



## NWT Cumulative Impact Monitoring Program (NWT CIMP)

A source of environmental monitoring and research in the NWT. The program coordinates, conducts and funds the collection, analysis and reporting of information related to environmental conditions in the NWT.

## NWT Environmental Research Bulletin (NERB)

A series of brief plain language summaries of various environmental research findings in the Northwest Territories. If you're conducting environmental research in the NWT, consider sharing your information with northern residents in a bulletin. These research summaries are also of use to northern resource decision-makers.

## Ekwò Nàxoèhdee K'e - watching caribou with our 'boots on the ground'

Ekwò Nàxoèhdee K'e (Boots on the Ground) is an ongoing ekwò (caribou) monitoring program based upon the traditional knowledge (TK) of Tł'chö and Inuit Elders and harvesters. This project uses the TK and methods of Elders and harvesters to monitor the current state of ekwò and their habitat. Overall, habitat conditions and food are in very good condition with the ekwò being healthy and fat. Likely impacts from climate change such as earlier spring melt continue to be observed.

### Why is this research important?

Ekwò are critical to the Tł'chö who want to understand the current situation of the Kòkètì (Bathurst) herd based on traditional methods and knowledge. This allows for more accurate and effective management decisions. This program monitors environmental indicators reconnecting Tł'chö monitors to their ancestral harvesting locations and to ekwò, which helps maintain their relationship with the land and animals.

### What did we do?

Using a holistic methodology called "We Watch Everything", field teams monitor the Kòkètì ekwò between July and September. Camps are set up on Kòkètì (Contwoyto Lake) and Deèzàatì (Point Lake), with monitors traveling by boat or foot daily. Observations about indicators such as habitat conditions, ekwò health, calf abundance, and predator observations are recorded.

Ongoing program results are communicated to key northern decision-makers including Tł'chö Government Chiefs Executive Council, Government of Northwest Territories - Environment and Natural Resources (GNWT-ENR), the Wek'èezhìi Renewable Resources Board (WRRB) and the Bathurst Caribou Advisory Committee for management decision-making.

## What did we find?

From 2018 to 2021, we observed:

- Caribou habitat and food were in optimal conditions due to consistent rain and soil moisture.
- Ekwò were described as "good" health and fat.
- Calf numbers were low in the Kòkètì ekwò.
- Consistent wolf observations were made in the presence of the Kòkètì ekwò.
- Impacts likely from climate change including:
  - earlier spring melt
  - permafrost melt causing collapsing eskers and sinkholes
  - disappearance of summer snow causing changes in caribou behavior and migration patterns
  - new species in the area including the bald-eagle and moose

## Indicators Over Time

	2016	2017	2018	2019	2020	2021
 Weather and Vegetation	Warm, Dry	Mix Dry/Wet	Wet, Windy	Wet, Windy	Wet, Windy	Cool, Windy
 Caribou Health	Normal, Many Injured	Normal	Early Fat, Bulls Healthy	Early Fat, Bulls Healthy	Healthy, Fat Animals	Healthy, Fat Animals
 Calf Abundance	Normal, High	Normal, High	Normal, Low	Low	Low	Low
 Wolves Observed	1	18	16	31	0	13



Tłı̨chǫ monitors watching ekwò by Jericho mine, north of Kòkètì (Contwoyto Lake). (Credit: P. Jacobsen)

## What does this mean?

Ongoing program results through long-term, on-the ground monitoring provide knowledge of multiple impacts and emerging trends for decision-making. This includes:

- Cumulative impacts of industrial infrastructure and wolf predation in key ekwò migration corridors.
- Reduction of full time Indigenous harvesters from the summer range has profound effects on the predator-prey relationship between ekwò, wolves and humans.
- Impacts likely related to climate change significantly effect Kokètì ekwò behaviour and movement patterns.

## What's next?

This is an ongoing project, with monitoring of ekwò planned to continue for at least the next three years. In summer 2022, we have established a third camp on Ek'atì (Lac de Gras). This will advance further monitoring of Kokètì ekwò and impacts from the diamond mines.

## Contacts

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## Recommended Reading

Program's website at: <https://research.tlicho.ca/research/bootsontheground>

Featured documentary Kokètì: Walking with Caribou at: <https://vimeo.com/567896073?ref=em-share>