



MAY 29, 2015 | 101-15

Laurier-Government of Northwest Territories Partnership receives funding to build world-class research infrastructure throughout the Northwest Territories

WATERLOO – Wilfrid Laurier University's Changing Arctic Network (CANet) research team has been awarded \$3.2 million in funding from the Canadian Foundation for Innovation (CFI) to continue to build Laurier's global leadership in cold regions environmental research.

Climate warming is resulting in dramatic changes to ecosystems across the Canadian North, including conversion of forests to wetlands and tundra to shrub landscapes. It is also changing the quantity and quality of water in streams, rivers, and lakes, and thawing permafrost at unprecedented rates.

"Building on our partnership with the Government of the Northwest Territories, formalized in 2010, this funding allows us to grow and deepen the resources available for our joint work," said **Deborah MacLatchy**, vice-president: academic and provost, and acting vice-president: research at Laurier. "This CFI funding will support our transformative research infrastructure that enables the discoveries about the North that will improve the lives of Canadians."

Increasingly, circumpolar countries are looking to the Canadian North as an ideal location for conducting essential northern research. This knowledge is needed to understand the global implications of a changing climate. CANet will support world-leading infrastructure to meet these globally important research challenges.

"Northern Canada is one of the most rapidly warming regions on Earth," said **Jennifer Baltzer**, associate professor of Biology and Canada Research Chair in Forest and Global Change. "The Changing Arctic Network will carry out integrated ecosystem studies to better understand the changes that are occurring to the tundra, forests, streams, rivers and lakes."

In addition to these changes, the Canadian North is expected to undergo increased mining, oil and gas exploration and production and construction of new highways and pipelines in the coming years.

"There is an urgent need to better understand the impact of a changing climate on the environment, and to begin preparing for increased resource development in the North," said **Philip Marsh**, professor of Geography and Environmental Studies and Canada Research Chair in Cold Regions Water Science. "The CANet infrastructure platform will allow the Partnership to enhance its world-class research infrastructure throughout the Northwest Territories."

This funding will provide the Government of the Northwest Territories and the Government of Canada with improved knowledge about these fragile northern environments, how to manage the forests, waters and fish of these regions and ensure that northern resources are developed in a sustainable manner.

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CANet is interested in changes in flood frequency of rivers, in changes of water quality and in changes to the fish that inhabit these waters. "CANet will couple state-of-the-science research stations with neighbouring communities to facilitate knowledge development and sharing between scientists and local land users," said **William Quinton**, associate professor of Geography and Environmental Studies and Canada Research Chair in Cold Regions Hydrology.

In addition to research stations, the infrastructure funding will support 20 "living laboratories", each representing a widely occurring bio-physical environment; plus, updates to three environment and natural resources laboratories in the Northwest Territories.

Partners on the project include the Government of the Northwest Territories, Université de Montréal, University of Guelph and the Laurier Institute of Water Science and the Cold Regions Research Centre.

About the Laurier-Government of the Northwest Territories (GNWT) Partnership:

- Laurier's researchers have worked for decades in the Northwest Territories (NWT), studying the environment and aligning their research projects to GNWT and community priorities.
- Laurier research has influenced the development of evidence-based environmental policy that has translated into practical applications to support ecological integrity and human health, such as shaping government policy on seismic exploration and the impacts of permafrost thaw on water resources.
- More than \$15 million in operating and infrastructure funding has been secured for NWT research.
- Laurier has trained more than 50 graduate and undergraduate students, with 20 more who will be trained in the NWT in 2015.

Website for outside info: <http://nwtwlu.com/>

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CONTACT

Dr. Philip Marsh, Professor, Geography and Environmental Studies, and Canada Research Chair in Cold Regions Water Science, Wilfrid Laurier University
519-884-0710 ext. 2856 or pmarsh@wlu.ca

Dr. Jennifer Baltzer, Associate Professor, Biology and Canada Research Chair in Forests and Global Change
Wilfrid Laurier University
519-884-0710 ext. 4188 or jbaltzer@wlu.ca

Dr. William Quinton, Associate Professor, Geography and Environmental Studies, and Canada Research Chair in Cold Regions Hydrology, Wilfrid Laurier University
519-884-0710 ext. 3281 or ext. 3847

Kevin Crowley, Director: Communications & Public Affairs
Wilfrid Laurier University
519-884-0710 ext. 3070 or kcrowley@wlu.ca