

SUSTAINABILITY SCHOLARS PROGRAM

Summer 2020

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 February 2, 2020.**

Research project title: Identifying a range of typologies and favorable conditions for regenerative and low-maintenance green rainwater infrastructure in right-of-ways

Research supports the following City of Vancouver policies:

Rain City Strategy (2019)

- Transformative direction 1: Strive to become a water sensitive city- managing water in harmony with community planning, natural systems and a range of infrastructure on a citywide scale
- Transformative direction 4: Revitalize watersheds and waterfronts to enable communities and natural systems to thrive- considering the unique characteristics and interactions in each of the city's watersheds

VanPlay (2019)

- Move 3: Connectivity- creating a network of connected recreational nodes while providing pathways for the movement of urban wildlife, and rainwater, while creating beautiful and direct and intuitive connections for pedestrians and cyclist of all ages and abilities

Integrating blue-green systems planning Council motion (2019)

- Watershed revival, delivered through urban watershed planning
- Refresh of the 1995 Greenways Plan to incorporate water management and biodiversity elements in the greenways networks

Greenest City Action Plan (2015)

- Goal 6: Access to Nature- improving access to green spaces, reducing time spent travelling between green spaces
- Goal 8: Clean Water- reducing combined sewer overflows and treating stormwater runoff

Biodiversity Strategy (2016)

- Increase the amount and ecological quality of natural areas, including forests, wetlands, streams, shorelines, and meadows, to support biodiversity.

Healthy City Strategy (2014)

- Environments to thrive in- healthy urban environments are characterised by complete, compact and connected communities- include well-planned, sustainable, thriving, and vibrant environments

Scope of Work:

The purpose of this Greenest City Scholar report is to conduct research on opportunities to integrate regenerative and low-maintenance strategies in green rainwater infrastructure (GRI) implementation in right-of-ways. This study will help the City catalogue right-of-way typologies and develop site specific GRI practices within identified blue-green system corridors outlined in the Rain City Strategy (RCS) and the integrating blue-green systems planning council report.

The right-of-way is an underutilized location that can provide opportunities to implement a range of GRI practices for stormwater management, reduce urban heat island effect, increase urban forest and biodiversity and enhance connectivity across the city. Right-of-ways however also present a set of unique challenges due to underground infrastructure, parking and access to private property.

GRI is often advocated for based on cost effectiveness over its life-cycle compared to traditional grey infrastructure. The initial implementation and construction costs of GRI are considerably lower than grey infrastructure practices; however operation and maintenance costs can be considerably higher. This study will explore challenges and opportunities in transforming right-of-ways to multi-functioning GRI landscapes using minimal management techniques in order to reduce operation and maintenance costs.

The scholar will complete the following tasks as part of their project scope:

- Gather information from five leading municipalities on GRI implementation in the right-of-way and from leading practitioners in regenerative landscape architecture (e.g. andropogon and Future Green Studio).
- Gather information on best practices on implementing low-maintenance GRI on private and public sites.
- Determine which plant species are capable of being a part of regenerative GRI.
- Visit potential right-of-ways in the city to identify barriers and opportunities, including cataloging site specific characteristics of the neighbourhood.

Why this work is of value:

By investing in regenerative and low-maintenance GRI practices in right-of-ways, the City can proactively prepare for climate change impacts, improve resilience to storms, support biodiversity and urban ecosystems and ensure cleaner urban run-off to surrounding water bodies while reducing operations and maintenance cost.

Deliverables

The Scholar will deliver a final report containing a summary of their completed work. The report must be completed in Microsoft Word and should be no more than 20 pages, with any additional content included as appendices. The report will be complemented by a final presentation to key stakeholders. The report should include:

- A catalogue of right-of-way typologies and case studies to highlight favourable conditions of right-of-ways.
- A summary of background research.



- Recommendations for the City on specific sites and key regenerative and low-maintenance design principles and implementation considerations.

Time commitment

- This project will take **500** hours to complete.
- This project must be completed between April to August , 2020
- The scholar is to complete hours between Monday-Friday, 8am-5pm, for approximately 30-35 hours per week.

Skill set/background required/preferred

- Excellent research and writing skills
- Demonstrated interest in green infrastructure or stormwater management
- Strong technical writing skills
- Familiarity with research methodologies
- Strong presentation and public speaking skills
- Strong analytical skills
- Ability to work independently
- Demonstrated time management skills
- Deadline oriented
- Project management and organizational skills
- Familiarity with benchmarking methods and tools

Additional skills required/preferred

- Proficiency in Microsoft Word and Excel is required
- Proficiency in GIS preferred

Additional project needs

The scholar may accompany Branch staff to sites. Any necessary personal protection equipment will be provided by the Branch, with the exception of steel-toed boots.

Applications close **midnight Sunday February 2, 2020.**

Apply here: <http://sustain.ubc.ca/scholarsapply>

Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions



Useful Resources

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>

The Centre for Student Involvement & Careers will host a resume & cover letter webinar tailored for graduate students on Tuesday, January 21, 2020 from 12:00-1:30. Registration will open approximately two weeks before the webinar, and can be accessed at Careers Online.

