Nunavut Research Institute / ᓄᓇᕗᒻᒥ ᖃᐅᔨᓴᖅᑐᓕᕆᔨᒃᑯᑦ
959A Nunavut Dr. Iqaluit, NU X0A 3H0 phone:(867) 979-7279 email:mosha.cote@arcticcollege.ca

SCIENTIFIC RESEARCH LICENSE

LICENSE NUMBER 02 006 25R-M

ISSUED TO: Laura Brown
Department of Geography
University of Toronto Mississauga
3359 Mississauga Road
Mississauga, Ontario
L5L 1C6 Canada

TEAM MEMBERS: E.Groh, L.Marno, D.Iqaluk

TITLE: Lake Ice in the Canadian High Arctic

OBJECTIVES OF RESEARCH:
Lake ice is an important part of the cryosphere and recent projections suggest a pan-arctic reduction by the end of the century in ice duration and thickness. Since the majority of ground-based ice observations in Canada ceased by the 1990s, recent changes in ice regimes have been primarily noted through modelling and remote sensing. Observation data, essential for validating both remote sensing and modelling research, is currently inadequate though some volunteer monitoring efforts have emerged since the decline of Canada's monitoring network and have been utilized for ice research. As changes are noted in ice regimes, we need to fully understand the implications and response in terms of water and energy balance and their effects on other areas of research. To achieve this, in situ data of lake ice in Canada is being collected across a latitudinal gradient. The field data will be used to improve the effects of snow cover on modelled ice thickness, as well as to isolate how the duration of the modelled ice break-up season is affected by the shape/size of the lake. Resolute and Polar Bear Pass provide ideal locations for the High Arctic portion of this study and data collection is underway.

TERMS & CONDITIONS:
The holder of the license will be bound by the terms and conditions of the Nunavut Impact Review Board Screening Decision Report (NIRB File # 16YN002) and the Department of Culture & Heritage archaeological sites terms and conditions. These terms and conditions will form part of this license.

DATA COLLECTION IN NU:
DATES: May 1,2025 to August 31,2025
LOCATION: Cornwallis Island, Resolute Bay, Polar Bear Pass

Scientific Research License 02 006 25R-M expires on December 31,2025
Issued at Iqaluit, NU on January 9,2025

PER James Shirley
Science Advisor

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