

ENVIRONMENTAL SCIENCE GRADUATE OPPORTUNITIES —  
PHD PROGRAM, ENVIRONMENTAL SCIENCE

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Project Title: Modeling greenhouse gas emissions in boreal peatlands (two positions)

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Project supervisor: Dr. Jianghua Wu (Grenfell Campus)

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Project description:

Further improvement of McGill Wetland Model (MWM): (1) fully coupled hydrology-C cycling module for natural as well as disturbed and restored peatlands; (2) a new module of CH<sub>4</sub> and N<sub>2</sub>O cycling and DOC in MWM for natural as well as disturbed and restored peatlands; (3) a vegetation dynamics scheme to simulate the changes/shifts of vegetation composition in peatlands under climate change, human disturbance and restoration; (4) evaluating the newly further developed and adapted MWM at a suite of natural peatland sites and disturbed peatland sites and restored peatland sites; and (5) National or global scale of simulation using the newly developed and adapted MWM in the next 100 years.

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Funding level: \$20,000 per annum for the first four years of the PhD program.

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Campus: Grenfell Campus

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Projected starting date: Spring 2022, Fall 2022 or Winter 2023

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Application procedure: Research interest statement; C.V., Writing sample or published paper sample.

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Contact for more information: [jwu@grenfell.mun.ca](mailto:jwu@grenfell.mun.ca) for more details