

Post-doctoral Opportunity at UNBC

Project Summary:

British Columbia's northern Rocky Mountains form the headwaters of the Peace River, a large (~300,000 km²) tributary to the Slave and Mackenzie rivers, and a critical waterway for the production of hydroelectricity by the provincial utility BC Hydro. Since the construction of the W.A.C. Bennett dam and the development of the 74 km³ Williston Reservoir in the late 1960s, the upper Peace River watershed's hydrology and climate have been substantially modified. This study will employ long-term climate and hydrometric records to assess recent changes in hydroclimate in the upper Peace River watershed (upstream of the W.A.C. Bennett dam). The long-term climate datasets may include observations-based (e.g. NRCANMET or PNWNAMET) datasets, reanalysis products (e.g. NARR) and/or climate model output, in addition to station-based time series while hydrometric records will be extracted from the Water Survey of Canada. An intercomparison of the climate datasets will be undertaken to assess their reliance in representing conditions across the upper Peace River watershed. Trends in air temperature and precipitation will then be used to assess drivers of streamflow changes in the waterways draining into the Williston Reservoir.

We invite applications for a post-doctoral fellow (PDF) having a comprehensive knowledge of cold regions climate and hydrology, atmospheric datasets, and who has excellent computational, programming and communication skills. Applicants must hold a Ph.D. in the atmospheric sciences or related fields, and preference will be given those with experience handling large climate datasets. The applicant may also participate in field work related to the deployment of weather stations in the vicinity of the Williston Reservoir and the northern Rockies, as well as in outreach activities at Tsay Keh Dene Nation and other communities within the upper Peace River watershed. Applicants must be able to work independently and have the ability to prepare papers for peer-reviewed journals. The successful candidate will be based at the University of Northern British Columbia (UNBC), and will also work in the offices of Chu Cho Environmental Consultants, both in Prince George, British Columbia, Canada. The successful candidate will receive one year of financial support starting in April 2019 with the possibility of a one year renewal if progress is satisfactory and depending on the availability of funds.

Interested applicants should contact Dr. Peter Jackson at (peterj@unbc.ca), Dr. Stephen Déry at (sdery@unbc.ca), or Dr. Brian Menounos at (Menounos@unbc.ca) with a cover letter highlighting research interests and experience relevant to this position, an up-to-date curriculum vitae, unofficial transcripts, and the names of at least two potential references. The application deadline is 1 February, 2019.