

## Summer 2022 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](#) to confirm your eligibility before applying.

**Applications close at midnight on Sunday January 30, 2022.**

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### >> This is a Fraser Estuary Research Collaborative Project >>

#### **Project Title: Flood Management for Climate, Salmon, and Community Resilience in the Fraser Estuary**

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

At the beginning of one of the most important and prolific salmon rivers in the world, the lower Fraser watershed contains over 1,500 kilometers of crucial habitat inaccessible to salmon due to over 150 pieces of aging flood control infrastructure (including floodgates, pump stations, and dikes) many of which are in poor and failing condition. The channels these structures block provide key nursery and spawning habitat for salmon. Research has shown that these types of off-channel habitat are a crucial limiting factor for all young Fraser River salmon migrating to sea serving as refuge, feeding grounds, and adapting to the salinity of the ocean. This includes Chinook who are a very high priority species given their relationship to Orca whales and other ecosystems. Improvements to salmon passage and water quality of these channels also provide many other ecosystem services to local governments, First Nations, and their community members within the estuary.

These flood control structures require thoughtful and careful planning to prepare communities for climate change impacts such as flooding and sea level rise with very limited funding and coordination to do so. Increased flooding and loss of salmon is having significant impacts on the economy, ecology, and society in the Lower Mainland and BC in general. First Nations along the Lower Fraser are disproportionately impacted by flood and loss of salmon, with many of these communities' reserve lands falling in at-risk flood plains. Our hope is that by informing a cross-sector network about better flood management practices throughout the Fraser estuary we will improve community, salmon, and ecosystem resilience to flooding and climate change more broadly.

##### **Project Description**

With the flooding emergency in November 2021, it has now become public knowledge that BC and the Lower Mainland are suffering from a lack of coordination, sustainable funding, and appropriate jurisdictional authority when it comes to flood management. This has been highlighted by [academic papers](#) and [professional reports](#), however there remains a lack of a summary of positive models to learn from. With that we would like to better understand how leading governments from around the world

govern flood management including regulatory and jurisdictional aspects. We also want to add to a series of documents we are preparing on more nature-based responses to floods such as diking alternatives. Lastly, communicating this type of research is important and having creative graphical support to do so will help us communicate the messages of these two components as well as other related Resilient Waters project work.

## **Project Scope**

This project is seeking support to research and prepare communications that will inform more climate resilient, fish and farm-friendly flood management strategies for the Lower Mainland.

## **Project work will include**

1. Conduct a literature review and develop 3-5 case studies of integrated and collaborative flood management governance regimes that proactively take into account climate change, ecosystems, food security, Indigenous rights, as well as flood risk
2. Conduct a literature review and develop 3-5 case studies of diking alternatives such as setback dikes, dike breaches, and floodways
3. Based on the literature reviews, produce attractive, creative, and graphical communications products that summarize floodplain management and diking alternatives and will be made available to decision makers and practitioners that work on flood management and related areas in the lower Fraser watershed.

## **Deliverables**

- A final report containing a summary of the work completed
- A final report (or executive summary) for the online public-facing [Scholars Project Library](#)
- A report on Integrated Floodplain Management including a literature review and 3-5 case studies
- A report on diking alternatives including a literature review and 3-5 case studies
- Infographic or 2-4 page summary on Integrated Floodplain Management
- Infographic or 2-4 page summary on diking alternatives

## **Time Commitment**

- This project will take 370 hours to complete
- This project must be completed between May 2, 2022 and August 12, 2022
- The scholar is to complete hours between 9 am and 5 pm, Monday to Friday, approximately 25 to 30 hours per week

## **Required/preferred Skills and Background**

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Demonstrated experience in climate adaptation, flood management, food security, Indigenous rights and culture
- Design and layout skills
- Access to InDesign and demonstrated creative layout skills, an asset

# SUSTAINABILITY SCHOLARS PROGRAM

Applications close **midnight Sunday January 30, 2022**

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 19. [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>