

# Watershed Modeller

## About the Tula Foundation

The Tula Foundation is an independent charitable foundation, rooted in British Columbia, but with global interests and outreach. We have used our facilities and resources to create a vast network of collaborators from academia, government agencies, and First Nations. Our collective efforts have catalyzed an enormous quantity of science, education, and stewardship. Our divisions include:

- *Hakai Institute* - an active, engaged scientific research institution with ecological observation stations on Calvert Island and Quadra Island. Known for the long-term research done on BC's coast, the scientific papers published and the compelling media, created.
- *Quadra Centre for Coastal Dialogue* - a division supporting meetings and workshops wherever they may happen, as well as hosting them at the Quadra Island site with meeting space and dorms.
- *Media* - the Media team showcases the work we all do through video and award-winning journalism.
- *The Ocean Decade Collaborative Center for the Northeast Pacific (DCC)* - supports the UN Decade of Ocean Science for Sustainable Development (the Ocean Decade 2021-2030) by facilitating partnerships and seeking connections in ocean communities.
- *Tula Health (Tula Salud)* - supports health systems for developing countries, particularly Guatemala's rural indigenous communities, by providing education and resources.

## Position Summary

The Tula Foundation's Hakai Institute conducts long term watershed science focused on the linkages between terrestrial, freshwater, and marine ecosystems along the rainforest coast of Western North America. Our watershed science spans from local scale observational studies to regional scale data assimilation and modelling. We work with a diverse network of partners and with specialists from multiple disciplines to develop an integrative understanding of the changing coastal margin. The Hakai Institute operates two field stations and hosts significant research infrastructure including environmental sensor networks, advanced laboratories, airborne remote sensing platforms, and data mobilization services.

The Hakai Institute and partners are currently recruiting a research scientist with expertise in watershed modelling and water quality prediction. The successful candidate will support multiple collaborative projects over the coming years. Most immediately, the modeller will work under the co-supervision of Dr. Dan Moore at the University of British Columbia to develop and apply a model of stream temperature in collaboration with Nanwakolas Council and its member First Nations. This work will improve our ability to predict the impact of climate change and forest management practices on stream temperatures and salmon. Concurrently, the successful candidate will contribute modelling expertise to an interdisciplinary team working on other watershed science problems – potentially including biogeochemical modelling and stream temperature modelling – across the diverse watersheds of the coastal rainforest.



The researcher will join an interdisciplinary team working to advance the field of watershed-ecosystem science and support practical applications in climate change adaptation, watershed stewardship, and ocean modelling.

## Qualifications

- PhD or equivalent experience
- Advanced skills in data science and modelling
- Experience working with both process-based and empirical modelling approaches
- Training in natural sciences such as hydrology, forest ecology and management, environmental science, physical geography, and biogeochemistry
- Significant experience with one or more relevant tools of watershed science: climate projections, geospatial data analysis, LiDAR-based modelling of forests and streams, stream sensor measurements, or water chemistry measurements
- Experience in developing computational workflows using an open-source language such as R
- Experience with field data collection and a willingness to undertake some field work would be an asset
- Experience publishing scientific articles, datasets, and code
- Experience working with Indigenous communities including Guardian programs

## Why Work at Tula

- We are an engaged, energetic, creative, collaborative team
- Dynamic work environment
- Competitive salary and extended health benefits
- Commitment to excellence at all levels

This 2-year, full-time contract position is based in British Columbia with options to work remotely or from a Tula Office (UBC/Vancouver, Campbell River, Quadra Island). You can learn more about working at Tula online at [www.tula.org/careers](http://www.tula.org/careers)

## Benefits

Salary & Competitive Benefits Package

## To Apply

Please submit a cover letter and current CV to [careers@tula.org](mailto:careers@tula.org) by October 15<sup>th</sup>, 2023

