

## Summer 2026 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Hub is pleased to offer current UBC graduate students the opportunity to work on sustainability internship projects. Successful candidates work under the guidance of a mentor from the partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region. The pay rate for the summer 2025 program is \$31.25/hour or \$7,812.50 for a 250-hour project.

- 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 11:59 pm on Sunday February 1, 2026.**

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## Project title: Identifying upstream flood attenuation and benefiting areas in the Lower Fraser

### Project Background

A group of researchers, including UBC Assistant Professor Dr. Matthew Mitchell, recently completed a national-scale [study](#) looking at the flood prevention benefits provided by natural ecosystems in Canada in the context of increased flood frequency and severity due to climate change. The study used spatial modelling to:

1. evaluate the potential runoff retention by natural ecosystems; and
2. identify downstream urban and agricultural areas critically dependent on these natural benefits, particularly those in floodplains and close proximity to upstream natural ecosystems.

This study was presented to Metro Vancouver Regional District's Air Quality and Climate Committee in October 2025. The Committee oversees work done by Metro Vancouver staff related to flood risk reduction in the region. This work has gained prominence following the November 2021 atmospheric river event. The Committee voiced support for applying the national-scale study to this region.

This work will help to advance the sustainability and natural hazard-related policies of [Metro 2050](#), the regional growth strategy. It will also contribute to the implementation of the [BC Flood Strategy](#) as it applies to the Lower Fraser.

### Project description

This project will:

- Identify upstream natural ecosystems that play a role in flood attenuation and the downstream areas that benefit from them. This would expand our understanding of the ecosystem services that are provided by natural areas in the region, and how they help to protect certain lands (e.g., agricultural and job lands; population centres) from flooding.
- Help make the case for using limited funds wisely by understanding where and how natural areas contribute to regional flood resiliency. Public Safety Canada estimated that for every \$1 invested in mitigation efforts, \$7 to \$10 can be saved in post-recovery costs.

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- Feed into the regional Hazard and Regional Vulnerability Assessment, which will benefit Metro Vancouver and member jurisdictions by providing a regional data set that can be used to complete the jurisdiction-specific risk assessments that are required under the recently revamped *Emergency Management Act*.

## Project scope

The UBC Sustainability Scholar will:

1. review and understand the approach that was used for the national-scale [study](#) and apply it to the Lower Fraser-scale, which is defined as the Metro Vancouver Regional District (MVRD) (main benefiting area) and the Fraser Valley Regional District (FVRD) (upstream area). This will be achieved by using GIS tools and approaches with publicly available data, or datasets provided by Metro Vancouver, for land cover, hydrologic soils groups, precipitation, slope, watershed boundaries, floodplains, human population density, and other relevant variables. All of these datasets will be provided by Dr. Mitchell or Metro Vancouver, but may require some amalgamation to the Lower Fraser-scale. The approach would also use historical and future climate flood scenarios to gain a more precise understanding of the upstream flood-attenuating ecosystems and downstream benefiting areas at this regional scale.
2. work with Metro Vancouver staff to apply this information to flood risk reduction capital projects that local and First Nation governments in the region are proposing to see if and how it can be used to help prioritize them. This would involve overlaying the spatial locations of these projects with the priority flood-attenuating ecosystems identified in (1) above to identify those projects that overlap with natural ecosystems that have the greatest flood attenuation potential.
3. review the [BC Flood Strategy](#) and [Metro 2050](#), the regional growth strategy, and identify what policies and actions would be advanced through this project.

The resulting data from this project would inform the on-going Metro Vancouver Regional-Scale Hazard, Risk, and Vulnerability Analysis ([HRVA](#)) Project that is currently underway.

## Deliverables

- PDF map(s) of priority areas for conservation towards increased flood attenuation in the Lower Mainland, created from GIS-shapefiles that would be shared with Metro Vancouver.
- A short final report containing a summary of the work completed, including a description of the applied method(s). A version of this report would be made available to UBC for the online public-facing [Scholars Project Library](#).

## Time Commitment

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 14, 2026
- The Scholar is to complete their hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.
- Be available to meet virtually once every two weeks for 30 minutes at an agreed upon time for check-in meetings.

## Required/preferred Skills and Background

- Strong analytical skills

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- ☒ Ability to work independently
- ☒ Deadline oriented
- ☒ Project management and organizational skills
- ☒ Interest in or familiarity with flood management, natural disaster management and related topics would be an asset
- ☒ General familiarity with modelling and analysis of geotechnical and geospatial data (for this project, hydrological and hydraulic modelling familiarity would be an asset)
- ☒ Data analysis experience
- ☒ Comfortable working with large data sets
- ☒ Experience with GIS and geospatial analysis
- ☒ Past experience or familiarity with the R programming language or RStudio

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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, 2026.  
[Click here for details and to register.](#)

Below are some links to useful resources to help you with your resume, cover letter and preparing for an interview (there are many more online).

<https://students.ubc.ca/career/career-resources/>

<https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services>