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Laurier to open new centre for leading-edge research into cold regions and water science

WATERLOO – Water: it is essential to life and covers about 362 million square kilometres of the earth's surface. Now, thanks to Wilfrid Laurier University's new Centre for Cold Regions and Water Science, researchers will have 14,000 square feet of space devoted to leading-edge water research. An event to mark the centre opening will take place Oct. 11, 10 a.m. at 65 Lodge St. on Laurier's Waterloo campus with remarks from MP Peter Braid, Minister Michael Miltenberger of the Government of the Northwest Territories, and Laurier President Max Blouw.

Research within the centre will involve scientists from across Canada and will focus on some of the country's most pressing questions about water, environmental and resource issues in cold regions, with implications for policy development and resource management.

"This building is a manifestation of the exceptional partnerships that Laurier's researchers have developed with the Government of the Northwest Territories and the institutional members of the Southern Ontario Water Consortium," said Deborah MacLatchy, Laurier's vice-president: academic and provost and a researcher in the centre. "It will be a hub of 'state-of-the-science' cold regions and water research and student training for years to come."

The two-storey facility will house Laurier's Canadian Aquatic Laboratory for Interdisciplinary Boreal Ecosystem Research (CALIBER); Laurier's Cold Regions Research Centre (CRRC); and the Laurier Institute for Water Science (LIWS). It will also house the ecotoxicology activities of the Southern Ontario Water Consortium (SOWC), including equipment and labs, sample preparation and staging areas for mobile trailers.

"Water and cold regions research are clearly areas of research excellence at Laurier," said Abby Goodrum, vice-president: research. "Research in these areas is of critical importance in today's world, and we are proud to have some of the leading authorities and researchers in these domains working here at our university."

Research examples include:

Biologist Jim McGeer studies physiological responses to environmental stress in aquatic animals and the environmental toxicology and risk assessment of metals and nanomaterials for application in risk assessment and regulations.

Geographer Bill Quinton, Canada Research Chair in Cold Regions Hydrology, studies the hydrology of cold regions with applications in assuring reliable sources of drinking water, flood planning, road and oil pipeline design and hydroelectric power station operation.

Biologist Jennifer Baltzer, Canada Research Chair in Forests and Global Change, studies ecosystems in boreal forests to understand species range sizes and patterns of local distribution.

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Geographer Mike English studies the hydrology and chemistry of groundwater and surface water and the downstream impacts of river impoundment, and examines acidification in the Canadian Shield and the chemistry of high-Arctic terrestrial drainage.

Biologist Deborah MacLatchy studies the health of aquatic environments by examining the effects of endocrine disrupting substances such as industrial contaminants on the hormone systems in fish and how this affects reproduction, development, and growth.

Support to the centre was provided by: the Government of the Northwest Territories, the Canada Foundation for Innovation, and Wilfrid Laurier University. Funding for the SOWC, a key tenant and partner at the centre, was provided by the Federal Economic Development Agency for Southern Ontario (FedDev Ontario) and the Ontario Ministry of Research and Innovation.

For more information about the Centre for Cold Regions and Water Science and its researchers, please visit: www.wlu.ca/research/CCRWS

Quotes:

"The Government of Canada recognizes the importance that freshwater research has on ensuring that our water resources remain healthy," said Peter Braid, Member of Parliament for Kitchener-Waterloo, on behalf of the Honourable Greg Rickford, Minister of State (Science and Technology). "Our investment in this world-class centre will provide researchers with the tools they need to understand and preserve Canada's boreal freshwater reserves, thereby improving the quality of life of Canadians today and into the future."

"The Government of the Northwest Territories is pleased to support the centre and the CALIBER program through our on-going partnership with Wilfrid Laurier University," said **Northwest Territories (NWT) Environment Minister J. Michael Miltenberger**. "This partnership is helping us establish a strong foundation for scientific studies on future changes to the NWT landscape, natural resources, communities and people in the face of a changing climate."

"I'd like to congratulate Wilfrid Laurier on the opening of this cutting-edge research facility," said **Reza Moridi, Ontario Minister of Research and Innovation**. "Ontario's researchers are breaking boundaries every day, and this top notch facility will help them find solutions to many of the pressing questions in this vital area of study. We are proud to support the Centre's work through funding to the Southern Ontario Water Consortium."

"The opening of the Centre for Cold Regions and Water Science is an excellent example of Wilfrid Laurier University's commitment to water research," said **Brenda Lucas, SOWC Operations Manager**. "Laurier's ecotoxicology research plays a crucial role within the Southern Ontario Water Consortium platform. Projects supported within this leading-edge facility will bring researchers one step closer to turning water ideas into water innovations."

"Canada's largest reserves of freshwater are contained within the aquatic ecosystems of the boreal forest," says **Dr. Gilles G. Patry, President and CEO of the Canada Foundation for Innovation**, which helped fund the Canadian Aquatic Laboratory for Interdisciplinary Boreal Ecosystem Research (CALIBER), located within the Centre for Cold Regions and Water Science. "Understanding the effects of contaminants on boreal freshwater is becoming increasingly urgent. We are committed to supporting this kind of research by providing researchers with the tools they need to advance our knowledge of these complex ecosystems."

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About the Centre for Cold Regions Research (CRRC): The CRRC focuses on mountain and northern cold regions, covering such areas as hydrology, climatology, glaciology, resource management, parks planning, and biogeochemistry.

About the Laurier Institute for Water Science (LIWS): LIWS focuses on both Canadian and global water issues, including the effects of climate change, the sustainability of healthy aquatic and coastal ecosystems, and the development of regulations and policy related to water use. Both LIWS and CRRC are multi-disciplinary, collaborative undertakings, together including researchers from geography and environmental studies, chemistry, biology, math, economics and the social sciences.

About the Canadian Aquatic Laboratory for Interdisciplinary Boreal Ecosystem Research (CALIBER): CALIBER researchers apply a holistic, interdisciplinary, and ecosystem approach based on watersheds, responding to urgent and serious concerns about flows and storage processes and the effects of nutrients and contaminants on boreal freshwater. CALIBER facilities in the centre will include labs for hydrology, aquatic culture and testing, biogeochemistry characterization, molecular biochemistry and imaging, and predictive modeling. CALIBER is funded by the Government of the Northwest Territories, the Government of Canada through the Canada Foundation for Innovation (CFI), and Wilfrid Laurier University.

About the Southern Ontario Water Consortium (SOWC): The SOWC is a platform for turning water ideas into water innovations through research, development, and demonstration of solutions to water problems faced in Ontario and around the world. The SOWC is supported by the Government of Ontario through the Ministry of Research & Innovation's Ontario Research Fund. The Government of Canada is providing support through the Federal Economic Development Agency for Southern Ontario's Technology Development Program, which has served as a catalyst for SOWC partnerships such as the one being announced today. Laurier is one of eight university partners of the consortium, which also includes municipalities, not-for-profits, and the private sector. SOWC facilities in the centre include labs for hydrometeorology calibration, sample prep and stabilization, fish, and base workstations for mobile trailers for field research.