

Theme 2, Project 2.1

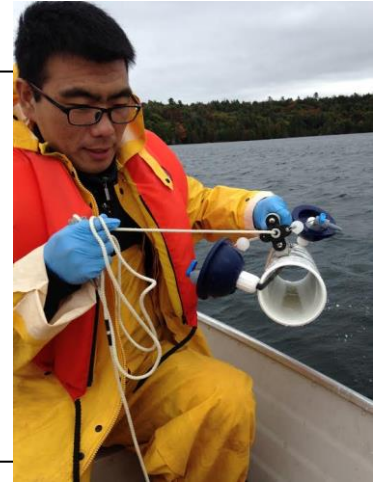
Classifying streamflow regimes in different forest landscapes across Canada

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Abstract

To understand the effects of forest management activities on streamflow, we will classify streamflow regimes in different forest landscapes across Canada using a combination of empirical analysis of existing streamflow records and water balance modeling. First, we will use GIS techniques to classify hydrologically similar catchments across Canada into different groups and analyze how forest management and climate change affect streamflow. Then, we will use the Regional HydroEcological Simulation System (RHESSys) in the Turkey Lake Watershed to simulate and assess our state of knowledge of catchment controls on water quantity and quality.

Keywords: Forest management, hydrological process, hydrological model, watershed managements

Geographic Location: Turkey Lake Watershed, Batchawana, Ontario, Canada

How does your project link to Canadian aquatic ecosystem services?

The objectives of the project are to define landscapes of similar hydrological characteristics using GIS and remote sensing technology and simulate the impacts of spatial and temporal forest management practices on aquatic ecosystem services within the specified hydrological region by a distributed hydrological model. Outcomes of the project may help explain how aquatic ecosystem services respond to disturbance.