

Summer 2024 Internship Opportunity

Title

Telling the Story of Water Quality in the Cowichan Valley: Supporting sustainable, collaborative decision-making through data review, analysis and crafting the story of watershed health throughout the years.

Organization

Cowichan Watershed Board (CWB)

Project Background & Overview

The Cowichan Watershed Board (CWB) is a local governance model created in 2010 to provide leadership for sustainable water management in the Cowichan/Koksilah watershed, ancestral home of the Quw'utsun First Nation. The CWB is co-chaired by Cowichan Tribes and the Cowichan Valley Regional District (CVRD) and represents a unique partnership between First Nations and local government. Through this model, Cowichan Tribes and the CVRD work together to advance whole-of-watershed health, demonstrating a commitment to moving down the path of reconciliation.

A decade ago, the BC Ministry of Environment (BCMOE) laid out water quality objectives for the Cowichan-Koksilah watersheds. This decision was prompted by concerns arising from previous findings indicating water quality issues in the lower Koksilah, Cowichan Bay tributaries, and the Cowichan Bay Estuary. Failure to meet these water quality targets became a concern for human health, the well-being of aquatic life, and even groundwater quality, including instances of contaminated wells in the lower Cowichan River area. As a result, one of the main priorities for the Cowichan Watershed Board (CWB) and its partners became to address the BCMOE's observations of pollution levels exceeding the set objectives for the Cowichan-Koksilah rivers.

Attainment sampling plays a vital role in the CWB's overarching goal of achieving healthier water quality, thereby ensuring a safe and sustainable environment for recreational, traditional, and cultural activities.

By monitoring and tracking changes in water quality over time, we gain valuable insights that inform decision-making processes, guide research endeavors, and drive community initiatives. These efforts are directed toward the common objective of improving water quality for the benefit of human well-being, the preservation of wildlife, and the health of aquatic ecosystems.

To effectively track and monitor water quality over time, the MOE initiated a two-component monitoring program in 2012. This program involves a short-term, intensive water quality monitoring program at specific sites within the watershed, conducted every five years. Testing water at regular intervals over time throughout the watershed holds significance in assessing changes in water

quality over time. Furthermore, it is essential to evaluate the effectiveness of programs and initiatives aimed at improving overall water health.

Project Description

We all rely on water to support the ecosystems on which we depend and the CWB and its partners have been monitoring the health of the watershed from the estuary to the tributaries that enter Lake Cowichan for the past 10 years. However, the information collected has varied in its collection, presentation and analysis, making it difficult to identify trends.

In order to support our Board, and its partners, in making the best decisions possible and sharing information with stewardship groups and the public, we are looking for a candidate that can review data, synthesize past reports, analyse and craft the story of our watershed's health through the years.

The key rationale for this project is simply: You don't know if you don't look! Too often we take for granted this precious resource. Yet, many practices and activities associated with our lifestyles and land and water use can have significant negative impacts on the quality of the water in our rivers, lakes, streams and marine waters. In order to identify these issues, we need to monitor our local water bodies and in order to make the best decisions possible for the sustainability of the watershed, we need to understand what that data means.

We want someone to tell the story to the community. This research will help us know where we are at, help us to make future decisions and guide our ways of working for 2024 sampling.

Project Scope

The activities the scholar will be undertaking include:

- Meet with the project mentor for orientation, handover of materials and to construct a timeline/work plan.
- Interview(s) with people who began the monitoring project in 2012/13, including the past Executive Director.
- Synthesise 4 past reports by different project managers into one story about the water quality in the Cowichan Valley.
- Analyse and come up with key findings/take-aways.
- Develop a final report.

Share findings through a presentation to the Cowichan Watershed Board (optional).

Deliverables

A publicly digestible report that synthesizes and analyzes the water quality monitoring work that has been done by the Cowichan Watershed Board over the past 10 years.

If the scholar is interested, we would also consider a presentation to the Cowichan Watershed Board on their findings but this wouldn't be a requirement of the role.

Time Commitment

We envision the scholar setting their own work schedule, with the support of their CWB mentor, and likely utilizing the full time periods of May 1st - August 15th to complete their work.

Required/Preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability and reconciliation
- Statistical analysis
- Strong analytical skills
- Critical thinking skills
- Ability to work independently
- Demonstrated experience in water quality testing
- Familiarity with benchmarking methods and tools
- Design and layout skills

Additional Information

We would love to have someone with the technical understanding around water quality testing that can analyze the data and understand the reports but also has the ability to then share (or share the story of) that data in a way that the public can understand.

Additional Project Requirements

This will be a remote work opportunity where the scholar can work from home or the university. However, we would want them to travel to the Cowichan Valley two or three times throughout the course of their internship. These would be day trips that would entail meeting with the mentor and other members of the team for orientation, visiting some sites to ground their understanding of the areas that are sampled and conduct an interview with our previous Executive Director and/or other staff or consultants.

Please note that we are requesting full funding for this internship opportunity.

UVic Sustainability Scholars Program

All current UVic graduate students are invited to apply for an impactful sustainability research project. Sustainability Scholars Program internships are designed and mentored by partner organizations and paid at a rate of \$30.87 per hour (after deductions) for 250 hours from May 1 to Aug 15. Explore details on our [website](#) and review eligibility criteria before applying. Contact Laurel Currie, Program Manager, with any questions: sustainability-scholars@uvic.ca.
