



March | Terry Prowse, Water Scientist

What do you do?

I am a research scientist with Environment Canada and a Professor in the Department of Geography holding an Environment Canada sponsored Chair focused on the impacts of climate on water resources. I was located at the University of Victoria by Environment Canada to start up a jointly supported Water and Climate Impacts Research Centre (W-CIRC). My main research focus is on the effects of climate change and variability on hydrology, water resources and aquatic ecosystems.

Why is it important?

The effects of climate change on water is one of the most pressing issues facing all levels of society and at a variety of spatial scales, from local to regional to national to international. We have W-CIRC programs operating at all of these scales and contribute to major international assessments of the issue, including the Intergovernmental Panel on Climate Change.

What does your research involve?

My research involves both field and laboratory work, ranging from the simple drilling of holes in frozen arctic lakes and rivers for studying ice-growth

processes, to computer modeling of hydrologic systems around the circumpolar North. I feel that it is critically important to have a sound understanding of physical processes based on first-hand field experience so that you can feel confident in modeling them in a laboratory.

What got you into the field of water science?

I can remember the day very clearly. I was inspired by a 3rd-year lecture in hydrology at the University of Waterloo: Professor Jim Gardner, who by chance, is now also teaching some courses as a retired professor here at the University of Victoria. Dr. Gardner was teaching us about how different snow crystals formed in the atmosphere. Once the class ended, I left the building only to find it snowing outside. I closely studied snow crystals landing on my jacket and became inspired – it all made sense. From that day forward, I had a strong interest in pursuing cold-regions aspects of hydrologic sciences - alpine snow and avalanches, snowmelt hydrology, glaciers, permafrost, lake and river ice, as well as the related controlling climatic systems and their joint effect in creating hydrologic extremes.

Did you ever want to be something else?

Prior to and during my university student years, I worked in many jobs including building car frames for Budd Automotive and tires for Uniroyal Tire. Long months working on assembly lines made it clear to me that I wanted a university degree to advance myself. Then I found a career track that really inspired me – cold-regions hydrological sciences - so much so that it is also my hobby. Quite frankly, if I won the lottery or was forced to retire, I would probably seek to do just what I am doing now – except for the administrative side of my duties.

What do you like most about your work?

What is most satisfying is seeing the final publication of my research, particularly if it has been a collaborative effort where I have been able to involve others from related scientific disciplines and graduate students. Conducting broad scale scientific assessments of major issues, such as how climate change will affect the Arctic, is something that I have been deeply involved with for almost twenty years now. I must like it if I have continued to participate in such assessments for so long. Most recently, I just agreed to participate in the 5th assessment report for the Intergovernmental Panel on Climate Change – my fourth time for them. In addition, I am fortunate enough to lead some international science programs that require the involvement of many other scientists and disciplines; conceptualizing and integrating such programs is also proving to be highly enjoyable.

What are three achievements/findings/other things in your life you are proudest of?

For work: the recognition: 1) for being one of the many lead author scientists that contributed to the IPCC being awarded the Nobel Peace Prize, and 2) in receiving an honorary Doctorate Degree from the University of Waterloo for my research in northern hydrology. Other things in my life: I am immensely proud of my 3 daughters. My eldest is in business after graduating from Royal Roads, the middle one in nursing school and will be finishing here degree at UVic, and the third in sciences here at UVic. All have sought their own unique career paths and are proving to be very successful having done so.



What was your first summer job?

My first full time summer job was working in the hardware department at K-Mart. Odd and long hours but it gave me enough money at 16 to buy my first car.

What 5 favourite artists/groups/pieces of music do you listen to on your ipod?

Rawlins Cross; Bruce Springsteen; Tragically Hip; CCR; Operamania

What's your favourite colour?

Red...guess it is my Celtic roots

What are your favorite things to do when you aren't working?

I must admit to spending a lot of time computer "surfing" but I also just purchased a new set of flyfishing gear and am eagerly waiting for spring to arrive so that I can get out to some of the local lakes and streams.

If you could meet one famous person for coffee who would it be?

Nelson Mandela.

What advice do you have for a young person wanting to pursue a career in your field?

My best advice would be to try and obtain some direct experience in the field via working with people in hydrologic sciences. In fact, one of the main reasons why the National Water Research Institute of Environment Canada established the Water and Climate Impacts Research Centre at the University of Victoria was to involve directly students in its research. W-CIRC has a number of graduate students and as well employs undergraduate co-op students and post-graduate students through the Science Horizons internship program. The latter is a program designed to specifically help students pursue a career in fields related to our research.

To learn more about Terry Prowse visit:
<http://web.uvic.ca/~wcirc/english/staff/prowse.php>

