

NPC 151120: Geological Study of the Coppermine River Group volcanic rocks, Nunavut

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Proposal Status: Completeness Check

[Overview Documents](#)

[Project Overview](#)

Type of application: New

Proponent name:

Marie-Claude Williamson

Proponent company:

Geological Survey of Canada

Project Description:

The Mackenzie LIP project (2024-2027) is part of the Geological Survey of Canada's (GSC) Critical Minerals and Geoscience Data (CMGD) program. Our main scientific objective is to investigate the potential for deposits of nickel, copper, and platinum-group elements in volcanic rocks of the Coppermine River Group, particularly in the dykes that feed the lava flows. Previous studies of similar volcanic rocks have shown that "feeder dykes" can trap economic minerals but fieldwork is needed to test this scientific hypothesis for the Coppermine River Group. The project objectives are: (1) to fill knowledge gaps on the Coppermine lava flows and feeder dykes, with a focus on economic potential; (2) to use a newly published geological map and laboratory studies to investigate possible connections between the Coppermine volcanic rocks and the Muskox intrusion; (3) to identify channelized lava flows, sills, and dykes using satellite imagery followed by ground truthing during fieldwork; (4) to explore the hypothesis that a meteorite impact may have played a role during the emplacement of the Mackenzie LIP; and (5) to generate a detailed geological map of the study area as well as a regional synthesis of our research results.

[Project Schedule](#)

Start Date:

2026-07-06

End Date:

2026-07-31

[Project Map](#)

List of project geometries:

Id

Geometry

Location Name

[20693](#)

point

Coppermine Base Camp

[20694](#)

point

Washburn Lake area

NPC Planning regions:

No Approved Plan

[Project Land Use and Authorizations](#)

Project Land Use:

Scientific Research

Scientific Research

Licensing Agencies:

Nunavut Research Institute

[Material Use](#)

Equipment:

Type

Quantity

Type

Use

helicopter

1

N/A

Part 1 of the field season: Transport of field crew from Kugluktuk to Coppermine base camp, return. Part 2 of the field season: Field work (two days) based out of Cambridge Bay.

Fuel Use:

Type

Container

Capacity

Use

Propane

2

20

Gas stove

Propane

2

20

Gas stove

Propane

2

20

Gas stove

Propane

2

20

Gas stove

Gasoline

1

20

Portable generator

Hazardous Material and Chemical Use:

Type

Container

Capacity

Use

No data found

Water Consumption:

Daily Amount (m²)

Retrieval Method

Retrieval Location

0

local stream

bucket

[Waste and Impacts](#)

Environmental Impacts:

The field team will use water from local streams for personal hydration and cooking. Greywater will be disposed of in the vicinity of camp at regulatory distances from any watercourse, lake or local stream. A tent with a portable toilet will be set up. Human waste will be disposed of by using a portable incinerator. Any remaining product will be transported out of camp with regular garbage.

Waste Management:

Waste Type

Quantity Generated

Treatment Method

Disposal Method

Greywater

10 litres per day or less

N/A

Projected amounts are small. Greywater will be disposed of in the ground away from local streams or watercourses.

Sewage (human waste)

N/A

Any remaining product will be collected for garbage disposal in Kugluktuk.