



**COLLEGE of ENGINEERING
AND PHYSICAL SCIENCES**

MASc in Water Resources Engineering or Environmental Engineering
School of Engineering, University of Guelph

September 2019 or January 2020 start date

POSITION: First Nations' Source Water Protection: A groundwater-focused study for decision-making and long-term planning

ADVISORS: Dr. Jana Levison and Dr. Rachael Marshall

START DATE: September 2019 or January 2020

DURATION: 2 years

STIPEND: available for 2 years

Project Description:

First Nations in Ontario face complex water management issues that put them at high risk for source water contamination. While source water protection (SWP) has been an important priority for municipalities in Ontario since 2006, First Nations face specific challenges that make it difficult for them to engage in SWP. First Nations have voiced concern over their lack of input and the lack of cultural recognition in the development of Ontario's SWP process, and Elders have called for SWP processes that recognize First Nations' sovereignty and water rights. The purpose of this research is to support the implementation of a community-engaged process for First Nations SWP that is: owned and lead by the community; respectful of their autonomy and nationhood; and includes appropriate, affordable hydrogeological studies. Specific objectives include: (1) supporting the community to develop a risk assessment method that includes appropriate hydrogeological information and resonates with the community's precautionary principle to "do no harm" and "plan seven generations ahead"; (2) support the Water Protection Committee in informing decisions at the community level. The project will include hydrogeological field work and opportunities to investigate the transport of contaminants deriving from a variety of sources (e.g. septic systems and landfills), as well as community engagement.

Pre-Requisites:

Undergraduate degree in Water Resources Engineering, Environmental Engineering, Civil Engineering, Geological Engineering, Earth Sciences, Environmental Sciences, Geoscience, Geology or related discipline.

Please contact **Jana Levison** at jlevison@uoguelph.ca and **Rachael Marshall** at rmarsh01@uoguelph.ca for more information or to apply for the position. To apply, please send cover letter outlining your interest in this position as well as how your background makes you a suitable candidate, resume/CV, and a copy of your unofficial transcript.