

Summer 2021 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 31, 2021.

Project Title

Geotechnical Analysis to Identify Potentially Hazardous Areas for Development on Bowen Island

Project description

Overview:

Bowen Island is a 50 square kilometre mountainous island much of which remains thickly forested. However, increasing development pressures are influencing this character and presenting potential hazards, particularly on our steep slopes. Although our Official Community Plan identifies a need to protect the island from environmental damages and risks resulting from development on hazardous terrain, we have yet to successfully pass regulations that address these concerns. This project is an opportunity to help us define areas which require particular protection against issues related to hazardous slopes.

We are seeking a Geotechnical specialist to research best practices for local regulations that address site alteration activities such as blasting, soil removal, and vegetation clearing and to analyze spatial data in order to delineate appropriate areas to apply a new Hazardous Areas Development Permit Area. Within this area to be defined, any proposed development would then be required to complete a specific geotechnical assessment report that assesses hazard risk. The Scholar would also help us in drafting a Terms of Reference document that indicates what would be included in these geotechnical assessment reports.

Purpose of the Project:

The Municipal Council of Bowen Island has decided to develop two new bylaws to address hazards that may be exacerbated by development and to either prevent or mitigate damage or risk of damage to our local ecosystems and community. The Sustainability Scholar would bring expertise in geotechnical engineering to help us to identify the best policies and approaches in developing these bylaws. They would also conduct GIS analysis on spatial data to draw up the maps identifying “Hazardous Areas” where particular Development Permits would be required before development may proceed. The aim of the project is to reduce hazards to people and the environment on Bowen Island that may be exacerbated by development. The Scholar’s work would directly inform the development of the bylaws and would ideally lead to the successful adoption of both bylaws.

Scope of Work:

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- Research best practices for bylaws that address site alteration activities such as blasting, soil removal, and vegetation clearing.
- Gather and analyze spatial data using GIS data and aerial photography on topography, bedrock depth, soil substrate, and historic slope failures. Resources will be provided.
- Delineate appropriate areas to apply a new Hazardous Areas Development Permit Area.
- Assist with drafting a Terms of Reference document for site-scale geotechnical assessment reports that would be triggered by the new DPA.
- Help staff facilitate public engagement on proposed bylaws to be conducted virtually

Deliverables

The Scholar will deliver a final report containing a summary of their completed work complemented by a final presentation to key stakeholders. The report should include:

- Summary of best practices for hazardous and steep slope local bylaws
- Explanation of the conditions on Bowen Island and the analyses conducted
- Proposed map of the Development Permit Area (DPA) (GIS shapefiles and original map files to be provided)
- Recommendations for the Municipality on future data-gathering or policies

Time Commitment

- This project will take **250** hours to complete.
- This project must be completed between May 3 to August 13, 2021
- The Scholar is to complete hours between 8:30 am and 4:30 pm Monday to Friday, with the exception of public engagement events which are often outside of working hours, approximately 12 hours per week. Scheduling can be flexible as needed.
- The Scholar may be asked to present their results directly to Council who meet every other week on Monday evenings.

Required/preferred Skills and Background

Required:

- Basic Spatial Statistical analysis
- Training or experience in geotechnical engineering, particularly with hazardous slopes
- GIS training or experience

Preferred:

- Excellent research and writing skills
- Experience conducting stakeholder engagement events, including facilitation skills
- Excellent public speaking and presentation skills
- Community engagement experience
- Strong analytical skills
- Ability to work independently
- Strong technical and drafting skills
- Interest in local municipal regulations

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Applications close **midnight Sunday January 31, 2021**

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>