

Project Dashboard

OPP 2.0 Baseline Shoreline Mapping (149937)

Proposal Status: Conformity Determination Issued

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Project Overview

Type of application: **New**

Proponent name:	Valerie Wynja
Company:	ECCC

Schedule:

Start Date:	2023-08-10
End Date:	2023-09-25
Operation Type:	Seasonal

Project Description:

The overall health of Canada's oceans is strongly influenced by the coastal marine environment. Through the Government of Canada's Oceans Protection Plan 2.0 (OPP 2.0), Environment and Climate Change Canada is working to protect, preserve, and restore Canada's marine environment. Under the OPP 2.0, our team has been funded to collect baseline shoreline data for oil spill preparedness in priority areas in the Arctic. The main purpose of the shoreline segmentation process is to collect information to help emergency responders plan and prepare for potential marine pollution incidents. A pre-spill shoreline dataset includes baseline coastal information such as the shoreline type and form, the substrate and vegetation type. •To collect key shoreline information, low-altitude helicopter overflights are conducted at the study sites to capture geotagged video and photos of the shoreline characteristics. •Once the shoreline data is collected, that information is recorded within a GIS database. •Shoreline interpretation is performed by reviewing the oblique videography and geotagged photos. The final product is a detailed vector geodatabase which describes each shoreline segment and its associated intertidal zones. The vector shoreline characterization database can be used to identify environmentally sensitive shoreline types, support a rapid response to pollution incidents, and aid in effective clean-up efforts. By presenting the data on an interactive map, we are aiming to improve decision-making during oil-spill responses. With the inclusion of information from satellite and drone imagery, we hope to provide broader coverage of Canadian shorelines to support spill response and protect marine ecosystems. Beyond supporting oil spill response, datasets and imagery have been used by local communities and environmental managers for project planning, marine safety & response preparedness, assessment of areas for marine restoration, marine planning, food security, among others. We hope to perform mapping activities during two different time periods in the summer of 2023. 1)August 15-23, 2023 (based out of Gjoa Haven, NU - logistical support through the Polar Continental Shelf Program (PCSP)) 2)September 7-13, 2023 (dates to be confirmed; based from a Canadian Coastguard vessel)

Personnel:

Persons:	3
Days:	10

Project Map

List of all project geometries:

ID	Geometry	Location Name
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9695 polygon	Southern Coastline of Lancaster Sound (This polygon shows the approx. extent of the mapping area) This mapping work will be performed from a Canadian Coast Guard vessel. (Timing - Sept 7-13, 2023)
9696 polygon	Coastline around Gjoa Haven and Taloyoak (This polygon shows the approx. extent of the mapping area) This mapping work will be performed based out of Gjoa Haven. (Timing - Aug 15-23, 2023)

Planning Regions:

Qikiqtani
Kivalliq

Affected Areas and Land Types

Inuit Owned Surface Lands
Municipal
Established National or Territorial Park
Settlement Area
North Baffin Planning Region

Project Land Use and Authorizations

Project Land Use

Scientific Research
Scientific Research

Licensing Agencies

NRI: Scientific Research Licence

Other Licensing Requirements

No data found.

Material Use

Equipment

Type	Quantity	Size	Use
Helicopter	1	20 X 8	To collect key shoreline information and establish a shoreline database, low-altitude helicopter overflights (approximately 60-70 knots, 200-300 feet elevation above the water, and 300ft off the shoreline) are conducted at the study site to capture video of the shoreline characteristics.

Video camera	1	24 x 6	Video camera on a gimbal to collect geotagged videos.
Camera	1	6 x 4	Digital camera to collect geotagged photos.
GPS	2	2 x 3	GPS to record our flight path.
Tough book tablet	1	4 x 6	Toughbook tablet to display map and to record our flight path.
Drone	2	2x2	Fly drone along the coastline to see if we can collect high resolution imagery suitable to doing a remote sensing classification.

Fuel Use

Type	Container(s)	Capacity	UOM	Use
Aviation fuel	0	208	Liters	Access to aviation fuel from the Gjoa Haven and Taloyoak Airports.
Aviation fuel	0	208	Liters	Access to aviation fuel from the coastguard ship for mapping in Lancaster Sound.
Aviation fuel	5	208	Liters	We have applied to the Polar Continental Shelf Program for logistical research

Aviation fuel	6	208	Liters	<p>support in the Arctic. They have proposed one fuel caches with 5 drums at Cape Sydney - Cabin (69 50.667 N; 97 39.159 W) - and planned removal of drums by August 27th, 2023.</p> <p>We have applied to the Polar Continental Shelf Program for logistical research support in the Arctic. They have proposed one fuel caches with 6 drums at Kinngaak Peninsula (68 03.470 N; 95 24.250 W) - and planned removal of drums by</p>
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August
27th, 2023.

Hazardous Material and Chemical Use

Type	Container(s)	Capacity	UOM	Use
No records found.				

Water Consumption

Daily Amount (m ³)	Retrieval Method	Retrieval Location
0		

Waste and Impacts

Environmental Impacts

We aim to have minimal impact to the environment. We will be working out of a helicopter the majority of the time and would like to work with the communities to coordinate the overflights so they have the least impact on wildlife and other traditional activities taking place on the land. We are not doing any destructive sampling and therefore do not anticipate any waste products with this project. Fuel cache drums will be coordinated with the Polar Continental Shelf Program and will be removed from caches by Aug 27, 2023.

Waste Management

Waste Type	Quantity Generated	Treatment Method	Disposal Method
No data found.			