communities to make decisions about their land that will foster a sustainable, resilient future where flooding risk is ultimately reduced.

Project description:

This project seeks to start the work of providing a community flood toolbox to be utilized by Coast Salish communities. The first step of building out the toolbox is to provide visualizations for a variety of flood mitigation options—from the level of individual parcels to community-scale—that are specific to the Coast Salish context, and potentially even specific to each community. Based on the scope of this work, the Scholar will focus on developing 2-3 visualizations for 2 Mainland Coast Salish communities.

To determine which mitigation option to visualize, the Scholar will utilize existing data such as hazard maps that indicate where flooding will occur and what type of flooding which can be used to determine potential mitigation tools. The Scholar will also use risk assessment and knowledge from Coast Salish Communities who understand their own land, culture, and way of life, so they can provide insight into different mitigation options and which ones may work best for them.

The toolbox will be used to inform proactive decision making to reduce the flood risks associated with climate change. The impacts of climate change will be felt in the lower Fraser River, so this toolbox can be used to inform adaptation strategies in this specific context.

This work will first require engagement with interested communities who want to know the mitigation options available on their land based on their exposure and risk. EPS (the partner organization) will lead this engagement process. This project will ideally involve 3-5 communities to use as models or case studies, that may be able to provide regional learnings or recommendations.

Project scope

The student will be tasked with the following:

- 1) Attend engagement meetings with communities (3-5 interested communities).**
Engagement sessions will be completed by June 30 2023
 - a.** Take notes during meetings to understand the local context and cross-reference with literature review to inform visualizations
- 2) Conduct a literature review on flood mitigation best practices**
 - a.** Identify flood mitigation options (based on science and traditional ecological knowledge). These could be nature-based, structural, or non-structural solutions.
 - b.** Time permitting: Identify solutions in other parts of Canada or the world that could work in the Lower Fraser River
 - c.** Condense literature review in a report to present to Advisory Team
- 3) Identify Hazards & Exposure Community is Facing**
 - a.** Hazards: pluvial, coastal, fluvial, groundwater flooding and how these are changing due to climate change

SUSTAINABILITY SCHOLARS PROGRAM

Applications close **midnight Sunday January 29, 2023**

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

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

Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 23, 2023.
[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>