
Supervisor's Name	Kathy L. Young
Supervisor Email Address*	klyoung@yorku.ca
Supervisor's Department	Geography
Project Title	Small patchy wetlands, Southern Iceland: Linkages between soil type and moisture dynamics

Description of Research Project (1500 characters maximum)

To ensure food security at the end of World War II, the Icelandic government urged farmers to drain coastal wetlands in order to increase food production. To date, many of these small, drained patchy wetlands (< 1 hectare) are not being farmed, nor are they protected from road and bridge installations. Instead, they provide food and shelter to both local and migratory birds, but there are no policies protecting them. The goal of this project is to assess the soil stratigraphy and moisture conditions of these small, patchy wetlands lying across Southern Iceland, as little is known of their hydrology. Iceland possesses several types of soils, some with much organic material, while others are modified by volcanic ash. In this project, a series of patchy wetlands within these soil groupings will be evaluated. At each site, transects of soil moisture will be monitored using both traditional moisture meters and novel smart sensors. Several soil pits will be dug and samples taken for soil texture, colour, organic content, etc. These baseline soil moisture and stratigraphy data will serve to direct future studies on infiltration and runoff at these small patchy wetlands.

Undergraduate Student Responsibilities (1500 characters maximum)

- *conduct field research in Iceland (May, 2018) which will lead to an undergraduate geography research thesis
- * student will be responsible for helping to select research sites in Iceland
- * they will help establish sampling transects and to sample for soil moisture and soil stratigraphy
- *student will work with researchers at the Agricultural University of Iceland and at York U to evaluate wetland soils (texture, organic content, bulk content, porosity, etc)
- *student will be responsible for providing a year end report to Northern Student Training Program (NSTP)

Qualifications Required (750 characters maximum)

- *an upper-level physical geography student
 - * student with some field experience, preferably with field experience in Iceland
 - *a team-player, a person who is easy-going, friendly, and reliable
 - *a student with an excellent work ethic and who can work independently
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