April 10, 2025 NPC File No. 150718

# **Cassel Kapolak**

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### **Wynter Kuliktana**

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Dear Cassel Kapolak, Mosha Cote, Richard Dwyer, Wynter Kuliktana, Stephanie Coulombe:

# RE: NPC File # 150718 [Permafrost dynamics in response to climate change on Victoria Island, Nunavut]

The following works and activities have been proposed in the above-noted project proposal:

- 1. Continue sampling and collecting readings on permafrost at various locations in southern Victoria Island, with a particular focus on Cambridge Bay and its surrounding areas, to enhance understanding of permafrost conditions and inform climate change adaptation strategies in the region.
- 2. Modifications to the original/amended project proposal: The proponent proposes the same project scope, which has been expanded to include investigations into the morphological and limnological properties of lakes and their long-term evolution, as well as the quantification of suprapermafrost groundwater discharge and associated biogeochemical fluxes. Another key addition is the examination of salt wedges along the coast and their influence on permafrost distribution, including potential impacts on coastal erosion under future climate conditions.
  - Installation of a deep borehole (15–20 m) with a thermistor cable for continuous permafrost temperature monitoring, along with complementary sensors to assess thermal and hydrological conditions.
  - Install a temporary piezometer to measure permafrost groundwater flow and undertake bathymetric surveys on lakes and along the coast using sonar.
  - Collection of water and sediment samples for comprehensive hydrochemical and isotopic analyses.
  - Coastal dynamics will be studied using pressure sensors, buoys, Acoustic Doppler Current Profilers (ADCP), and Acoustic Wave and Current Profilers (AWAC).
  - Drone surveys, time-lapse photography, and topographic beach profiling will be employed to monitor permafrost degradation, coastal erosion, and intertidal morphology.

- 3. Associated NPC File No: 149749, 148796, 150058, 150277; Related NIRB File No: 18YN020.
- 4. Location: Kitikmeot Region; [several lakes near Cambridge Bay]

A complete description of the project proposal reviewed by the Nunavut Planning Commission (NPC) can be accessed online using the link below.

The NPC has completed its review of the above-noted project proposal. The NPC previously reviewed works and activities associated with the current project proposal, and decisions were issued on March 21, 2018, May 17, 2022, April 13, 2023, and March 12, 2024, stating that they are outside the area of an applicable regional land use plan. In addition, works and activities associated with the current proposal were previously screened by the Nunavut Impact Review Board (NIRB File No.: 18YN020).

The above-noted project proposal is exempt from screening by the NIRB because the NPC is of the understanding that the currently proposed activities does not change the general scope of the original project activities, and the exceptions noted in Section 12.4.3 (a) and (b) of the Nunavut Agreement do not apply.

By way of this letter, the NPC is forwarding the project proposal to the regulatory authorities identified by the proponent. Project materials are available at the following address: <a href="https://lupit.nunavut.ca/portal/registry/registry/aspx?appid=150718">https://lupit.nunavut.ca/portal/registry/registry/aspx?appid=150718</a>

This decision applies only to the above-noted project proposal as submitted. Proponents may not carry out projects and regulatory authorities may not issue licenses, permits and other authorizations in respect of projects if a review by the NPC is required. If you have any questions, please do not hesitate to contact me at (867) 447-4563.

Sincerely,

Solomon Amuno, PhD Senior Planner

**Nunavut Planning Commission**