





Project Proposal Notices

**Project Proposals** 

# Public Registry - Project Proposals

NPC 149495: National Glaciology Project - Queen Elizabeth Islands, NU & NT

## Proposal Status: Conformity Determination Issued

## **Project Overview**

Overview

#### Type of application: New

Proponent name: David
Proponent company: NRCan

**Documents** 

## Project Description:

This multi-year project involves site visitation and measurements of glacier mass balance and related glacier-climate metrics over 3 ice caps and 1 glacier in Nunavut. Methodology has been consistent since the project began 1959 whereby snow accumulation and ice melt are measured annually against aluminum poles drilled into the ice cap or glacier, and snow density is measured by weighing known volumes (~4 cubic cm) of snow collected from each site. Since 1994, automatic weather stations deployed at each site have collected hourly measurements of air temperature and snow/ice thickness. Transport to each site is via Polar Continental Shelf Project charter air flights on twinotter aircraft, and movements on the ground are via snowmobile. Field team stay in tents at all sites except Grise Fiord where accommodation is in the Grise Fiord hotel. The average stay at each site is 4 days. Results from this project support Government priorities through science contributions to NRCan Programs, Government departments, National and International assessments pertaining to climate change and contributions to sea-level from Canada's Arctic glaciers and Northern communities.

### Project Schedule

Start Date: 2021-04-01 End Date: 2026-12-31

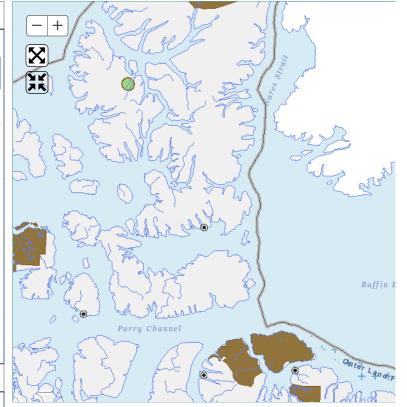
## Project Map

#### List of project geometries:

ld	Geometry	Location Name
7197	polygon	Meighen Ice cap
7190	polyline	Devon ice cap
7195	polyline	Grise Fiord Glacier
7196	polyline	Agassiz Ice Field

## NPC Planning regions:

North Baffin



# Project Land Use and Authorizations

#### Project Land Use:

Scientific Research

Scientific Research

#### Licensing Agencies:

Nunavut Water Board

Nunavut Research Institute

#### Material Use

#### Equipment:

Туре	Quantity	Туре	Use
shovel	1	30cm x 60cm	digging snow pits
ice	1	2 auger x 3 meter	drill aluminum stakes into ice
drill		length	caps

#### Fuel Use:

Туре	Container	Capacity	Use
Gasoline	3	20	snowmobile
Propane	2	20	cooking stove

#### Hazardous Material and Chemical Use:

Туре	Container	Capacity	Use
No data found			

#### Water Consumption:

1	local snow pack	melt snow
Daily Amount (m <sup>2</sup> )	Retrieval Method	Retrieval Location

#### Waste and Impacts

## **Environmental Impacts:**

Impact: The impacts on the environment are limited to packing of snow via twin otter landing/take-off, and from the use of the snowmobile. Mitigation: Twin-otter take offs and usage of snowmobile occur on the ice caps to eliminate any impacts on the local vegetation. In addition, tracks from the snowmobile and twin-otter are often covered in a few days by snow drift. Impact: tent camps on the ice cap may result in preferential accumulation of snow due to drifting. Mitigation: Camps are frequently moved to avoid prolonged accumulation of drifting snow.

# Waste Management:

Waste Type	Quantity Generated	Treatement Method	Disposal Method
Sewage (human	3 litres per day	non	return to Resolute Bay for disposal
waste)			

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