

**From:** Leanne Baker  
**Subject:** MSc and PhD positions - Northern Water Futures

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\*\*Please contact Andrea Lister - alister@wlu.ca regarding these positions.\*\*

As part of the Northern Water Futures\* research initiative Wilfrid Laurier University and University of Waterloo are actively looking to recruit 3 highly motivated graduate students in the fields of aquatic ecology and ecotoxicology. Projects will involve both laboratory work, and field research in the Decho region of the Northwest Territories, and involve communicating with multiple stakeholders, including Indigenous peoples.

PhD student #1 (Wilfrid Laurier University, Waterloo, Ontario, Canada, Supervisor: Deb MacLachy): Research will be undertaken to develop indicators of fish and aquatic ecosystem health in a region subject to oil and gas development. Physiological (e.g., fish condition, lipid content, fecundity, liver-somatic index), community (e.g., aquatic invertebrate community assemblage), and ecosystem (e.g., food web structure) endpoints will be explored, related to existing water quality conditions, and evaluated with respect to sensitivity to predicted development.

PhD student #2 (University of Waterloo, Waterloo, Ontario, Canada, Supervisor: Heidi Swanson): Research will be undertaken to understand and compare fish community structure, age and growth, and habitat use between two connected lakes that differ markedly in stock biomass and contaminant concentrations. The successful candidate will employ acoustic telemetry techniques, stable isotope analyses, and fish growth analyses to newly collected samples. Historical data will also be compiled and analyzed.

MSc Student #1 (Wilfrid Laurier University, Waterloo, Ontario, Canada, Supervisor: Deb MacLachy): Research will be undertaken to compare food web structure (including plankton, benthic invertebrates and fish) between two connected lakes that differ markedly in fish biomass and contaminant concentrations. The successful candidate will employ stable isotope analyses, and fish and benthic macroinvertebrate ID skills. Results will be analyzed in the context of understanding differences between the lakes in fish mercury concentrations.

Interested candidates should forward their CV, transcript(s), and a cover letter indicating their interest in, and suitability for, the positions to:  
Andrea Lister - alister@wlu.ca. Start dates: September 2017 or January 2018.

\*[https://urldefense.proofpoint.com/v2?url=https-3A\\_gwf.usask.ca\\_science\\_pillar-2D3-2Dprojects.php-23NorthernWaterFutures&d=DwIF-g&c=Ngd-ta5yRYsqeUsEDgxhcqsYYY1Xs5ogLxWPA\\_2Wlc4&r=e2OJ1azRFn8ihJzb2HxZT0AqoiqLxfeeTyN59ZLol&m=Sxs7i7SerRWQReyaxvHaxwQDqKiNwvP7yYBXiCuPLBQ&s=O78c2AnMYIZvbX96uWrvRUaxYE4Y-5FFGF9pq369JMs&e=](https://urldefense.proofpoint.com/v2?url=https-3A_gwf.usask.ca_science_pillar-2D3-2Dprojects.php-23NorthernWaterFutures&d=DwIF-g&c=Ngd-ta5yRYsqeUsEDgxhcqsYYY1Xs5ogLxWPA_2Wlc4&r=e2OJ1azRFn8ihJzb2HxZT0AqoiqLxfeeTyN59ZLol&m=Sxs7i7SerRWQReyaxvHaxwQDqKiNwvP7yYBXiCuPLBQ&s=O78c2AnMYIZvbX96uWrvRUaxYE4Y-5FFGF9pq369JMs&e=)