



Norman Wells
Public Listening
**Climate Change
& Wildfire**



Effects of Climate Change and Wildfire on Caribou in the Sahtu

Lorne Gould, Science Advisor to the SRRB

Climate Adaption Programs - North America

- ▶ No specific climate adaption plans for boreal caribou found during this project.
- ▶ This report, reviewed plans developed in Canada, United States and Europe.
- ▶ This report emphasizes climate adaption plans by Indigenous peoples in Canada.

Key climate change topic:

Summarize climate change adaptation programs in other areas of North America (or globally) to help inform Planning for the Future (PFF) options (i.e., examples of caribou conservation measures defined specifically to address climate change impacts on boreal caribou).

Ontario First Nations Technical Service Corporation

- ▶ Partnership with Stantec
- ▶ Asses climate change vulnerability of First Nations communities in ON
- ▶ Oneida Nation - focus on housing, risk profile for assessed infrastructure with recommendations
- ▶ Akwesasne and Moose Factory - water and wastewater assessment
- ▶ Kahnawà:ke - shoreline adaptations along St. Lawrence River

What We Do - Our Core Services



Water and Wastewater



Operations and Maintenance



Infrastructure



Housing



Fuel Systems Management



Fire and Safety



Environment



Engineering

Kanaka Bar Indian Band

- ▶ Vulnerability assessment
 - ▶ Community engagement
 - ▶ Watersheds identified for assessment
 - ▶ Determined baseline conditions
 - ▶ Ranked low to high severity
 - ▶ Identified potential adaptation strategies
- ▶ **Mitigation strategies identified:**
 - ▶ FireSmart strategy
 - ▶ Updating emergency response
 - ▶ Installing air filters and air conditioning
 - ▶ Developing food production in community
 - ▶ Maintaining roads
 - ▶ Designing alternate access routes to community

Chippewas of Georgina Island First Nation

- ▶ Completed climate change adaptation planning.
 - ▶ Ranked risk to prioritized activities to mitigate the effects of climate change.
- ▶ **Example Steps in Adaption Plan:**
 - ▶ Define methodology to collect Traditional Ecology Knowledge
 - ▶ Explain how watershed vulnerabilities will be compared to Western science assessments.
 - ▶ Outline how to prioritize risk
 - ▶ Outline how to share results
 - ▶ Build a process to collect and prioritize adaptation recommendation.

Poplar River First Nation

- ▶ Forest fire vulnerability assessment initiated by Elders noticing changes.
- ▶ **Possible mitigation activities:**
 - ▶ Discuss moving firefighting resources closer to the community and clearly understand provincial firefighting response.
 - ▶ Reevaluate natural firebreak capability
 - ▶ Activities to reduce amount of forest near community
 - ▶ Develop fire management strategy

Alberta

- ▶ Climate adaptation plans for Ferruginous hawks and Burrowing owls
- ▶ Natural history and population trends
- ▶ Looked at climate parameters:
 - ▶ Rainfall
 - ▶ Snow quantity
 - ▶ Changes to wind
- ▶ **Future Predictive Models:**
 - ▶ Using climate change adaption models from hawks and owls will provide methodology to inform climate change adaption models for caribou.

Government of Canada

- ▶ Environment and Climate Change Canada
 - ▶ Website with general information on climate change adaption for Indigenous and other communities.

Services and information

Climate Action and Awareness Fund

Support projects that encourage engagement and build capacity to reduce greenhouse gas emissions.

Clean technology programs

Programs and initiatives supporting clean technology projects.

Carbon pollution pricing proceeds

Returning carbon pollution pricing proceeds to jurisdictions of origin.

Low Carbon Economy Fund

Fund to create jobs, deliver clean growth, support innovation and reduce energy bills.

Green Infrastructure Fund

Fund to support environmental infrastructure projects.

Environmental funding

For environmental projects and environmental assessments.

Public Transit Infrastructure Fund

Short-term funding to upgrade existing transit systems, build new ones, transit expansion projects.

On this page

- [Success stories: Climate Action and Awareness Fund](#)
- [Success stories: Climate Action Fund \(2018-2020\)](#)
 - [Clean Foundation's Clean Climate Action School: class in session](#)
 - [Ecology Ottawa: Ambassadors of Change](#)
 - [Green Building Council: how architects can help make Canada more green](#)
 - [Random Acts of Green: With this app it's easy being green](#)
 - [Agriculture in the Classroom Saskatchewan](#)

United States

- ▶ U.S. Climate Resilience Toolkit

- ▶ Guide to adaptation and case studies.
- ▶ Tools, information and expertise to building climate resilience

- ▶ Alaska Case Studies:

- ▶ Shaktoolik building berm from driftwood and gravel to protect from flooding and erosion.
- ▶ Some communities shifting harvesting species
- ▶ Build more efficient houses to reduce wind exposure
- ▶ Piling snow at doors

Europe

Sámi-speaking peoples (Norway, Sweden, Finland, Kola Peninsula (Russia))

- ▶ Commissioned climate change adaption study to assess effects of climate change on:
 - ▶ Fishing
 - ▶ Hunting and gathering
 - ▶ Reindeer husbandry
 - ▶ Community health and well-being
- ▶ **Study concluded:**
 - ▶ Cross-disciplinary measures and adaptation strategies are required to respond to changes and risks.
 - ▶ Coordinated action from institutions and governments is required to address issues.
 - ▶ Actions require flexibility and must incorporate Indigenous Knowledge and acknowledge Rights.

Key climate change question

- ▶ examples of using Western science to write and implement climate change adaptation plans to adjust to changes to boreal caribou habitat and changes to caribou.