

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 Scholars 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: Foundational literature reviews to support land, water and resource management in T̓silhqot'in Territory – Soil Amendments

Total Number of Scholars Required: 3

Other positions collaborating on this project

- 2022-006A: Foundational literature reviews for T̓silhqot'in Territory - Habitat management of forest ecosystems
- 2022-006B: Foundational literature reviews for T̓silhqot'in Territory - Wildlife management for bears and ungulates
- 2022-006C: Foundational literature reviews for T̓silhqot'in Territory - Soil amendments

Project Background & Overview:

The T̓silhqot'in Nation are caretakers of their Territory and have inherited an ancient obligation to safeguard their lands and resources. The ancestral teachings of the T̓silhqot'in, "the People of the River" guide decision-making for the nenqay (the land and everything on it). By continually learning, sharing knowledge and acting in respectful ways, the T̓silhqot'in Nation continues to pass on T̓silhqot'in values from generation to generation.

The sustainable management of the water, land and resources is a priority for the Nation. In 2019, the T̓silhqot'in Nation signed the Gwets'en Nilt'i Pathway Agreement, a tri-partite agreement, with the Government of Canada and the Province of British Columbia. This government-to-government agreement commits both levels of Crown government to transform the relationship between them and

the T̓silhqot'in Nation with respect to the management of land and resources in T̓silhqot'in Territory, among other commitments.

The T̓silhqot'in Nation is working collectively to assess cumulative impacts over time and space. Climate change impacts are being felt in the Territory. There have been extensive wildfires, extreme heat waves, flood events, changes to water temperatures and prolonged periods without rain. Forestry activities and the management of habitat, assessments of wildlife and operational plans must work collectively to ensure landscape resiliency.

Project description

UBC Sustainability Scholars will support the work of the T̓silhqot'in National Government by conducting directed literature reviews to support habitat management, wildlife management and forest management. The reports will be reviewed by the Nation to inform research and land management decisions and will be used to develop educational material. After the reports are submitted to the T̓silhqot'in National Government, they will continue to be built on and traditional knowledge from the T̓silhqot'in Nation will be added into the reports. By bringing together western science and Indigenous knowledge, the T̓silhqot'in National Government is bringing together two different ways of knowing to support decision-making.

Project scope

The Scholar will conduct a literature review in the use of soil amendments in forestry and/or agroforestry and/or agriculture operations.

The deliverables will be a report summarizing the literature review and a compilation of factsheets for different soil amendments.

Activities:

- Focus on the use of biochar from wood waste (e.g., spruce, pine and fir), charred wood (from wildfires) and wood chips to increase nutrient availability, moisture holding capacity and carbon capture of soils
- Additional soil amendments could be added with discussions with mentors
- Note impacts to soil pH, temperature, soil microorganisms (i.e., bacteria, actinomycetes, fungi (particularly, mycorrhizal fungi), protozoa and nematodes) and invertebrates
- Note soil amendments inoculants and composting techniques including inoculating with mycorrhizal fungi and composted with manure (e.g., cow or horse)
- Note pros and cons of application to mechanically disturbed areas, burned areas and unburned areas (e.g., forest cut blocks, grasslands and agriculture land)
- Review pros and cons of application techniques including broadscale applications (such as aerial or spreading behind machinery), location specific application for specified purposes (e.g., erosion control or in conjunction with planting) and in conjunction with site preparation techniques (e.g., using a D9cat with ripper attachment)
- Note risks (e.g., invasive plants and impacts to soil chemistry and soil composition) and options to reduce risks

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Deliverables

- Produce a report including a technical summary of the literature review and a compilation of plain language factsheets.
 - The technical summary will contain a summary of the literature review conducted, references, resources and recommendations for outstanding research on these topics.
 - The factsheets will be attached in the appendix and clearly summarize the information gathered on each plant, animal or soil amendment.
 - Reports (word documents) should include: title page, executive summary, table of contents, technical report, references and an appendix of factsheets.
- These reports will be able to be used for the online public-facing [Scholars Project Library](#).

Time Commitment

- Each position is for 270 hours of work.
- This project must be completed between May 2 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
- Demonstrated interest in sustainability
- Familiarity with research methodologies and survey techniques
- Ability to work independently
- Deadline oriented
- Project management and organizational skills
- Strong technical and drafting skills
- Design and layout skills, an asset
- Demonstrated interest in sustainability and biodiversity
- Knowledgeable about British Columbia's forest soils and plant communities
- Familiarity with soil amendment protocols
- Understanding of forestry/agroforestry/agriculture practices

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.](#)

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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>