

Project Dashboard

Healy Baffin Bay Survey (149502)

Proposal Status: Conformity Determination

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Project Overview

Type of application: **New**

Proponent name:	Robert Pickart
Company:	Woods Hole Oceanographic Institution

Schedule:

Start Date:	2021-09-17
End Date:	2021-10-10
Operation Type:	Seasonal

Project Description:

The project addresses the pathways and fate of the freshwater and heat carried by the boundary current system of Baffin Bay. We will conduct a shipboard survey on the US Coast Guard Cutter Healy, occupying transects extending from Baffin Island to West Greenland, including transects along some of the channels leading to West Greenland's glacial fjords. Physical and chemical Measurements of the water column will be collected at roughly 300 sites using an instrument package lowered over the side of the ship, and also from sensors on the ship while it is steaming. Seafloor mapping and sub-bottom profiling will be done in designated areas adjacent to Baffin Island. An autonomous vehicle will be deployed in the vicinity of Jakobshavn glacier, West Greenland, to collect detailed physical measurements there.

Personnel:

Persons:	104
Days:	24

Project Map

List of all project geometries:

ID	Geometry	Location Name
7668	polyline	Line 1
7669	polyline	Line 1
7670	polyline	Line 1
7671	polyline	Line 1
7672	polyline	Line 1
7673	polyline	Line 1
7674	polyline	Line 1
7675	polyline	Line 1

7676	polyline	Line 1
7677	polyline	Line 1

Planning Regions:

Qikiqtani

Kivalliq

Affected Areas and Land Types

Settlement Area

North Baffin Planning Region

Project Land Use and Authorizations

Project Land Use

Marine-Based Activities

Marine-Based Activities

Scientific Research

Licensing Agencies

NRI: [Scientific Research Licence](#)

Other Licensing Requirements

No data found.

Material Use

Equipment

Type	Quantity	Size	Use
Conductivity-Temperature-Depth (CTD)	1	6' x 3'	To collect vertical profiles of temperature, salinity, oxygen, fluorescence, and beam transmission at specified locations.
Niskin bottles	24	3' x 0.5'	To collect water samples for measuring chemical properties.
Flow-through sensors	4	Attached to ship	Several devices to monitor the properties of seawater/air by passing seawater/air through them as the vessel is underway. A detailed list of these sensors is provided in the

			documentation at the end of the application.
12-kHz echosounder	1	Attached to ship	Bathymetric data collection.
150-kHz acoustic Doppler current profiler (ADCP)	1	Attached to ship	To collect vertical profiles of water velocity.
75-kHz ADCP	1	Attached to ship	To collect vertical profiles of water velocity.
Autonomous glider	1	5' x 1.5'	This will be launched near Jakobshavn glacier, West Greenland to collect measurements of temperature, salinity, velocity, and turbulence. It will be recovered by CCGS Amundsen later in the fall.
Surface velocity drifter	30	2' x 2'	These will be deployed from the vessel at various locations in Baffin Bay. They drift with the surface currents and transmit their data to satellite. The sensors on the drifters are described in the documentation

			at the end of the application.
USCGC Healy	1	420' x 82' x 29.3'	Research vessel.
3.5-kHz echosounder	1	Attached to ship	Seabed imaging.
multi-beam echosounder	1	Attached to ship	Bathymetric data collection.

Fuel Use

Type	Container(s)	Capacity	UOM	Use
Diesel	1	12202915 Gallons		Vessel had Diesel Electric propulsion and carries all fuel it needs.

Hazardous Material and Chemical Use

Type	Container(s)	Capacity	UOM	Use
Chloroform	1	1	Liters	Used for measuring nutrients in water samples.

Water Consumption

Daily Amount (m³)	Retrieval Method	Retrieval Location
0		

Waste and Impacts

Environmental Impacts

No anticipated environmental impacts. The vessel complies with all international waste management guidelines and is self-contained with respect to waste. Vessel management plan is appended in the Documents section.

Waste Management

Waste Type	Quantity Generated	Treatment Method	Disposal Method
Hazardous	1 Liter	N/A	Will stay on ship and be disposed after reaching home port.