

Consortium for Permafrost Ecosystems in Transition

William Quinton, Wilfrid Laurier University

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The Consortium for Permafrost Ecosystems in Transition (CPET) is building a consortium of local communities, government agencies and an interdisciplinary team of researchers for the purpose of developing and mobilising new knowledge and predictive tools regarding the impacts of permafrost thaw on the surface water resources of NEBC and the southern NWT. The long-term objective of CPET is to improve the understanding, parameterisation and prediction of water flow and storage processes in the thawing, peatland-dominated southern fringe of discontinuous permafrost.

The major deliverables include:

- Quantification of the rate and pattern of permafrost loss
- Quantification of ecosystem change as it applies to water supply change
- Science-based understand the impact of permafrost thaw on ecosystems and their services
- New predictive eco-hydrological models (Phase

II)

- Fifty year forecast of water supply in the region (Phase II)

Policy Issue

Safeguarding groundwater and surface water quantity during development of unconventional oil and gas resources in the Western Canadian Sedimentary Basin.

Knowledge Gap

Assess the supply and sustainability of surface and shallow groundwater in the key unconventional resource plays in AB and BC.

PTAC Final Report

NSERC CRD Final Report