NIRB Application for Screening #126009

One Ocean Expedition - Norwegian tall ship through Northwest Passage and the Nunavut region in 2025

Application Type: New

Project Type: Scientific Research

Application Date: 11/20/2024 2:56:47 AM

Period of operation: from 2025-08-05 to 2025-09-02

Project Proponent:
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Norway
Phone Number:: 004797537984, Fax Number::

DETAILS

Non-technical project proposal description

English: see attached document

French: see attached document

Inuktitut: see attached document

Inuinnaqtun: see attached document

Personnel

Personnel on site: 110
Days on site: 45
Total Person days: 4950
Operations Phase: from 2025-08-05 to 2025-09-02
Closure Phase: from 2025-08-13 to 2025-09-05

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Station work area 1	Researching	Marine	N/A	N/A	N/A
Station work area 2	Researching	Marine	N/A	N/A	N/A
Ikaluktutiak	Access Road	Municipal	N/A	N/A	N/A

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Information is not available			

Authorizations

Indicate the areas in which the project is located:

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Research Institute	in the process of applying	Not Yet Applied		
Other	Enviornmental Impact Screening Committee (EISC), application in progress	Not Yet Applied		
Parks Canada	Feedback from Parks Canada After discussing with our colleagues, we can confirm there is no Parks Canada specific permit requirement from a nautical or scientific perspective for your expedition	Active		
Fisheries and Oceans Canada	In the process of applying	Not Yet Applied		
Other	Government of CanadaApplication for consent to conduct marine scientific research	Applied, Decision Pending		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Water	Sail Training Ship Statsraad Lehmkuhl, Crew change in Cambridgebay	

Project accomodation types

Other,

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Kongsberg Discovery EK80 (38, 120, 200 kHz)	1	N/A	Single-beam echosounder, hull mounted sensor
RDI 75 kHz, Kongsberg Discovery CP 300 kHz	1	N/A	Acoustic Doppler Current Profilers, Hull mounted
WS700-UMB Smart Weather Sensor	1	N/A	Temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity, air pressure, wind direction, wind speed, radiation Mast mounted sensor
Three Ocean Sonics hf hydrophones	1	N/A	record passive acoustics, hull mounted sensor
WS100 Radar Precipitation Sensor / Smart Disdrometer	1	N/A	Mast mounted sensor for Rain/precipitation quantity, rain/precipitation type (Rain, snow, sleet, freezing rain, hail)
Apogee SI-421-SS. Narrow field of view infrared radiometer sensor	1	N/A	Mast mounted Sea Surface skin temperature
CTD rosette	1	n/A	Temperature, conductivity, dissolved oxygen, chlorophyll A, turbidity, backscatter pH, PAR Seabird SBE19plus V2 SBE43 DO CHL-a & TURBIDITY ECO-FLNTU SATPAR PAR-LOG ICSW, SATPAR SURFACE/REFERENCE PAR SBE18 pH
Ferrybox, sensors of flow through system	1	N/A	installed on board Temperature, conductivity, dissolved oxygen, turbidity, chlorophyll A
Quantum SQ-522 PAR sensor	1	N/A	Mast mounted sensor, Optical sea awarness
WP2 plankton net, mesh size of 180 micrometer.	1	N/A	Zooplankton Zooplankton net deployed from vessel
Onboard filtration and qPCR/sequence analyses and water filtered for post cruise lab analysis	1	N/A	Water samples for eDNA analysis, Water samples collected from vessel flow through system and water bottles on CTD rosette (12x2.5l) for microplastics analysis, isotope analysis
Box corer	1	50cm x 50cm	seafloor sediment extraction
Multicorer	1	6 corers à 10cm diameter	seafloor sediment extraction

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Arctic grade Marine Gas Oil Sulphur content <0.05%Alternativt Marine Gas Oil Sulphur content <0.05%.Usually only filled 85%	fuel	3	1179	3537	Cubic Meters	Fuel for the sailingship Statsraad Lehmkuhl
16% Formaldehyde	hazardous	1	0.1	0.1	Liters	preservation of benthic invertebrates
Ethanol	hazardous	6	1	6	Liters	preservation of benthic invertebrates anf fish larvae
4% Formaldehyde	hazardous	8	1	8	Liters	preservation of zooplankton samples

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0		

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Waste disposal	Combustible wastes	N/A	we will keep our waste on board the ship until we reach anchorage to avoid stressing the area	N/A
Marine Based Activities	Sewage (human waste)	N/A	The ship has treated sewage on board which according to international regulations	only cleaned and treated Sewage will be released

Environmental Impacts:

Aquatic species, including habitat and migration / spawning --> hunting, spawning areas will be avoided. Effect on migration will be minimal as the ship will only sail through the areas, with short station stops of <24hours along the way for sampling activities.

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

LOA (in reference to fees etc.): 84,60 mLPP: 72,40 mMax Beam (Hull only): 12,60 mMoulded depth: 7,32 mMax. Draft: 5,50 mMax. Air draft above sea level: 48,00 mHighest mast above main deck: 45,00 mFuel tank capacity: 90 m3Fresh water capacity in tanks: 120 m3GRT: 1516 tNRT: 454 tDisplacement: 2231 tNumber of sails: 22Total Sail area: 2026 m2Max. speed: Engine: 10 knots / Sail: 17 knotsCrew and traineesMax. number of voyage trainees 150Crew: 25Seating area below deck: 80 + 96MachineryMain Engine: Bergen Diesel-KRM6 -750 rpm 827 kWGear: Volda ACG - 450Propulsion system: Rolls Royce / Kamewa: CCP 4 bl. dia. 2,25 m 794 kWBow thruster: Rolls Royce Type 45 TV 270 kWSteering gear: Rolls Royce /Frydenbø HS 40Generator 1 og 2: Caterpillar – C 7.1 -150 kWShaft generator: ABB, PTO 300 kWBatteri: Kongsberg Marine 360 kWhEmergency generator: Volvo Penta-TAMD 71B/Stamford 90 kWElectrical power system: 400 V – 50Hz, 230 V - 50Hz - three phaseMain switchboard aft: ABB - 230 VMain switchboard forward: Rolls Royce/ TB- Austevoll 400 V / 230 VEmergency switchboard: TB- Austevoll 230 VHSG switchboard: Rolls Royce / TB AustevollAutomation: Rolls Royce: ACONSafety equipmentMOB rescue boats: (2) 6 person Zodiac 600 w/ 90 / 80 HK outboardsLiferafts: (2) 65 person DKR + Viking open(4) 50 person DKS Viking(8) 25 person DK+ VikingEvacuation slides (Inflatable): (2) Viking MinislidesSurvival suits (Full body): (181) VikingLifejackets (Thermal): (195) adult / 40 (16) child / 10 infantFirefighting equipmentAddressable alarm system: ACON IAS systemEngine room: Halotron inert gas remote extinguishingEmergency generator room: Halotron inert gas remote extinguishingAccommodation and storage areas: Marioff Hi-fog water mist extinguishingBattery room: Marioff Hi-fog water mist extinguishingNavigation equipmentRadar (ARPA): (2) X-Band KM 25 KwECDIS (Full): (2) K-NAV Stand AloneAIS: Simrad AI 70Navtex: Furuno NX 700 BGPS: Kongsberg SeaPos 320Gyro compass: Simrad /Robertson GC 80Echo sounder: Skipper GDS 101Doppler Speed Log: Furuno DS 80Radio Station GMDSS A3MF/HF: Sailor CU5100 250W DSCVHF: Sailor RT5022 DSCSAT-C: Sailor 6110 mini-CEPIRB: Tron 30 S MK IIRadar Transponder: Tron SARTSatcom Voice/Data: Sailor VSAT 900 High PowerSatcom Voice/Data: Iridium Pilot Captain PhoneInternal communicationPA/Intercom: Vingtor Marine VMP-32/FUEL: arctic grade marine gas oil.Sulphur content <0.05%

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

Identification of Impacts and Proposed Mitigation Measures

Cumulative Effects

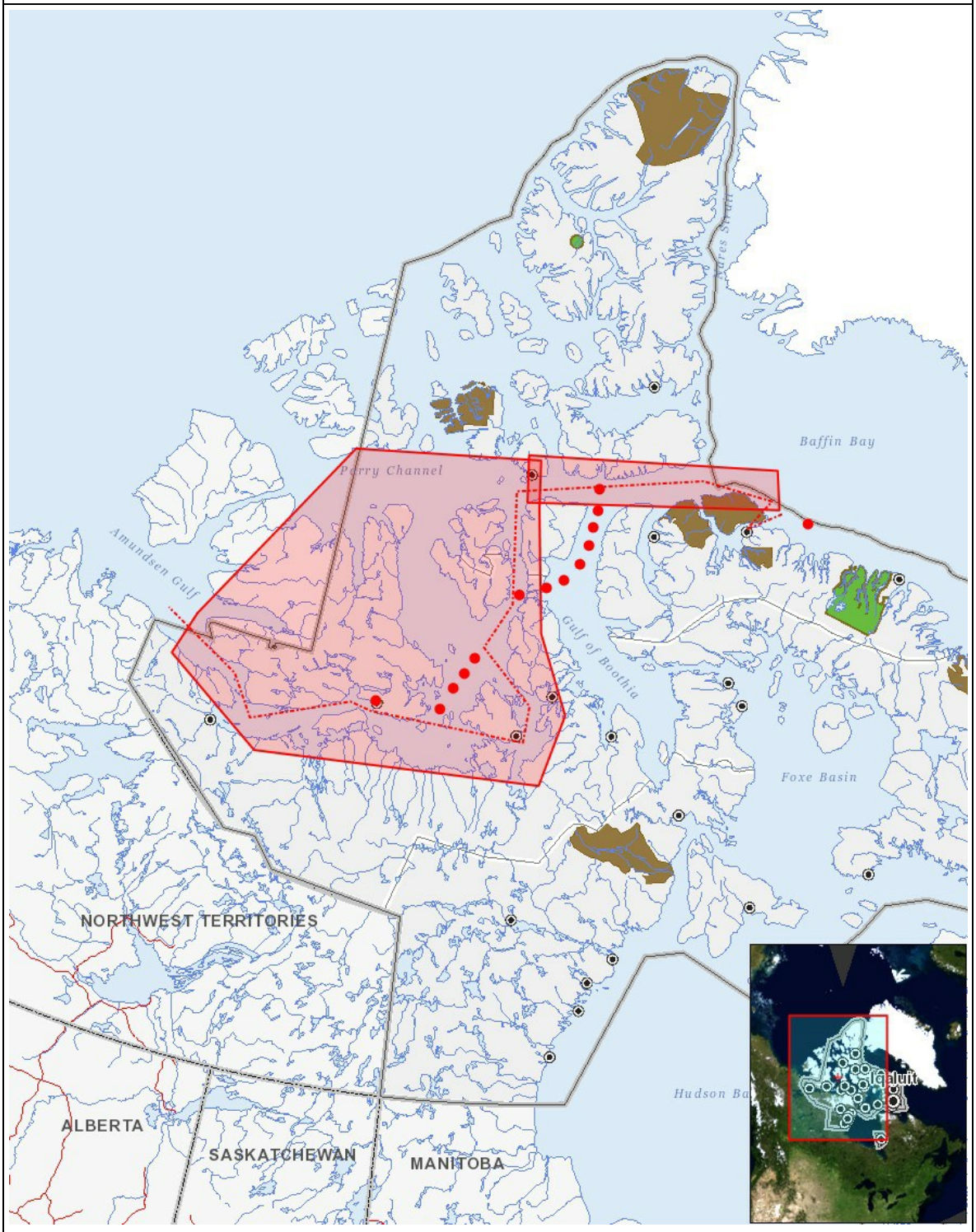
Impacts

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
Construction																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																									
Researching		U	U	U	-	U	U	U	U	U	U	U	U		U	U	U	M	U		U	U	U	U	U
Access Road		U	U	U	-	U	U	U	U	U	U	U	U		U	U	U	M	U		U	U	U	U	U
Decommissioning																									
Researching		U	U	U	-	U	U	U	U	U	U	U	U		U	U	U	M	U		U	U	U	U	U
Access Road		U	U	U	-	U	U	U	U	U	U	U	U		U	U	U	U	U		U	U	U	U	U

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polygon	Station work area 2
2	polygon	Station work area 1
3	polyline	Polyline is alternativ route, if weather conditions or other conditions demands/allows us
4	point	Polyline is alternativ route, if weather conditions or other conditions demands/allows us
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15	point	Polyline is alternativ route, if weather conditions or other conditions demands/allows us
16	point	Polyline is alternativ route, if weather conditions or other conditions demands/allows us
17	point	Ikaluktutiak