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Postdoctoral Position in Hydrology

PCIC is seeking to hire a postdoctoral position.

Pacific Climate Impacts Consortium (PCIC)

The Pacific Climate Impacts Consortium (PCIC) was created to assess climate impacts in the Pacific and Yukon Region of Canada. The goals of the Consortium are to foster collaborative research, to strengthen the capacity to address regional climate change and variability, and to provide the scientific basis for policy development. PCIC is a regional climate service centre at the University of Victoria that provides practical information on the physical impacts of climate variability and change. Through collaboration with climate researchers and regional stakeholders, PCIC produces knowledge and tools in support of long-term planning. <http://www.PacificClimate.org>

Challenge

The Postdoctoral Scientist will work as part of a multi-disciplinary team that seeks to develop adaptation strategies that minimize the joint impacts of climate change and reservoir regulation on fish habitat. The postdoctoral position will be required to assess the hydrologic sensitivity of the Nechako River basin, a regulated system located in central British Columbia, to climate variability and change. In this context, this position is responsible for the enhancement and application of PCIC's version of the Variable Infiltration Capacity (VIC-GL) hydrology model to explicitly represent the hydrology, surface routing and water temperature of this regulated system. The position will also evaluate the extent to which hydrology and water temperature in the Nechako watersheds has responded to observed climate variability and change and evaluate potential hydrologic impacts under projected future climates.

Nature of Work

The Postdoctoral Scientist undertakes basic and applied research to quantify the impact of climate variability and change on the hydro-climatology of select Canadian basins. He/she works under the supervision of the Lead for PCIC's Hydrologic Impacts theme and collaborates with other members of PCIC and the project team. PCIC offers a positive, supportive and collegial work environment that promotes collaboration and excellence. As a user and stakeholder driven organization, PCIC requires that candidates be able to flexibly adapt their research objectives to changing organizational and stakeholder priorities and needs.

Objectives

The objectives of the position are to conduct research that seeks to address the following:

- Development and enhancement of the Variable Infiltration Capacity (VIC-GL) model to explicitly represent surface routing through large lakes and reservoirs, including flow abstraction and regulation.
- Develop and implement a lake/reservoir water temperature model of sufficient complexity to represent the spatial and temporal variability of thermal stratification.
- Use climate change scenarios to generate flow and water temperature scenarios in order to investigate the potential impact of climate change on the management of water release and fish habitat.

- Work closely with project members and stakeholders to communicate and inform adaptation of water resources operations, management and planning.

Knowledge, Skills & Abilities

Knowledge and Experience

- PhD in the physical sciences, preferably in the Hydrology, Limnology or Climate sciences
- Experience in the development and application of hydrologic, lake or land surface models (such as the Variable Infiltration Capacity model)
- Experience studying climate variability and change, and its hydroclimatic implications
- Experience working on interdisciplinary projects and with interdisciplinary teams
- A high level of productivity for peer-reviewed publications is expected.

Skill

- Excellent data analysis and visualization skills
- Excellent statistical analysis skills
- Excellent communications skills
- Excellent programming skills in several languages (C++, python and R being particularly useful)
- The applicant must have excellent multi-tasking skills

Ability

- Work in a self-directed manner and within a team environment
- Re-evaluate and adjust priorities and objectives in light of research findings and evolving requirements
- Ability to acquire, manipulate and analyze large spatiotemporal data sets.
- Ability to find creative solutions to complex, open-ended problems.
- Operate with a professional demeanor while representing PCIC outside the organization.

Employment period

2-year term commitment.

Weekly working hours

Full time (37.5 hours per week)

Additional information: Address enquiries to Markus Schnorbus at climate@uvic.ca.

Application: Please send your application including a cover letter, CV, and three professional references to Markus Schnorbus, climate@uvic.ca, with “**ATTN: Postdoctoral Position in Hydrology**” in the subject line. Please indicate whether you are legally able to work in Canada.

Review of applicants will start **immediately** and continue until suitable candidates are found.