

Permafrost research for northern infrastructure and improved community life

This project is focused on supporting infrastructure maintenance and construction for the development of the Arctic and the well-being of communities who live on the land, while making high-level scientific contributions to permafrost science and engineering.

Project Overview

Building on previous research results in situations where permafrost is a key factor, this project has five overarching and interrelated objectives:

1. To map and improve knowledge of permafrost characteristics and temperature regime in a number of Inuit communities and in support of a number of infrastructure improvement or construction projects such as airports, roads and sea ports;
2. To provide informative support and advice necessary to select best choices of foundations for all types of buildings in communities, improve land use planning, better design urban architecture and better manage lands in general;
3. To create a teaching tool and a computer-assisted course on permafrost for widespread Inuit and public use;
4. To develop and test new engineering designs and materials for roads, airports and coastal infrastructures; and
5. To provide opportunities for the members of the research team and their students to carry out innovative research in permafrost science and engineering.

Northern Climate ExChange is pleased to be participating in this project by expanding work into Old Crow, and by supporting work taking place in Nunavik, and Nunavut. We joined the project in April 2015 and will continue to contribute until the end of the ArcticNet Networks of Centres of Excellence program in March 2018.

Project Team

Michel Allard, Network Investigator, Professor, Université Laval

Dr. Fabrice Calmels, Network Investigator, Permafrost Researcher, Yukon College

Guy Doré, Professor, Network Investigator, Université Laval

Stephan Gruber, Network Investigator, Professor, Carleton University

Esther Lévesque, Network Investigator, Professor Université du Québec à Trois-Rivières

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ArcticNet Networks of Centres of Excellence

Contact:

Brian Horton

Manager, Climate Change Research

YukonU Research Centre

School of Science

867 456 8636

bhorton@yukonu.ca

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