

Summer 2025 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 January 26, 2025.

Project title: Case study on the St. George Rainway: Cost benefit analysis of a Blue-Green System

Project Background & Overview:

The City of Vancouver adopted the Rain City Strategy (RCS) in 2019 with a target of managing rainwater runoff from 40% of the City's impervious areas by 2050. This will be achieved through increased use of nature-based solutions such as green rainwater infrastructure (GRI) to collect and treat rainwater runoff while providing other co-benefits such as providing green space, decreasing urban heat and contributing to urban biodiversity. Projects in support of this strategy directly support the objectives of the City's Climate Change Adaptation Strategy.

Blue-Green Systems are connected park-like streets that manage water in a naturalistic way and first emerged for the City as an action in the RCS. They reduce the impact of future climate hazards facing Vancouver by removing pollutants from the air, mitigating the urban heat island effect, and managing urban rainwater runoff. When co-located with active transportation greenways, they can also support Transportation 2040 goals. Through the Vancouver Plan, a city-wide network of Blue-Green Systems was defined, and a study of Blue-Green Systems typologies was recently completed ([Blue-Green Systems | City of Vancouver](#)). Thus far, the City has implemented a handful of Blue-Green System pilot projects. The most recent of these is the St. George Rainway project, which brings 4 blocks of bioswales to St. George Street in Mount Pleasant where a local community group had advocated to honour and daylight a historic waterway. Analyzing the outcomes of this pilot Blue-Green System is instrumental to guide future projects.

As a pilot project that spanned years from planning to implementation, there are many valuable lessons learned from the St. George Rainway project. Now that the system is implemented, beginning to analyse its benefits and performance will inform future projects. More projects like the St. George Rainway are needed in the future to meet green space needs for densifying areas, achieve Council's 11% road reallocation target, meet water quality targets, support rainwater management needs for growth and climate change, and fulfill

UNDRIP actions. These projects also provide benefits that reduce systemic inequalities in the design of urban spaces by providing access to green space and reducing urban heat island effect in areas of Vancouver where there is a relative lack of trees and green space.

This case study and cost-benefit evaluation will help make the case and optimize future blue-green system projects. This work can also build from UBC MEL students' cost benefit analysis of Alberta St. Blue Green System and Columbia Park.

Project description

This project seeks to understand the costs and benefits of Blue-Green Systems projects by examining the St. George Rainway as a case study. Questions we have include: What is the business case for Blue-Green System at the project level? Do the benefits of the St. George Rainway project outweigh its costs, and why? By evaluating the costs and benefits of a Blue-Green Systems project, this case study can be used to advocate for and inform the planning and design of future projects.

Project objectives include:

- Select and/or develop an appropriate green infrastructure cost-benefit analysis methodology or tool for the Vancouver context
- Assess the benefits of the St. George Rainway project, including rainwater management, urban heat mitigation, biodiversity enhancement, public realm benefits
- Analyze the costs and benefits of the St. George Rainway in relation to relevant City goals, strategies, and targets

This project will result in a reference document available to internal staff and others involved in planning and designing Blue-Green Systems. It can also be shared with partner organizations doing similar work. The information produced will inform planned Blue-Green System projects that include Alberta Street from Queen Elizabeth Park to Columbia Park, Willow Street in the Broadway Plan Area, and on Nootka Street as part of the Eastside Crosscut Blue-Green System.

Project scope

The Scholar will:

- Review supporting City policies and St. George Rainway project engagement materials to develop familiarity with the project and its policy context
- Conduct a minimum of one site visit to the St. George Rainway
- Review and summarize existing GRI cost-benefit tools and benefit quantification methods from a North American context, both online tools and in the academic literature, and select a recommended tool/methodology for cost-benefit analysis
- Undertake desktop research of project documentation, including design drawings and financial spreadsheets to quantify the St. George Rainway project costs and benefits in relation to achieving the goals of supporting City policies

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- Conduct interviews with 3-5 City staff involved in the St. George Rainway and Blue-Green Systems design and/or planning to understand policy context and help define appropriate cost-benefit parameters and scenarios
- Evaluate the costs and benefits the St. George Rainway compared to a business-as-usual scenario, both qualitatively (descriptive analysis) and quantitatively (monetary analysis)

Deliverables

- A final report containing a summary of the work completed
- A final report for the online public-facing [Scholars Project Library](#).
- Sections of the report to include:
 - A summary of the St George Rainway project background and supporting policies
 - A summary of the cost-benefit tools and methodologies review
 - A breakdown of cost-benefit analysis, including a breakdown of costs associated with various City goals/strategies like Active Transportation, Biodiversity Strategy, and Rain City Strategy.
- If applicable based on the selected cost-benefit tool/methodology, a cost-benefit analysis spreadsheet tool for future use by the GII Branch
- A final presentation based on the report to City branches involved in the project

Time Commitment

- This project will take 250 hours to complete.
- This project must be completed between May 1 to August 15.
- The Scholar is 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
- Statistical analysis
- Excellent public speaking and presentation skills
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Experience or familiarity with GIS and reading landscape drawings, an asset
- Project management and organizational skills
- Familiarity with benchmarking methods and tools
- Comfortable interacting with strangers to conduct public/in person surveys
- Experience with financial modelling and analysis
- Design and layout skills

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Applications close at **11:59 pm Sunday January 26, 2025**

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 21, 2025. [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>