

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.

>> This is a Collective Impact (CI) Project >>

Collective Impact (CI) projects involve multiple Scholars working in collaboration on one larger project. Some CI projects require with similar skills while some require Scholars with different skills. If you are a strong communicator and like the idea of achieving high impact through collaboration, this project might be for you. Read on for more details.

Project Title: Updating Lake Assessment Protocol to Interweave Traditional Knowledge – Technical Data

Total Number of Scholars Required: 3

Other positions collaborating on this project

- 2022-003A: Updating Lake Assessment Protocol to Interweave Traditional Knowledge – Framework Development & Engagement Support (2 positions available)
- 2022-003B: Updating Lake Assessment Protocol to Interweave Traditional Knowledge – Technical Data (1 position available)

Project Background & Overview:

Living Lakes Canada (LLC) facilitates collaboration in education, monitoring, restoration and policy development initiatives for the long-term protection of Canada's lakes, rivers, wetlands and watersheds. Our mandate is to help Indigenous and non-Indigenous communities understand, adapt and mitigate the impacts of climate change on water quality and quantity, biodiversity through grassroots water stewardship activities. Living Lakes Canada bridges the gap between science and action to enhance and support Community Based Water Stewardship.

LLC wishes to improve partnerships with Indigenous People and the integration of Traditional Knowledge and Values into the Foreshore Integrated Management Planning (FIMP) assessment process and Foreshore Development Guidelines (FDG) Report. FIMP is a methodology developed in partnership with Fisheries and Oceans Canada (DFO). It maps shoreline habitats, assesses habitat value and establishes Shoreline Development Guidelines to conserve ecosystems, support climate resiliency, protect species of

conservation concern and provide best management practices to decision-makers, stakeholders, and shoreline property owners. The FIMP process maps and identifies sensitive habitats, and through Foreshore Development Guidelines, provides the opportunity for those habitat areas to be placed in conservation zones where long-term protection beyond the project's time frame can be afforded. In the face of climate change, maintaining ecosystem heterogeneity and connectivity of integrated littoral-riparian lake systems is critical for aquatic species, including the Species at Risk currently benefiting from this project. Foreshore heterogeneity enables the adaptive capacity of lakes to respond to changing climate conditions while maintaining ecological functions. This is particularly important for providing habitat 'options' for fish and wildlife. The ecological connectivity component refers to both animal movements among habitat patches within a lake, but also among lakes (in cases where a lake has connectivity to others, or to river systems). In the long-term, the implementation of the Foreshore Development Guidelines into policy will help aid in recovering fish habitat values, specifically species at risk, lost to past development impacts and protect and enhance culturally important areas for Indigenous People.

LLC is working with DFO to update the FIMP protocol to accommodate new technology however, the inclusion of Traditional Knowledge and Values is lacking emphasis and success. Sensitively interweaving Traditional Knowledge and Values could provide Indigenous People with a holistic Foreshore Development Guideline report. This can be used for tracking environmental degradation, making land use decisions to support lake health, identifying foreshore climate change effects, and prioritizing restoration while highlighting Indigenous Knowledge, and culturally important foreshore areas. This project would provide resources necessary for a partnership with the Upper Nicola Band (UNB), and other Indigenous groups as the project proves successful. Additionally, this project provides an opportunity for UBC Sustainability Scholars Program students to support this work and collaborate with LLC and UNB.

Project description

Beginning in 2019, Living Lakes Canada entered a four-year Contribution Agreement with Fisheries and Oceans Canada (DFO) and their Canada Nature Fund for Aquatic Species at Risk Program. The Project is reviewing and revising the FIMP methodology and mapping (or re-mapping) 6-8 lakes in the Columbia Basin to assess the rate of change in ecological and urban development parameters. These final FIMP reports, published at the end of each project year, apply replicable and scientifically robust methods to track changes in land use, impacts from development, environmental degradation, restoration activities, and climate change. As this protocol becomes more accessible, it is expected that uptake will increase across the province allowing for various regions to track and to mitigate negative impacts on lake health.

With the support of 3 students through the UBC Sustainability Scholars Program, Living Lakes Canada wishes to improve partnerships with Indigenous People and braid Traditional Knowledge and Values into the FIMP assessment process and Foreshore Development Guidelines (FDG) Report. Through methods familiarization, engagement and communications, and data management with Indigenous People, a framework will be created by the Sustainability Scholars, which will act as a preliminary template for interweaving Traditional Ecological Knowledge (TEK) into the existing and newly updated Federal protocol for [FIMP methodology](#). Presently, there are two known pathways for this, quantitatively through Fish and Wildlife information added into Foreshore Habitat Sensitivity Index, or qualitatively through adding Culturally Valued or Sensitive zone polygons added to the Foreshore Mapped areas.

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Additionally, one or all of the Scholars will finalize a strategic communications plan to improve FN engagement and ongoing partnerships as the Foreshore Integrated Management Planning project begins to expand outside of the Columbia Basin and into other parts of British Columbia and Canada. This component of the project will support future program development as well as the distribution of information such as online mapping access and communication of shoreline development processes and stewardship opportunities.

Through methods review, Living Lakes Canada staff will be working closely with Upper Nicola Band (UNB) to critique known, and identify additional pathways that interweave community supported TEK and values. Living Lakes Canada and UNB staff will inform the Sustainability Scholars on the information gathered to interweave these knowledge systems into the updated FIMP Framework, created by the Scholars. These efforts, including the collection and dissemination of information, will be consented via a Memorandum of Understanding with the Indigenous Partner (UNB) and knowledge holders. These processes will inform a FIMP-Traditional Knowledge and Values Framework which could be dispersed for replication in other areas. This framework will help address concerns about watershed health, protecting sensitive habitat, and tracking changes caused by environmental degradation and climate change. The outcome will be an adaptive and meaningful Framework to guide applied Indigenous partnership and highlight cultural lake foreshore values into the overall assessment to create stronger and holistic foreshore development guidelines.

Project scope

Updating the FIMP federal protocol to highlight Traditional Knowledge and Values is a progressive step towards Reconciliation with BC First Nations as supported by the BC UNDRIP Act (2019). TEK and Values are sometimes difficult to define because they are not static and represent intergenerational wisdom that is cumulative and has evolved through long standing relationships on the land (MVEIRB 2005). Often Indigenous Peoples relationships with land and water are not represented in western scientific environmental protocols. This project will demonstrate how the FIMP protocol can interweave Traditional Knowledge and Values to inform land use decision makers and promote more balanced, sustainable, and ethical development decisions as the growing climate crisis continues to present to water. Adaptation to the climate crisis continues to challenge both Indigenous and non-Indigenous communities alike. This project represents the opportunity for applied Indigenous knowledge to be a priority and a normalized reference point for water stewardship, instead of the previous add on approach, for water and ecosystem health monitoring Provincial and National monitoring protocols.

Project work will focus on:

- Developing and refining an Indigenous engagement framework/plan to improve the Foreshore Integrated Management Planning processes and resources. Among other elements, the detailed framework will outline protocols each time Indigenous People are engaged in the project, prioritize other Knowledge systems, give consideration to Western vs Indigenous timelines and priorities, and outline the ways Living Lakes Canada, as a Non-Government Organization, can support this process while ensuring culturally respectful, effective and consistent communication about every lake before, after and during the FIMP Process.
- Developing and refining a Traditional Knowledge and Values Framework/plan for effectively interweaving Traditional Knowledge into the federal Foreshore Integrated Management Planning protocol.

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In addition to supporting the larger project requirements, the **Technical Data Scholar** will be responsible for coordinating, planning, and initiating the creation of a Traditional Knowledge Framework to guide the interweaving of Traditional Knowledge into the Foreshore Integrated Management Planning protocol. This position will include assisting with data interpretation, documenting progress, developing an outreach and engagement plan, and other external processes key to the function of these projects

The Scholar will also assist with creating a database of contacts, document progress, developing an outreach and engagement plan, and other external processes key to the function of these projects. Additional tasks may include; writing and posting educational blogs or articles, communicating with the public via newsletters, website, and social media posts, recruiting partners and contributors to the FIMP project.

Deliverables

- A final report containing a summary of the work completed
- A final report for the online public-facing [Scholars Project Library](#).
- A strategic First Nations Communications Plan to be used by Living Lakes Canada
- A Finalized FIMP-Traditional Knowledge Framework to be used by Living Lakes Canada

Time Commitment

- Each position is for 270 hours
- This project must be completed between **April 19** and August 12, 2022
- The scholars are to complete hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.

Required/preferred Skills and Background

- ✘ Excellent research and writing skills
- ✘ Experience conducting stakeholder engagement events, including facilitation skills, is an asset
- ✘ Familiarity with research methodologies and survey techniques
- ✘ Excellent public speaking and presentation skills
- ✘ Community engagement experience
- ✘ Deadline oriented
- ✘ Strong technical and analytical skills
- ✘ Programming skills
- ✘ Comfortable working with data and maps
- ✘ GIS training or experience
- ✘ Experience working with biological foreshore ecosystems
- ✘ Demonstrated experience working with data and in data management
- ✘ An interest in or familiarity with foreshore ecology, biodiversity, natural systems, Species at Risk, and freshwater conservation considered an asset.
- ✘ A strong working knowledge of Google Suite is an asset
- ✘ Additional technological competency in Asana, Mailchimp, Zoom, and Microsoft Suite would be considered an asset.
- ✘ This project will involve an extensive amount of Indigenous engagement and some degree of data management skills regarding Indigenous People and the sensitivities around that. Previous experience in

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these areas and/or a keen interest to learn more about Indigenous People and technical data pertaining to their culture would be considered an asset.

✘ The ability to effectively communicate via phone and email is extremely important ensuring that all duties are completed accurately and delivered with high quality and in a timely manner. Experience and sound judgment to plan and accomplish goals and a wide degree of creativity and latitude is expected.

✘ interest or knowledge about natural systems, Indigenous Reconciliation, water sustainability, community-based monitoring, biodiversity, and climate change, an asset.

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

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 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>