



## **NIRB Application for Screening #125364**

### **Crocker Bay Study and NW Passage to Gjoa Haven**

**Application Type:** New

**Project Type:** Scientific Research

**Application Date:** 6/27/2018 10:46:41 PM

**Period of operation:** from 0001-01-01 to 0001-01-01

**Proposed Authorization:** from 0001-01-01 to 0001-01-01

**Project Proponent:** Nicole Trenholm  
990 Awald Rd  
Annapolis md 21403  
United States  
Phone Number:: 2152084464, Fax Number::

## DETAILS

### Non-technical project proposal description

English: Marine Based Scientific Research: This is a low impact study using a vessel of opportunity. The research group is made up a graduate student Nicole Trenholm, an American Polar Explorer Matt Rutherford and two Canadian pleasure yacht adventurers on the Sailing Vessel Toboggan. The study will occur during the voyage from July 28 to August 26, 2018. The graduate student heads back to University Maryland Baltimore County Geographic Environmental System Program departing at Gjoa Haven, while the rest of the team continues on through the passage. The work involves a 4 day stop at Croker Bay in a 40 foot sailing boat for oceanographic surveys. Alternative fly out locations includes Pond Inlet and Resolute. Location: Qikiqtani Region [Croker Bay and Northwest Passage Transit]In Croker Bay, the graduate student will assess the ocean warming factor in glacial mass ice loss of the Devon Ice Cap. She is collaborating with Dr. Clark Richards at DFO and Dr. Andrew Hamilton of University of Ottawa on the greater contribution of their research assessing Canadian ocean circulation and Devon Ice Cap Cryospheric conditions.Nicole, intends to test additional sea and ice surface observation collection methods to improve satellite models of sea ice concentration of the National Weather Service. This will occur only with appropriate conditions. If her observations are greatly beneficial to improve National Weather Service models then she will apply for permits and contact NIRB and NPC to request local volunteer observations from Nunavut communities as well as her own additional observations on future cruises.She does not have a community outreach component associated with this earlier project phase in 2018 but is open to Nunavut school and public collaborators in contacting her to consider educational outreach partnerships going forward. nicole3@umbc.eduThis project is sponsored by the Ocean Research Project 501c3 and the team of the vessel of opportunity, SV Toboggan.

French: n/a

[illegible]

Inuinnaqtun: n/a

## Personnel

Personnel on site: 4

Days on site: 4

Total Person days: 16

Operations Phase: from 2018-07-28 to 2018-08-26

## Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
NW Passage, Croker Bay	Marine Based Activities	Marine	N/A	N/A	Pond Inlet, Gjoa Have, and Resolute

## Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Information is not available			

## Authorizations

Indicate the areas in which the project is located:

Transboundary  
Kitikmeot  
North Baffin

### Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Research Institute	NPC No 148838	Active	2018-06-19	2018-08-28

### Project transportation types

Transportation Type	Proposed Use	Length of Use
Water	recreational yacht	

### Project accomodation types

Other,

## Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
yacht	1	39 feet	cruise, research
Might have backup instrument: USB2000+	1	0.1m	Back up sea surface observations, temperature
RBR Conductivity, temperature and sound speed (CTD) probe	1	0.3	surface and water column data

### Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Gasoline	fuel	3	300	900	Gallons	inboard engine when needed

### Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
1	Carry drinking and washing water needs from Greenland	Greenland

# Waste

## Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Marine Based Activities	Other, kitchen rubbish	2 bags	leave stowed in vessel	n/a

## Environmental Impacts:

More collaborative research discoveries between Canadian agency and academic researchers with US academic researchers.

# **Additional Information**

**SECTION A1: Project Info**

**SECTION A2: Allweather Road**

**SECTION A3: Winter Road**

**SECTION B1: Project Info**

**SECTION B2: Exploration Activity**

**SECTION B3: Geosciences**

**SECTION B4: Drilling**

**SECTION B5: Stripping**

**SECTION B6: Underground Activity**

**SECTION B7: Waste Rock**

**SECTION B8: Stockpiles**

**SECTION B9: Mine Development**

**SECTION B10: Geology**

**SECTION B11: Mine**

**SECTION B12: Mill**

**SECTION C1: Pits**

**SECTION D1: Facility**

**SECTION D2: Facility Construction**

**SECTION D3: Facility Operation**

**SECTION D4: Vessel Use**

**SECTION E1: Offshore Survey**

**SECTION E2: Nearshore Survey**

**SECTION E3: Vessel Use**

## **SECTION F1: Site Cleanup**

## **SECTION G1: Well Authorization**

## **SECTION G2: Onland Exploration**

## **SECTION G3: Offshore Exploration**

## **SECTION G4: Rig**

## **SECTION H1: Vessel Use**

Survey observations regarding the ice and ocean physical and environmental conditions in the NW Passage and Crocker Bay.

## **SECTION H2: Disposal At Sea**

## **SECTION I1: Municipal Development**

### **Description of Existing Environment: Physical Environment**

### **Description of Existing Environment: Biological Environment**

### **Description of Existing Environment: Socio-economic Environment**

### **Miscellaneous Project Information**

7/12/2018 Additional details request: As the Canadian vessel approaches the Northwest Passage the Canadian Captain will assess the ice conditions to determine if the 2 Americans can be checked into the country in a navigable open port. If conditions do not permit stopping in Pond Inlet then the Canadian Captain will call the proper authorities to provide arrival Passport information and details for checking in the 2 Americans. All aboard are familiar with this process. The 2 Americans are planned to depart from Gjoa Haven and fly back to the US around the 25th of August. If ice conditions do not allow the 2 Americans may depart from a different ice free harbor town such as Resolute or Pond Inlet. The two Canadians will continue on through the Northwest Passage keeping to the Canadian Coast Guard mandatory 24 hour position check in and departure from Canadian waters. The two Canadians continue through the Northwest Passage to International waters and then Alaska.

### **Identification of Impacts and Proposed Mitigation Measures**

### **Cumulative Effects**



# Impacts

## Identification of Environmental Impacts

		PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
<b>Construction</b>																										
-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Operation</b>																										
Marine Based Activities		-	-	-	-	-	P	-	-	-	P	-	-		-	-	-	-	-			-	-	-	-	-
<b>Decommissioning</b>																										
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(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

# PROJECT MAP



## LIST OF PROJECT GEOMETRIES:

1	polyline	NW Passage, Croker Bay
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