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SCIENTIFIC RESEARCH LICENSE

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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 licence will be bound by the terms and conditions of the Nunavut Impact Review Board Screening Decision Report and the Department of Culture & Heritage archaeological sites terms and conditions. These terms and conditions will form part of this licence.

DATA COLLECTION IN NU:
DATES: May 11,2023 to August 3,2023
LOCATION: Resolute, Polar Bear Pass

Scientific Research License 02 002 23R-M expires on December 31,2023
Issued at Iqaluit, NU on December 6,2023

PER
Jamal Shirley
Science Advisor

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