NWT Cumulative Impact Monitoring Program

GWICH'IN REGION 2020/21 SUMMARY

To watch and understand the land so it can be used respectfully forever.

2020/21 NWT CIMP-FUNDED PROJECTS IN THE GWICH'IN SETTLEMENT AREA

NWT CIMP projects in the Gwich'in Settlement Area address the key regional cumulative impact questions of regulators, governments and communities.

In 2019/20, NWT CIMP provided **\$265,000** to support four projects that included work in the Gwich'in Settlement Area. **This year (2020/21), six projects are being supported in the region**.

HIGHLIGHTED PROJECTS

Community-based long-term monitoring of broad whitefish in the lower Mackenzie River watershed

CIMP195 - YEAR 5 OF 5

LEAD

Rachel Hovel, University of Maine rachel.hovel@maine.edu

PURPOSE

To develop a long-term, community-based fish and water monitoring program in the lower Mackenzie River watershed focusing on the ecology and composition of whitefish harvest.

WHY?

To build community monitoring capacity while developing a better understanding of how future developments and changes related to climate warming may impact broad whitefish populations.



Alice and Ernest Vittrekwa sampling fish



How does proximity to roadways impact water quality and invertebrates in Arctic lakes?

CIMP197 - YEAR 4 OF 4

LEAD

Derek Gray, Wilfrid Laurier University *dgray@wlu.ca*

PURPOSE

To better understand how dust from roadways may impact aquatic invertebrates in northern lakes of the Beaufort-Delta region, and to compare lakes in this region to inform predictions about how small northern lakes may respond to climate change.

WHY?

This information will provide a better understanding of potential impacts to benthic invertebrates, water quality and fish habitat from the development of roads. Project results can be used for effective fish management, including management of water withdrawals from local lakes.

Changes in water within the Mackenzie Delta/ Beaufort Region as indicators of aquatic health

CIMP200 - YEAR 3 OF 3

LEAD

Phillip Marsh, Wilfred Laurier University pmarsh@wlu.ca

PURPOSE

To assess changes in water quality, quantity and size of lakes in the Beaufort-Delta region using remote sensing, climate and past water monitoring data.

WHY?

This information will provide a better understanding of changes to the aquatic ecosystem that can be used in decision-making.

Cumulative impacts are changes in the environment caused by human activities and natural processes that accumulate over space and time. It is important to understand both the environmental impacts of individual developments and the cumulative impacts of many developments in a region.

Impacts of permafrost thaw slump extent, severity and persistence on stream biotic health

CIMP211 - NEW, YEAR 1 OF 3

LEAD

Jordan Musetta-Lambert and Joseph Culp, Wilfred Laurier University *jordanmusetta@gmail.com*

PURPOSE

To investigate impacts of permafrost slumping on water quality, insects, fish and ecosystem health in the Willow River watershed.

WHY?

New predictive tools can help management boards assess impacts of permafrost disturbance on aquatic ecosystems. This information will support climatechange adaptation strategies and inform cumulative impact monitoring.

Impacts of permafrost degradation on łuk dagaii habitat in the Peel River Watershed

CIMP217 - NEW, YEAR 1 OF 2

LEAD

Trevor Lantz, University of Victoria *tlantz@uvic.ca*

PURPOSE

To study the cumulative impacts of permafrost thaw on critical łuk dagaii (broad whitefish) habitat by compiling traditional knowledge and scientific data, and modelling and mapping the potential impacts of permafrost thaw on these critical habitat areas.

WHY?

To provide information to better inform natural resource and cultural heritage management decisions made by local organizations.

The Northwest Territories Cumulative Impact Monitoring Program (NWT CIMP) provides important environmental information about cumulative impacts and environmental trends to decision-makers and communities. Cumulative impact monitoring is a requirement of settled land claim agreements in the NWT, and the *Mackenzie Valley Resource Management Act*.

CONTACT INFORMATION

NWT CIMP is guided by a Steering Committee of Indigenous, territorial and federal government and comanagement representatives.

GWICH'IN SETTLEMENT AREA REPRESENTATIVE

James Thorbourne (Gwich'in Tribal Council) (867) 777-7908 or james.thorbourne@gwichin.nt.ca

FOR MORE PROJECT RESULTS, VISIT

nwtcimp.ca or search for the CIMP project number at
nwtdiscoveryportal.enr.gov.ca

FOR GENERAL PROGRAM INQUIRIES, CONTACT (867) 767-9233 or nwtcimp@gov.nt.ca