MSc Position in Aquatic Ecology – Improving Walleye Fry Stocking Practices in Manitoba Lakes

Start date May 2027 • **Application deadline** January 8, 2027

We invite applications for one thesis-based MSc position in aquatic ecology at The University of Winnipeg. The student will join Dr. Anas Usoof's newly established research group, which studies environmental change in freshwater ecosystems to guide management.

Research project

Walleye (*Sander vitreus*) support important recreational and commercial fisheries in Manitoba. Each spring, millions of hatchery-reared fry are stocked. Fry feed first on small zooplankton and shift to larger prey as they grow. The timing of spring zooplankton blooms and favourable water conditions varies among lakes and can shift as a warming climate brings earlier ice-out and higher water temperatures. Current stocking practices are not optimized to align with periods when prey availability and habitat conditions are most suitable for fry.

The project will use intensive spring and summer lake sampling to track prey abundance and water quality. Stable isotope analysis and DNA metabarcoding will be used to examine how walleye diets change across early life stages. The findings will inform recommendations on when and where to stock walleye and what size fish to release.

Training and opportunities

The student will work closely with Manitoba Fisheries staff and help turn the project's findings into guidance for the province's stocking program. The project offers hands-on training in the following areas:

- Freshwater field sampling
- Zooplankton taxonomy and microscopy
- Stable isotope analysis and DNA metabarcoding
- Advanced statistical analysis in R
- Science communication

The student will have opportunities to present their research at scientific conferences and contribute to peer-reviewed publications.

Graduate program and funding support

UWinnipeg's thesis-based MSc in Bioscience, Technology and Public Policy pairs independent research with coursework in science and public policy. The successful candidate will receive guaranteed funding for two years, along with support for direct research costs and conference participation.

Qualifications

Applicants should have a four-year BSc or equivalent in biology, ecology, fisheries science, environmental science, or a related field. Experience with aquatic fieldwork, microscopy, or data analysis in R is an asset.

How to apply

Interested students should email Dr. Anas Usoof at a.usoof@uwinnipeg.ca with the subject line "MSc Walleye Stocking Practices." Applicants should include a CV, unofficial transcripts, contact information for two references, and a brief statement outlining their career goals and explaining how their background and interests fit the project.

We welcome applicants from all backgrounds. We particularly encourage applications from Indigenous, Black, other racialized, and 2SLGBTQ+ candidates, as well as from people with disabilities and members of other underrepresented groups.

Applications will be reviewed as they are received.