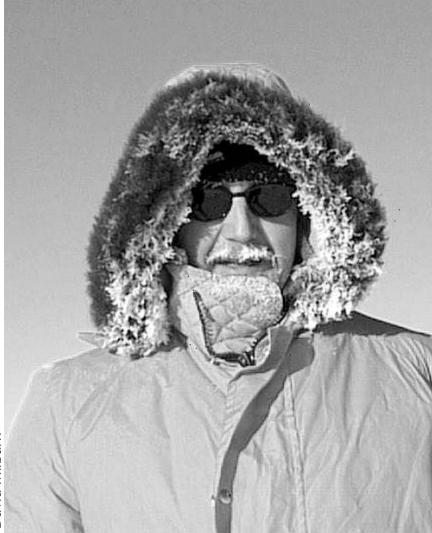


## Profile

# Dr. Terry Prowse



David Milburn

## Donna Underhill

Did you know that a change in the freshwater budget in Canada's Arctic could bring colder weather to England? Scientists are worried that changes in ocean salinity brought about by increased freshwater outflow from rivers such as the Mackenzie, Athabasca, and Slave could cause such changes in climate. One Canadian scientist who is studying problems such as these is Dr. Terry Prowse, the Professor and Research Chair of the new Climate Impacts on Water Resources Centre (W-CIRC) at the University of Victoria (UVic).

W-CIRC is the result of an expanded National Water Research Institute (NWRI) program, and is a co-operative effort between the federal government and the University

of Victoria. A research scientist with Environment Canada, Prowse arrived in Victoria in September 2002, and with a team of graduate students and research scientists, is eagerly watching the construction of a new building that will house the centre. Once complete in April 2003, the centre will hire more staff to cover topics such as climate, hydro-ecology, and water resources.

Prowse's research focus at W-CIRC is to examine changes in arctic river flow that affect the global thermohaline, defined as the effects of temperature and the ratio of freshwater to saltwater circulation in oceans. He is also working on research projects such as the Northern Rivers Ecosystem Initiative (NREI), the Northern Ecosystem Initiative (NEI), and the Program on Energy Research and Development (PERD).

The NREI study is examining the Peace, Athabasca, and Slave River Systems and the joint effects of flow regulation and climate change. Data from the Bennett Dam, and its effects

on one of the world's largest freshwater deltas, has been studied for decades. Recent research, supported by BC Hydro, saw scientists simulate a large ice jam in the Peace-Athabasca Delta to find out how to minimize the effects of flow regulation and mitigate other impacts.

"This project probes an interesting question," said Prowse. "If a

downstream system is drying out because of climate change, can we use upstream flows to assist the downstream system to adjust more slowly?"

The Northern Ecosystem Initiative (NEI) is attempting to quantify what climate change will do to the water budget of northern lakes and ponds. "There is hope to establish an aquatic DEWline, to set up research monitoring systems at stations that advise on climate change," explained Prowse. "The idea is that the status of the ponds would be the bellwether of the northern latitudes."

The Program on Energy Research and Development (PERD) is examining changes in snow and ice reserves in the Western Cordillera and how they might affect hydroelectric systems. Another of Prowse's projects is examining how climate change is affecting ice in northern lakes and rivers, and how ice duration and mechanical strength will affect the oil and gas industry.

Prior to his work in Saskatoon, Dr. Prowse lived in Ottawa. He completed his undergraduate training at the University of Waterloo, his masters at Trent University, and his doctorate at Canterbury. He has maintained a close relationship with many academic institutions as an adjunct professor at Trent University, the University of Waterloo, the University of Saskatchewan, and the Wilfred Laurier University. Next September, he will begin teaching a graduate level course on climate impacts on water resources at UVic.

We'd like to welcome Dr. Prowse to British Columbia, where the warmer climate means he can walk to work every day. ~

## Dr. Prowse can be contacted at:

**Climate Impacts on Water Resources,**  
Water & Climate Impacts Research  
Centre, Department of Geography  
University of Victoria  
PO Box 3050 STN CSC,  
Victoria, BC V8W 3P5  
**E-mail: [prowset@uvic.ca](mailto:prowset@uvic.ca)**