

Public Registry - Project Proposals

NPC 151002: Arctic kelp forests and seaweed biodiversity in Cambridge Bay

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Proposal Status: Conformity Determination Issued

[Overview Documents](#)

[Project Overview](#)

Type of application: New

Proponent name:

Amanda Savoie

Proponent company:

Canadian Museum of Nature

Project Description:

The overarching goal of this project is to have a better scientific understanding of the marine ecosystems around Cambridge Bay, Nunavut. Our research team is focused on seaweeds (marine algae), invertebrates, and fish. We have already conducted three years of research around Cambridge Bay (2022-20224) with the support of the Ekaluktutiak HTO. We would like to continue this project into the future as funding allows. In the Canadian Arctic, large brown algae known as kelp form underwater forests. Kelp forests are a complex three-dimensional habitat hosting many species besides the dominant kelps, and provide refuge for fish and invertebrates. The main objectives of this project are: (1) to explore subtidal sites around Cambridge Bay to determine the presence or absence of seaweed and kelp forests, and establish suitable sites for long-term monitoring; (2) to collect seaweed specimens for an accurate assessment of macroalgal species diversity, biogeography, and biomass; and (3) take video transects of kelp forests and use quadrats to assess invertebrate & fish diversity both in and out of kelp forests. Baseline biodiversity information and ongoing monitoring of seaweed diversity and distribution in Canada's Arctic is needed to determine the impacts of climate change on the coastal ecosystem. As marine macroalgae provide habitat for many fish and invertebrates that are valued and consumed by northern communities, it is important to understand how changes in the distribution and abundance of seaweeds could potentially impact these species. A longer project description is added in the documents section. Work on this project will take place during the summer months.

[Project Schedule](#)

Start Date:

2026-07-01

End Date:

2028-09-30

[Project Map](#)

List of project geometries:

Id

Geometry

Location Name

[19360](#)

polyline

The marine waters around Cambridge Bay (Dease Strait and Queen Maud Gulf)

NPC Planning regions:

No Approved Plan

[Project Land Use and Authorizations](#)

Project Land Use:

Marine-Based Activities

Marine-Based Activities

Scientific Research

Licensing Agencies:

Government of Canada - Fisheries and Oceans Canada

[Material Use](#)

Equipment:

Type

Quantity

Type

Use

small marine boat

1

21 feet

In the past we have used the guiding services and boat of a local community member for setting drop cameras and as a platform for SCUBA diving.

Marine Front Lander

1

33 feet

In the past we have used the Arctic Research Foundation vessel R/V Blue Nanook to help with sampling and SCUBA diving in addition to smaller boats from the community.

Fuel Use:

Type

Container

Capacity

Use

Gasoline

25

20

if we use smaller marine boats owned by community members in Cambridge Bay for this work, the typical fuel is gasoline. A typical day out would use 4 or 5 jerry cans. I have estimated a maximum of 5 days of work using 5 20L jerrycans per day.

Gasoline

3

200

if we use the larger Arctic Research Foundation vessel R/V Blue Nanook, an estimated fuel consumption would be similar, approximately 600 L of gasoline for 5 days of fieldwork.

Hazardous Material and Chemical Use:

Type

Container

Capacity

Use

none

0

0

not applicable

Water Consumption:

Daily Amount (m²)

Retrieval Method

Retrieval Location

0

Waste and Impacts

Environmental Impacts:

During this project the team will be living in the accommodations at the Canadian High Arctic Research station (CHARS) and will not be producing any waste on the land or while on the water. In terms of environmental impact, we will be collecting small amounts of seaweeds and invertebrates for scientific study. We will collect from healthy patches of seaweed in the coastal zone and will only take the small amounts needed for scientific research.

Waste Management:

Waste Type

Quantity Generated

Treatment Method

Disposal Method

No data found