Graduate Internship Opportunity

Summer 2025

PROJECT TITLE

Tides of Change: Evaluating the Estuaries of the Gorge Waterway

ORGANIZATION

Gorge Waterway Action Society

Project Overview

The Gorge Waterway Action Society (GWAS) is seeking a graduate student to conduct research on the estuaries of the Gorge Waterway. Scholars are invited to bring their unique interests and background to contribute to the research and dissemination of information related to the estuaries of the Gorge. The research focus allows for flexibility. This project could encompass a graduate student with an interest in hands-on ecological restoration, those eager to delve into the Traditional stewardship practices of the Songhees and Esquimalt Nations along the Gorge, or those with a focus on climate science and carbon sequestration.

Project Background

The Gorge Waterway and its shoreline have experienced degradation, pollution, and significant adaptation since settlers first arrived and displaced the Songhees and Esquimalt Nations from their traditional territory. Since the introduction of invasive species and the engineering of the shoreline, critical native ecosystems have been damaged. Degradation of the Gorge by settlers has left residents and wildlife vulnerable to climate impacts like flooding and contributed to the release of stored carbon. The Gorge Waterway Action Society (GWAS), along with its GWI partner organizations, aims to restore the Gorge Waterway's estuaries for the benefit of native, brackish tolerant species, migratory birds, salmon and other native fish, and community members including the Songhees and Esquimalt Nations.

Restoring estuaries and riverine areas can improve water quality by capturing pollutants and sediment from land degradation. Restoration of coastal ecosystems can also help communities adapt to climate hazards such as sea level rise, storm surges

and associated flooding. Estuaries themselves have the potential to mitigate climate change through significant carbon sequestration. Underlying these ecosystem services provided with a Western-science lens, the intrinsic and cultural values of estuaries and wetlands persist.

Project Description

The goals of the Estuary Research project are to explore a facet(s) of the Gorge estuaries' value(s), for example:

- The cultural significance of estuaries, examined through a lens of ethnobotany, and with a focus on key species of significance to the Songhees and Esquimalt Nations
- The carbon sequestration potential of the Gorge Waterway's estuaries, thereby informing the climate change mitigation factor of the Gorge

We are seeking a graduate student to work as a Gorge Waterway Environmental Stewardship Scholar, bringing their unique interests and background to contribute to the research, design, and dissemination of information related to the estuaries of the Gorge Waterway. The specific research question allows for flexibility, and we welcome individuals with diverse skill sets and academic backgrounds. This project could encompass a graduate student with an interest in hands-on ecological restoration, those eager to delve into the Traditional stewardship practices of the Songhees and Esquimalt Nations along the Gorge, or those with a focus on climate science and carbon sequestration.

The Scholar will collaborate with the Gorge Waterway Action Society (GWAS), which is actively involved in restoring the rare saltmarsh habitat within Esquimalt Gorge Park and rehabilitating salmon habitat in Gorge Creek. For a biology/restoration-focused scholar, this entails conducting research, expanding project scopes, and implementing new practices. Simultaneously, GWAS conducts place-based nature education through the Gorge Waterway Nature House, aiming to provide the community with engaging content related to conservation and environmental stewardship. A social science or Indigenous Studies-focused scholar can contribute by researching and enhancing educational content.

The project's overarching goal is to support Gorge Waterway stewardship through action, education, or a combination of both. Scholars will conduct relevant research and formulate project plans, such as Restoration Project Plans or Nature Interpretive Content tied to their projects. While the work primarily involves independent efforts, scholars will have scheduled check-ins with GWAS staff supervisors and support from

the GWAS staff team. Each Scholar is accountable for producing a final project report, sharing their findings, and ensuring the project's long-term impact.

Scope of Work

The Gorge Waterway Environmental Stewardship Scholar will support research and action to restore and conserve the estuary ecosystems of the Gorge Waterway. The Scholar's work will focus on:

- Assessing the **current ecological state** of estuaries, including key species and habitats.
- Exploring the **carbon sequestration potential** of estuaries and their role in climate mitigation.
- Investigating the **cultural and ecological significance** of estuaries, with input from the Songhees and Esquimalt Nations as appropriate.
- Developing recommendations for **restoration strategies** or **community education initiatives**, based on the Scholar's expertise and interests.

The Scholar will produce:

- Restoration plans, educational resources, or other actionable deliverables.
- A final report summarizing research findings and recommendations to guide long-term stewardship.

While the project has defined goals, there is **flexibility to tailor the focus** based on the Scholar's academic background and interests, such as ecological restoration, climate science, or cultural engagement.

Key Deliverables

The Scholar will be asked to create and share a project report, which would ideally be freely accessible to coastal communities, Indigenous land stewards, researchers and restoration practitioners around the world. The report will summarize the research they conducted during the project, and feature relevant next steps/recommendations, in whichever research-focus their project took.

Time Commitment

Optimal timelines for the roughly 12-week, estuary research project to run are as follows:

1. Week 1: Meet GWAS team; collaborate on honing the research project's focus and deliverables; create a project timeline

2. Week 2-9: Conduct research, keep notes and share updates with GWAS staff in regular meetings.
3. Week 10: Share draft report and project deliverables to GWAS staff.
4. Week 11: Receive feedback on draft report and deliverables, incorporated into a final version.
5. Week 12: Submit final report and project deliverables to GWAS staff.

Preferred Skills & Background

✓ Excellent research and writing skills

✓ Demonstrated interest in sustainability

✓ Familiarity with research methodologies and survey techniques

✓ Ability to work independently

✓ Deadline oriented

✓ Project management and organizational skills

Additional Project Requirements

GWAS aims to provide equitable and accessible work conditions for the Scholar's work term. The Scholar may work remotely and will require access to a computer and internet connection to conduct research. Check-in support meetings with GWAS staff can take place in-person or remotely through video conferencing.

Program Information

Dates: May 1—August 15, 2025

Compensation: Scholars are paid approximately $31.80/hr for 250 hours of work (based on UVic Research Assistant pay rate)

Application Deadline: January 31, 2025

Contact: Laurel Currie (sustainability-scholars@uvic.ca)

Visit our website to learn more about eligibility and application requirements.