NIRB Application for Screening #126158
Marine Acoustic Monitoring in Akpait and Qaqulluit NWAs

Application Type: New

Project Type: Scientific Research

Application Date: Tuesday, March 25, 2025

Period of operation: from 2025-07-28 to 2027-09-26

Project Proponent:

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Canada
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DETAILS

Non-technical project proposal description

English: Project Title: Marine Acoustic Monitoring in Akpait and Qaqulluit NWAsApplicant Name and Contact Information: Danica Hogan, Canadian Wildlife Service5019 52 St, PO Box 2310Yellowknife, NT, X1A2P7Danica.Hogan@ec.gc.ca867-669-4754Project Objectives: The monitoring priorities for Akpait and Qaqulluit NWAs identified by the Sululiit Area Co-Management Committee (ACMC) include marine mammals and the effects of marine traffic on wildlife. Each year, tourism vessels apply to the ACMC/CWS for permits to enter the area to view wildlife that use the area. CWS does not have baseline underwater noise data or recent information about marine mammal use of the area. Akpait and Qaqulluit NWAs are also pilot sites for the Ecological and Conservation Monitoring Program (ECOMaP), a program aimed at monitoring the status and effectiveness of the Protected and Conserved Areas Network managed by Environment and Climate Change Canada.The goal of this project is to address the management priorities indicated by the ACMC by deploying one marine acoustic recorder each in Akpait and Qaqulluit NWAs to collect information about baseline noise levels, vocal marine animals, and vessel traffic noise in the area. We will use the results of this study to update the list of marine mammals that use the area, provide insight into marine mammal phenology in the area, and assess how noise pollution from vessel traffic may affect marine mammals in the NWAs. This information will be used to guide permitting decisions regarding vessels in the NWAs (e.g., when and what types of ships to allow in the NWAs), identify areas for improvement of compliance promotion activities (e.g., detection of non-permitted vessels and detection of vessels not equipped with an Automatic Identification System (AIS)), and create standard permit conditions (e.g., speed limits, time limits, anchoring vs. dynamic positioning) for vessels entering the NWA for tourism and other purposes. Project Location:Akpait National Wildlife Area and Qaqulluit National Wildlife AreaThe exact location of the acoustic recorder deployments is still to be determined. The locations will be chosen after the ACMC meets and discusses the project (likely in March 2025). We will use input and knowledge from the ACMC to determine best possible deployment locations. We will travel via boat from Qikiqtarjuaq to Akpait and Qaqulluit NWAs with a local boat operator.Proposed date and duration of visit to each protected area:Akpait NWA: 3 days total (1 day each year) in August or September 2025, 2026, and 2027Qaqulluit NWA: 3 days total (1 day each year) in August or September 2025, 2026, and 2027Note that deployment and retrieval should only take 1 day in each area each year, however, unforeseen circumstances (e.g. weather, ice conditions), may require multiple attempts/visits in a year. Summary of Activities and Rationale:We will deploy a marine acoustic recorder that records underwater noise in Akpait and Qaqulluit NWAS (one in each NWA) in August/September 2025. The deployment location for the recorder will be chosen based on available information on ocean depth and proximity to mammal and marine vessel hotspots in the NWA. We will discuss and seek input on possible deployment locations at the next Sululiit ACMC meeting (likely in March 2025). The recorder will be deployed at a depth of between 30m-110m for a period of 1 year, passively recording underwater noise for 5 minutes every 30 minutes. The recorder will be retrieved in August/September 2026 and a new marine acoustic recorder will be deployed for another year (until August/September 2027) in each NWA. 2 years of data will allow for a greater variety of vessels to be captured transiting in/by the NWAs and will provide a better understanding of baseline noise levels in the NWA.The deployment and retrieval of the recorders will take no more than one day per NWA. We will travel to the NWA via local vessel from Qikiqtarjuaq. The crew will consist of 4-6 people, including 2-3 CWS employees, 1-2 community members, and 1 boat operator. Community Consultation and Involvement:This project will be discussed with the Sululiit Area Co-Management Committee at the next meeting (likely March 2025). We will send plain language summaries and translated materials to the ACMC and Nattivak Hunters & Trappers Association. There will be an opportunity for a community member or ACMC committee member to join us during the field work. We will also be hiring a local boat and boat operator from Qikiqtarjuaq to transit us from Qikiqtarjuaq to the NWAs. We will share project reports and updates with the Sululiit ACMC on a regular basis, as well as with the Nattivak Hunters & Trappers Association. Once the project is completed, the data and final report will be circulated to the Sululiit ACMC.

French: N/A

Inuktitut: ᐱᓕᕆᐊᑉ ᑕᐃᔭᐅᓂᖓ: ᐃᒪᕐᒥᐅᑕᑦ ᓂᐱᖏᓐᓂᑦ ᖃᐅᔨᓴᕐᓂᖅ ᓄᓇᒥ ᐊᒃᐸᐃᑦ ᐊᒻᒪ ᖃᖁᓪᓗᐃᑦ −NWAsᑐᒃᓯᕋᖅᑑᑉ ᐊᑎᐊ ᑐᑭᓯᒋᐊᕐᕕᑦᓴᐅᕕᖏᓪᓗ: ᑖᓂᑲ Hᐅᒐᓐ, ᑲᓇᑕᒥ ᐆᒪᔪᓕᕆᓂᕐᔪᐊᒃᑯᑦ5019 52 St, PO Box 2310Yellowknife, NT, X1A2P7Danica.Hogan@ec.gc.ca867-669-

4754ᐱᓕᓇᐊᖏᒍᒪᔪᑦ:ᓇᐅᑦᓯᔪᑐᖅᑕᐅᓂᖏᓪᒧᑦ ᓯᐅᔨᓕᐅᑎᓴᖅᓵᓪᑦ ᐊᒃᐸᐃᑦ ᐊᒪᒪᓗ ᖃᖏᑦᓗᐃᑦ ᓯᓗᓵᑦ ᑲᑎᑎᑦ ᑲᑎᑎᑦ ᐊᐅᓚᑦᑎᑦ (ACMC) ᐱᖃᓯᐅᑎᓗᑦ ᐃᒪᖏᑕᐅᑦ >ᐃᔨᑦ ᐊᒪᒪᓗ ᐊᑦᑐᐃᓂᖏᓂᑦᑕᑦᑎᑦ ᐅᒪᔪᓂᑦ ᐃᒪᓕᑦ ᐃᖏᑦᑎᔪᓱᒋᐸᑦᑐᑦ. ᐊᖏᔪᒍᑕᒫᑦ, >ᓪᓚᖅᑐᓪᓕᓂᓱᑦᓯᑦ ᐅᒥᐊᖏᔪᐊᑦ ᐊᑦᑐᐊᓂᓪᑦ ᐅᐅᖕᒐ ACMC/CWS ᐱᔨᓇᐅᑎᓄᑦ ᐃᓯᑭᓇᐅᑎᓄᑦ ᖃᒥᖏᑭᓂᔪᓂᑦ ᐅᒪᔪᓂᑦ ᑕᒫᓂᖅᐸᑦᑐᑦᑐᑦ. CWS –ᓄᑦ ᐱᒋᐊᖏᕐᓂᓂᑦ ᖃᒥᖏᑭᐅᓴᓂᑦ ᐱᑕᖅᑭᑦᑐᖅ ᐃᒪᖏᑕᐅᑦ >ᐃᔨᑦ ᐅᓪᓚᐃᑕᐅᖅᑕᑦᓯᔨᒪᒪᓕᒐᓪᓕ ᑕᒫᓂ ᐊᒃᐸᐃ ᐊᒪᒪ ᖃᖏᑦᓗᐃᑦ ᐃᓂᓯᑭᓂ NWAs–ᖅᔪᑦ ᖃᐅᔨᓴᖏᐃᐅᒪᔪᑦᑕᐅᖅ ᐅᒪᔪᑦ ᓇᔪᒪᖃᑎᒋᑦ ᔨᓪᓚᖃᑎᒋᑦ ᐊᒪᒪᓗ ᐱᐅᖅᔨᐊᓂᓪᑦ ᓇᐅᑦᓯᔪᑐᖅᑕᐅᓂᑦ (ECOMaP), ᐱᓪᓕᐊᖅ ᑐᑲᖅᑕᓪᓕᒃ ᓇᐅᑦᓯᔪᑐᓂᓪᑦ ᖃᓇᐅᑕᖅᑐᓂᓪᑦ ᐱᐅᖅᔨᐊᖅᑕᐅᔪᓪᓗ ᐃᓂᐅᑦ ᐊᐅᖅᑕᐅᑦ ᐊᑐᑎᖃᖅᑐᓂᓪᑦ ᐱᐅᖅᔨᐊᖅᑕᐅᔪᓪᓗ ᐃᓂᐅᑦ ᐊᐅᖅᑕᐅᑦ ᐊᐅᖅᑕᐅᑦ ᐊᐅᖅᑕ

Personnel

Personnel on site: 6
Days on site: 2
Total Person days: 12
Operations Phase: from 2025-07-28 to 2027-09-26

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Akpait NWA (marine boundary only)	Researching	Marine	Akpait National Wildlife Area (NWA) protected area designated under the Canada Wildlife Act. The area is managed by the Canadian Wildlife Service and the Sululiit Area Co-Management Committee.We will deploy one marine acoustic recorder within this boundary, in a location recommended by the ACMC.	N/A	Marine boundary of Akpait National Wildlife Area. Qikiqtarjuaq is the closest community (about ~130km northwest of Akpait NWA)
Qaqulluit NWA (marine boundary only)	Researching	Marine	Qaqulluit National Wildlife Area (NWA) protected area designated under the Canada Wildlife Act. The area is managed by the Canadian Wildlife Service and the Sululiit Area Co-Management Committee. We will deploy one marine acoustic recorder within this boundary, in a location recommended by the ACMC.	N/A	Marine boundary of Qaqulluit National Wildlife Area. Qikiqtarjuaq is the closest community (about ~100km northwest of Qaqulluit NWA)

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Qikiqtarjuaq	Chair (Meeka Newkingnak) and committee members	Sululiit Area Co-Management Committee	2025-03-03

Authorizations

Indicate the areas in which the project is located:

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Canadian Wildlife Service	National Wildlife Area Permit	Applied, Decision Pending		
Nunavut Research Institute	Nunavut Scientific Research License. The HTO will be consulted on this project via the NRI Research Permit process. We will not send the MBS permit application separately so we avoid over-taxing the HTO with double consultation.	Applied, Decision Pending		

Project transportation types

Transportation Type	Proposed Use	Length of Use
Water	Nunavut Experience Outfitting (Billy Arnaquq)	

Project accomodation types

Community

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Sountrap ST 600 acoustic recorder	2	0.5m in length	passively record unwater sounds in the NWA
PORT MFE acoustic release & PACS deck box with MFE transducer	2	NA	Allows the crew to recover the acoustic recorder by triggering release on the mooring
25lb iron plate weights	10	11	used to anchor the recorders to the sea floor
14 inch floats and marine rope	4	14 diameter, 40m rope	Used to allow the acoustic recorder to resurface when released from mooring
12 gauge shotgun and ammo	1	NA	for polar bear safety
Local boat from Qikiqtarjuaq	1	Unknown- will update	for travelling to mooring sites

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Diesel	fuel	10	25	250	Liters	For boat - travelling from Qikiqtarjuaq to the mooring sites within NWAs. Fuel amount still TBD.

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
Information is not available				

Environmental Impacts:

This project will have minimal impacts to marine wildlife, however, there is a chance that deployment and retrieval activities could disturb any wildlife in the area. The vessel will contribute to underwaternoise in the area, could potentially strike whales or other submerged marine wildlife, and will likely cause some wildlife to flee the vessel. Crew will follow guidelines provided by the ACMC for vessel operation and will attempt to avoid wildlife whenever safely possible. Time spent in the NWA will be minimized to the time required to deploy the recorders (estimated 1 days per year). It is likely that wildlife disturbed by the ship will resume normal behavior once the ship leaves the area. The vessel will not enter the NWA unless it is deemed safe to do so by the boat operator that is experienced in navigating Arctic waters and knowledgeable in assessing ice conditions. This will reduce the risk of a serious vessel accident that could result in pollution of habitat in the NWA.

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

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

Description of Existing Environment: Physical Environment

Created in 2010, Akpait and Qaqulluit NWAs protect the nesting cliffs of colonial seabirds as well as their joint and larger marine waters extending to the territorial sea limit. The marine rich waters provide essential feeding grounds for nesting seabirds between April and October each year, in addition to supporting a variety of marine mammals including different types of seals, polar bears and various whale species.

Description of Existing Environment: Biological Environment

Located 30 km apart, together Akpait and Qaqulluit represent one of the most important seabird areas in the eastern Canadian Arctic, supporting more than 500,000 marine birds during the summer.The Akpait NWA hosts one of the largest colonies of thick-billed murres, equivalent to 8% of the Canadian population (about 130, 000 pairs). Akpait is the Inuktitut word for “murres”. Other seabirds nesting in large numbers at Akpait include northern fulmars and black-legged kittiwakes.The Qaqulluit NWA hosts the largest colony of northern fulmars, equivalent to 20% of the Canadian population (about 27,000 pairs). Qaqulluit is the Inuktitut word for “fulmars”. Other nesting birds found in smaller numbers at Qaqulluit include black guillemots, glaucous and Iceland gulls.

Description of Existing Environment: Socio-economic Environment

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

Cumulative Effects

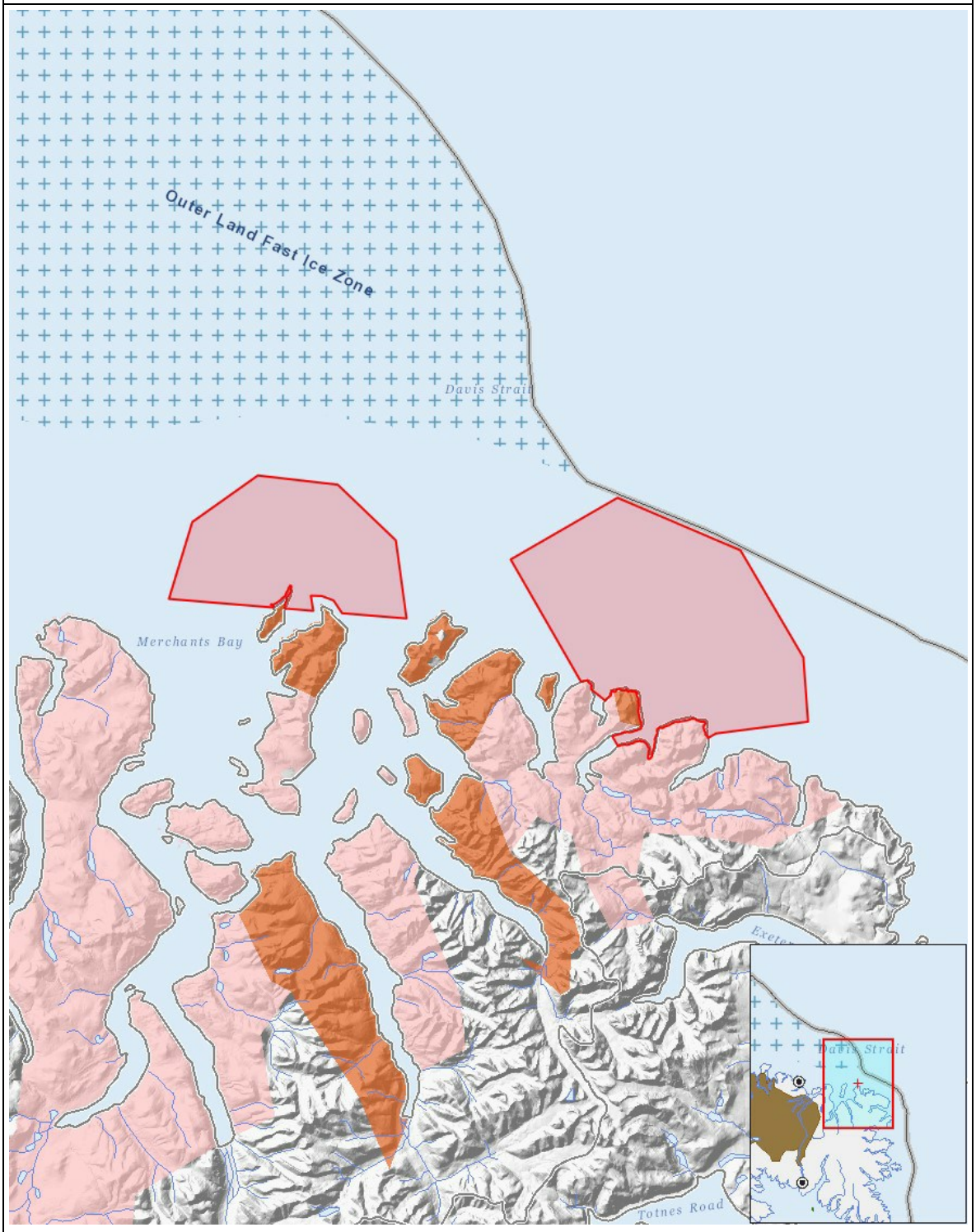
Impacts

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		P	-	-	-	-	-	-	-	-	-	-	U		-	U	U	M	P		-	-	P	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

Project Location



List of Project Geometries

1	polygon	Akpait NWA (marine boundary only)
2	polygon	Qaqulluit NWA (marine boundary only)