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: Research to improve water management practices at golf courses in a changing climate

Project Background & Overview:
The Vancouver Park Board is developing a Golf Services Plan (the Plan) to optimize, sustain and enhance current golf service levels at the six publicly owned courses managed by Park Board (Fraserview Golf Course, Langara Golf Course, McCleery Golf Course, Stanley Park Pitch and Putt, Rupert Pitch and Putt, and Queen Elizabeth Pitch and Putt), while making environmental improvements.

Intensifying rainfall and drought with climate change has been identified as long-term risk to continued success for golf operations as the need for irrigation water on golf courses peaks in drought season. Average summer rainfall is projected to decrease by 4% and drought duration is projected to increase from 23 to 27 days on average per year, so minimizing potable water usage at golf courses is a priority.

By their nature, golf courses are large greenspaces that offer unique opportunities for water management in comparison to other public spaces. The City has a Groundwater Strategy underway, which is anticipated to promote retention and infiltration of rainwater, and the Park Board recently passed the Water Priority Action Plan (2023). The Climate Change Adaptation Strategy (2024-2025 update) identifies extreme heat and extreme rainfall as priority areas for action and the Rain City Strategy (2019) aims to increase Vancouver's resilience through sustainable water management. At the intersection of these policies and golf courses are opportunities to explore a tailored approach to potable water and rainwater management with resilience, conservation, climate adaptation, and ecological integrity in mind.

Project description
The goal of this project is to identify opportunities to improve water management one or more of Vancouver Parks municipal golf courses by collating existing data and developing management options for rainwater and potable water. This is in support of Rain City Strategy principles, Climate Change Adaptation Strategy actions, Climate Emergency Action Plan Big

Move 6: Natural Climate Solutions, and VanPlay approach N.2 Freshwater Resources, while sustaining or enhancing current golf service levels.

Water is essential to golf course operations and, while some information is known about current water use (e.g., Langara is irrigated solely with groundwater; Fraserview is one of the City's highest users of potable water), changing climate conditions and new policy necessitates improved data and management options to inform decision-making.

Project work would come at a key time and may inform decision-making related to improvements recommended in the Golf Services Plan that is due to be completed in September of 2025.

Project scope
The project will have an emphasis on research, data collection and analysis, with an opportunity to evaluate one or more golf course, and visit one or more golf courses for context.

The scope of this project includes:

- Background review of relevant City policies, and desktop review 5 or 6 global examples of water management best/novel practices to become familiar with the City of Vancouver policy and practice context, and to gain understanding of the issues and practices globally pertaining to water management practices in golf courses.
- Data collection and analysis:
    - Gather publicly available historic and forecasted precipitation and temperature data
    - Review existing data on potable water use trends on each golf course
    - Identify any data gaps
    - Using the data, analyse current and projected potable water use consumption and trends
    - Analyse potable water use in terms of adhered to Water Priority Action Plan (2023)
- Interview approximately 5-10 key Park Board staff independently or as part of small groups (Golf Supervisor and Superintendents, Environmental Planners, Parks' Green Infrastructure Engineer, Park Development and Planning Landscape Architects), and the Plan consultant to gain understanding of existing water systems
    - During the interviews, identify potential evaluation criteria, and collect data or references to outside sources for data
- Based on the research, data, and interviews develop a draft decision-making tool to inform water management improvements at golf courses. Test the prototype against 3 to 6 sites chosen in consultation with the project mentor and make any refinements.
    - Using the refined decision tool apply it to one championship or pitch and putt course and demonstrate in plan view what a conceptual improved water management system may look like
    - Create 2-5 conceptual diagrams of the improvements

Deliverables

- A final report including a summary of the research including:
  - An analysis of water use and precipitation
  - A decision tool
  - A sample alternative water management concept including 2 to 5 conceptual diagrams
  - Recommendations on future improvements to the decision tool and related data collection
- A presentation to key stakeholders
- A final report 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 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
☒ Strong analytical skills
☒ Ability to work independently
☒ Deadline oriented
☒ Strong technical and drafting skills
☒ Demonstrated experience in water management and hydrology
☒ Comfortable interacting with strangers to share and collect information
☒ Design and layout skills
☒ Experience creating conceptual plans and renderings to communicate technical information to non-technical audience, an asset

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