

Work opportunity in northern hydrometeorology



Project description: The Quesnel River drains an area of 12,000 km² in Interior British Columbia (BC) with headwaters in the Cariboo Mountains and outlet in the Fraser River at Quesnel. The Quesnel River and its tributaries like the Horsefly River host some of the Fraser River basin's most important salmon migrations thereby providing vital spawning grounds and habitat for coho, chinook and sockeye salmon. Rising air temperatures and precipitation changes affect freshwater resources across the Quesnel Watershed including the timing of snowmelt and the spring freshet. This project's main objective is to assess the potential impacts of climate change on future snowpack evolution, extreme streamflows and water levels across the Quesnel Watershed. This study will focus on future climate change scenarios to drive a hydrological model and assess potential future flows for the main stem Quesnel River and its main tributaries like the Horsefly River, McKinley Creek and Moffat Creek, from 1950 to the end of the 21st century.

Position description: We invite applications for a **post-doctoral fellow** (PDF) with extensive experience with hydrological modeling, climate data and statistical analyses. Candidates must have strong technical, programming, computational and communication skills. Applicants with extensive experience programming in the Fortran or other computing languages, in the use of GIS software (e.g. ArcGIS) and in the application statistical and graphics packages (e.g. using R) are preferred assets. In particular, we seek individuals who have prior experience using the **Variable Infiltration Capacity (VIC) model** as this is the modeling platform being applied to the Quesnel Watershed. Applicants must have a Ph.D. in the environmental, atmospheric or hydrological sciences or related fields, and preference will be given to those with strong leadership and problem-solving skills. Applicants must be able to work independently as well as in a team environment and have the ability to disseminate their findings in peer-reviewed publications, presentations at conferences, and through outreach activities with stakeholders in the Quesnel Watershed and beyond. The successful candidate will be based at the University of Northern British Columbia (UNBC) in Prince George, BC, and will work closely with project collaborators. UNBC is fully committed to employment equity and strongly encourages applications from women, aboriginal peoples, persons with disabilities, members of visible minorities and the LGBTQ2S+ community. The full-time position (35 hours/week) will span at least one year with possibility of a renewal depending on funding availability.

Interested applicants should contact Dr. Stephen Déry at sdery@unbc.ca with a cover letter highlighting research and computational experience relevant to this position, an up-to-date curriculum vitae or résumé, unofficial university transcripts, and the names of at least two potential references. Salary will be commensurate with past experience and expertise, will be within the range of \$55,000-\$60,000 annually and will include a highly competitive benefits package. **The application deadline is Friday 1 December 2023 or until the positions are filled.** The position will start on 1 April 2024.