

Who?

- This project is conducted by the Yukon Geological Survey (Government of Yukon) in collaboration with Northern Climate ExChange (Yukon College), and is funded by Indian and Northern Affairs Canada (INAC).



Indian and Northern
Affairs Canada

Affaires indiennes
et du Nord Canada



Northern Climate ExChange

independent information, shared understanding, action on climate change



For more information, contact:

Kristen Kennedy
Surficial Geologist
Yukon Geological Survey
PO Box 2703 (K-10)
Whitehorse, YT
Y1A 2C6
Tel: (867) 393-7188
Fax: (867) 393-6232
kristen.kennedy@gov.yk.ca

Lacia Kinnear
NCE Coordinator
Northern Research Institute
500 College Drive, PO Box 2799
Whitehorse, YT
Y1A 5K4
Tel: (867) 668-8862
Fax: (867) 345-8672
lkinnear@yukoncollege.yk.ca



Landscape Hazards in Yukon Communities:

Geological Mapping for Climate Change
Adaptation Planning



What?

- A one-year project aimed at identifying potential landscape hazards for two communities in the Yukon.
- Results will include:
 - community-scale surficial geology maps
 - community-specific climate change projections
 - a summary of the existing surface materials and the likely responses of the landscape to a changing climate



Mayo



Why?

- A changing climate may affect the landscape and geological processes (i.e. melting permafrost, increased/decreased rain and snow, higher/lower peak flow in rivers, etc.) in Yukon communities.
- Surficial geological mapping can identify potential landscape hazards (floods, landslides, unstable ground) and describe how different materials and landforms might respond to changes in climate.
- Surficial geology maps also provide baseline information about the landscape for ongoing and future municipal and regional planning and development.

Where?

- Landscape hazard studies will be completed for Mayo and Pelly Crossing in 2010-11.

Pelly Crossing



How?

- Compile existing data from sub-surface boreholes, water wells and test pits.
- Collect new data on surface materials by looking at existing exposures (gravel pits, river banks, etc.), and collecting small samples (<math><1\text{m}^3</math>) for grain size analysis.
- Where possible, characterize flood frequency history or hazard risk using dating methods such as radiocarbon analysis.
- Evaluate potential landscape hazards based on surface materials and projected climate change scenarios.

