NIRB Application for Screening #126164

Movement and chemical ecology of fishes in Hudson Bay

Application Type:	New
Project Type:	Scientific Research
Application Date:	Saturday, April 12, 2025
Period of operation:	from 2025-05-26 to 2035-03-22
Project Proponent:	Connor Faulkner Fisheries and Oceans Canada 501 University Crescent Winnipeg MB R3T 2N6 Canada Phone Number:: 2049148147, Fax Number::

DETAILS

Non-technical project proposal description

English: Arctic char, a culturally and economically vital species, is the most harvested species of wildlife in Nunavut, serving both subsistence and commercial needs for Inuit. Despite this importance, many knowledge gaps remain with respect to Arctic char biology and ecology, especially regarding movements and habitat use in both freshwater and marine environments. To address these knowledge gaps, we are continuing a 2023 project using acoustic telemetry to study the migratory ecology of sea-run Arctic char in Rankin Inlet, Kivalliq region, Nunavut. Specifically, we will continue acoustically tagging and subsequently tracking Arctic char from two river systems (Diana and Meliadine) using a fixed-acoustic array in Rankin Inlet to address key questions regarding the migration, dispersal, home ranges, and habitat use of this species. These results will provide critical insights into key marine habitats and migration timing, all of which will provide important baselines for future monitoring as habitats in the area continue to be influenced by climate change. Further, we will continue to study the migratory ecology of biologically important marine fish species, including Greenland cod, marine sculpins, lumpfish, and capelin within the area to examine critical marine habitats and movement patterns within Rankin Inlet and along western Hudson Bay more generally to assess how these species may be influenced by climate change. All told, these results may have important implications for informing management strategies pertaining to assessing the mixing of Arctic char populations harvested at discrete locations in the region, and furthering our understanding of marine and freshwater movements and habitat use by these species, including areas critical for feeding, spawning and overwintering. Additionally, microplastic pollution is a contaminant of emerging Arctic concern. These small particles (<5 mm) have been identified in environmental compartments ranging from glacier ice to the stomachs of Arctic fishes. While it is clear microplastics are present in the Arctic, it is unclear which organisms are most susceptible, and whether ingested microplastics can expose organisms to toxic plastic additives. This is of concern for Northern communities given their reliance on traditional country food sources and the environment. Therefore, our team has worked closely with the Kivalliq Wildlife Board and the communities of Rankin Inlet and Sanikiluaq to better understand the burden of microplastics and plastic additives in the Hudson Bay marine food webs. Here, we build on existing work in the area to better understand the prevalence of microplastics and their additives as co-contaminants in Arctic marine fishes in Rankin Inlet (northwestern Hudson Bay) and Sanikiluaq (southeastern Hudson Bay). We propose to conduct field sampling of Arctic char, Greenland cod, marine sculpins, capelin, and zooplankton in collaboration with northern partners to help address these questions.

French: N/A.

Inuktitut: ᐃᖃᓗᒃᐲᑦ, ᐱᖅᖁᓯᕆᔭᐅᔪᒃᑯᑦ ᐊᒻᒪᓗ ᐱᕈᖅᐸᓪᓕᐊᓂᕐᒧᑦ ᐊᑑᑎᖃᖅᑐᑦ, ᐃᖃᓗᒃᑕᐅᒐᔪᓛᖑᔪᑦ ᓄᓇᕗᒻᒥᑦ, ᓂᕆᔭᐅᖃᑦᑕᖅᖢᑎᒃ ᐊᒻᒪᓗ ᓂᐅᕕᐊᒃᓴᕆᔭᐅᓂᐊᕐᓗᑎᒃ ᐃᓄᖕᓄᑦ. ᑕᒪᑐᒧᙵ ᐱᒻᒪᕆᐅᒐᓗᐊᖅᑎᓪᓗᒍ, ᐊᒥᓱᓂᒃ ᖃᐅᔨᒪᓂᖃᙱᑦᑐᑦ ᐃᖃᓗᒃᐲᑦ ᐆᒪᓂᖃᕐᓂᕆᔭᖏᓐᓄᑦ ᐊᒻᒪᓗ ᐱᕈᖅᐸᓪᓕᐊᔾᔪᑎᖏᓐᓄᑦ, ᐱᓗᐊᖅᑐᒥᑦ ᐊᐅᓚᓂᕆᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐊᒻᒪᓗ ᐃᓂᐅᔪᓂᑦ ᐊᑐᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐃᒪᑦᑎᐊᕙᖕᒥᑦ ᐊᒻᒪᓗ ᑕᕆᐅᕐᒥᑦ. ᐱᓕᕆᐊᕆᓂᐊᕐᓗᒋᑦ ᖃᐅᔨᒪᓂᕐᒥᑦ ᐱᑕᖃᙱᓐᓂᐅᔪᑦ, ᑲᔪᓯᓂᐊᖅᑕᕗᑦ 2023-ᒥᑦ ᐱᓕᕆᐊᖑᓚᐅᖅᑐᖅ ᐊᑐᕐᓗᑕ ᐃᓕᓴᐅᓯᒪᔪᓂᒃ ᖃᐅᔾᔪᑎᓂᒃ ᓇᒧᙵᐅᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓗᒋᑦ ᑕᕆᐅᕐᒧᐊᖅᑕᖅᑐᑦ ᐃᖃᓗᒃᐲᑦ ᑲᖏᖅᖠᓂᕐᒥᑦ, ᑭᕙᓪᓕᕐᒥᑦ, ᓄᓇᕗᒻᒥᑦ. ᐃᒪᓐᓇᐃᓕᐅᓗᐊᕐᓂᐊᖅᑐᒍᑦ, ᖃᐅᔨᓴᐃᔾᔪᑎᓂᒃ ᑖᓪᓕᖅᑐᕐᓗᒋᑦ ᐊᒻᒪᓗ ᑭᖑᓂᐊᒍᑦ ᖃᐅᔨᓴᕐᓗᒋᑦ ᐃᖃᓗᒃᐲᑦ ᒪᕐᕉᖕᓂᑦ ᑰᖕᓂᑦ (ᐃᖃᓗᐃᑦ ᐊᒻᒪᓗ ᑕᓯᕐᔪᐊᖅ) ᐊᑐᕐᓗᑕ ᐃᓕᓴᐅᓯᒪᔪᓂᒃ ᖃᐅᔨᓴᐃᔾᔪᑎᓂᒃ ᑲᖏᖅᖠᓂᕐᒥᑦ ᖃᐅᔨᓂᐊᕐᓗᒋᑦ ᐊᐱᖅᖁᑕᐅᓗᐊᖅᑐᑦ ᓅᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᓇᒧᙵᐅᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᐊᖏᕐᕋᕆᔭᖏᓐᓄᑦ ᑎᑭᐅᒪᓂᖏᓐᓂᑦ, ᐊᒻᒪᓗ ᐃᓂᐅᔪᒥᒃ ᐊᑐᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐃᖃᓗᒃᐲᑦ. ᖃᓄᐃᖓᓂᐅᔪᑦ ᑐᓂᓯᓂᐊᖅᑐᑦ ᐱᒻᒪᕆᐅᔪᒥᒃ ᖃᐅᔨᑎᑦᑎᓂᕐᒧᑦ ᑕᕆᐅᕐᒥᐅᑕᓄᑦ ᐃᓂᒋᔭᐅᔪᓂᑦ ᐊᒻᒪᓗ ᖃᖓᒃᑯᑦ ᓅᖃᑦᑕᕐᓂᖏᓐᓄᑦ, ᑕᒪᕐᒥᓗᒃᑖᖅ ᑐᓂᓯᓂᐊᖅᑐᑦ ᐱᒻᒪᕆᐅᔪᓂᒃ ᐱᒋᐊᕐᕕᐅᔪᓂᑦ ᓯᕗᓂᒃᓴᒥᑦ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐃᓂᒋᔭᐅᔪᑦ ᑕᒫᓂᑦ ᐱᑎᑦᑎᓂᖃᐃᓐᓇᕐᒪᑕ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓂᑦ. ᐊᒻᒪᓗ, ᖃᐅᔨᓴᐃᓐᓇᕐᓂᐊᖅᑕᕗᑦ ᓅᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐆᒪᓂᖃᕐᓂᖏᓐᓄᑦ ᐱᒻᒪᕆᐅᔪᑦ ᐊᔾᔨᒌᙱᑦᑐᓄᑦ ᐃᖃᓗᖕᓄᑦ, ᐃᓚᐅᑉᓗᑎᒃ ᐆᒐᐃᑦ, ᑲᓇᔪᐃᑦ, ᐳᕕᖅᓯᒪᔪᑦ ᐃᖃᓗᐃᑦ, ᐊᒻᒪᓗ ᐃᖃᓗᐊᓛᑦ ᐃᓂᐅᔪᒥᑦ ᕿᒥᕐᕈᓂᐊᕐᓗᒋᑦ ᐊᑐᖅᑕᐅᓗᐊᖅᑐᑦ ᑕᕆᐅᕐᒥᑦ ᐃᓂᐅᔪᑦ ᐊᒻᒪᓗ ᐊᐅᓚᓂᖏᑦᑕ ᖃᓄᐃᓕᐅᕐᓂᖏᑦ ᑲᖏᖅᖠᓂᕐᒥᑦ ᐊᒻᒪᓗ ᐱᖓᖕᓇᖅᐸᓯᖓᓂᑦ ᑕᓯᐅᔭᕐᔪᐊᑉ ᐱᓗᐊᖅᑐᒥᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓗᒋᑦ ᖃᓄᖅ ᐃᖃᓗᐃᑦ ᐱᑎᑕᐅᔪᖕᓇᕐᒪᖔᑕ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓᓄᑦ. ᐅᖃᐅᑎᔭᐅᓯᒪᓗᒃᑖᖅᑐᑦ, ᖃᓄᐃᖓᓂᐅᔪᑦ ᐱᒻᒪᕆᐅᔪᒥᒃ ᖃᐅᔨᑎᑦᑎᔪᖕᓇᖅᑐᑦ ᐃᑲᔪᕐᓂᐊᕐᓗᑎᒃ ᐊᐅᓚᑦᑎᓂᕐᒧᑦ ᖃᓄᖅᑑᕈᑎᓂᑦ ᐱᔾᔪᑎᖃᖅᑐᓂᒃ ᖃᐅᔨᓴᐃᓂᕐᒧᑦ ᐊᑯᑉᓕᖅᓯᒪᔪᓂᒃ ᐃᖃᓗᒃᐱᒃᑕᐅᔪᓂᑦ ᐃᖕᒥᒃᑰᖓᔪᓂᑦ ᐃᓂᐅᔪᓂᑦ ᑕᒫᓂ, ᐊᒻᒪᓗ ᑐᑭᓯᐊᓕᖅᑎᑦᑎᒃᑲᓐᓂᕐᓗᑎᒃ ᑕᕆᐅᕐᒥᑦ ᐊᒻᒪᓗ ᐃᒪᑦᑎᐊᕙᖕᒥᑦ ᐊᐅᓚᓂᕆᔭᖏᓐᓂᑦ ᐊᒻᒪᓗ ᐃᓂᐅᔪᓂᒃ ᐊᑐᖃᑦᑕᖅᑕᖏᓐᓂᑦ ᐃᖃᓗᐃᑦ, ᐃᓚᐅᑉᓗᑎᒃ ᐱᒻᒪᕆᐅᒋᔭᐅᔪᑦ ᓂᕆᕝᕕᒋᖃᑦᑕᖅᑕᖏᑦ, ᒪᓐᓂᓕᐅᕐᕕᒋᖃᑦᑕᖅᑕᖏᑦ ᐊᒻᒪᓗ ᐅᑭᐅᒃᑯᑦ ᐅᕐᓂᒃᓯᒪᖃᑦᑕᖅᑕᖏᑦ. ᐃᓚᒋᔭᐅᔪᖅ, ᒥᑭᔪᑦ ᐊᐅᒃᑕᔩᓂᑦ ᐱᑦᑕᐅᖏᑦᑐᓂᒃ ᓴᖅᕿᐸᓪᓕᐊᑐᐃᓐᓇᖅᑐᑦ ᐅᑭᐅᖅᑕᖅᑐᒥᑦ ᐃᓱᒪᓘᑕᐅᔪᑦ.

ᒥᑭᔨᑎᑦ (< 5 ᒥᓕᒋᑕᐃᑦ ᐊᖏᑎᑎᓂᐅᓕᐳᐸ ᑐᖓᓀᓂᑐᑐᑦ) ᖃᐅᔨᔪᐅᓕᓗᔪᑦ ᐊᐸᑎᐅᐳᐸ ᐃᓕᖏᓂᓂᑦ ᑎᐱᐅᑎᓗᔪᑦ ᓴᖅᑭᑦ ᓗᑯᓂᑦ ᐃᑭᑭᑐᖏᓂᓄᓕᒃ ᐅᑭᐅᖃᑕᖃᑐᑦ ᐃᖃᓗᐃᑦ. ᓄᓇᓇᖏᑎᓪᓗᒍ ᒥᑭᔨᑦ ᐊᐅᓂᑕᔨᑦ ᑕᐃᒪᐅᓚᒪᑕ ᐅᑭᐅᖃᑕᖃᑐᑦ, ᓄᓇᓇᖃᑐᖃᖅ ᐅᒪᔪᕆᓕᑦ ᐊᓂᑐᑕᐅᔪᖏᓕᓕᖅᓚᒻᒪᓗᑕ, ᐊᓚᒪᓗ ᓂᓗᔨᐅᓂᐸᑕ ᒥᑭᔨᑦ ᐊᐅᓂᑕᔨᑦ ᐊᓂᑐᓂᓕᕆᓂᖅ ᐅᒪᔪᕆᓕᓂᓂᖅ ᐊᐅᓂᑕᔨᑦ ᐱᑦᑕᐅᑭᑦᑐᓂᑦ ᐃᓕᔨᐅᓂᐳᒪᔪᓄᑦ. ᐃᓂᒪᓗᑕᐅᔪᖅ ᐅᑭᐅᖃᑕᖃᑐᑦ ᓄᓇᓕᓐᓄᑦ ᐱᖃᑦᑯᓂᓕᔪᓗ ᓂᓗᔨᐅᖃᖅᑕᑦᓂᓐᓂᑐᓄ ᐊᓚᒪᓗ ᐊᐸᑎᒍᑦ. ᑕᐃᒪᓕᓐᓄᑦ, ᐱᓕᓂᔨᐅᖅ ᐱᓕᓂᖃᖅᑎᑦᓴᖅᓯᒪᔪᑦ ᑭᓴᓕᓕᒥᑦ ᐅᓪᒪᔪᕆᓂᔨᑦᔪᐊᑲᑯᓂᑦ ᐊᓚᒪᓗ ᓄᓇᓕᓐᓄᑦ ᑲᖏᑦᓀᓂᑦ ᓴᓂᑭᔨᓂᑦ ᐊᓚᒪᓗ ᔪᓂᑭᔨᓂᑦ ᐅᓪᒪᔪᕆᓂᔨᑦ ᑕᓂᐅᑎᑦᓴᐅᓂᑦ ᑐᓂᑭᑦᑐᑕᖃᖅᑐᓂᑦ. ᑕᒡᓴᓂ, ᐱᓴᓪᓕᐊᕐᓇᒥᖃᓕᑕᖅᑕᑦᓂᓐᓂᑦ ᐱᓕᓂᐊᖅᓯᒪᔪᓂᑦ ᐃᓂᓐᓂᑦ ᑐᓂᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᐱᑦᑕᐅᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᑐᓂᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᐱᑦᑕᐅᑭᑦᑐᑕᖃᖅᑐᓂᑦ ᐅᑭᐅᖃᑕᖃᑐᑦ ᑕᓂᐅᑎᑦᓴᐅᓂᑦ ᐃᓕᓴᐅᑎᑦᓴᐅᓂᑦ ᐅᑭᐅᖃᑕᖃᑐᑦ ᑕᓂᐅᑎᑦᓴᐅᓂᑦ ᐃᓕᓴᐅᑎᑦᓴᐅᓂᑦ ᐅᑭᐅᖃᑕᖃᑐᑦ ᐃᓕᓴ

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Location where sampling with occur in the large lake in the Sanikiluaq area.	Sampling sites	Marine	N/A.	N/A.	Approximately 20 km from the community of Sanikiluaq.
Location where sampling with occur in the southern extent of the Sanikiluaq area.	Sampling sites	Marine	N/A.	N/A.	Approximately 90 km from the community of Sanikiluaq.
Location where sampling with occur in the northern extent of the Sanikiluaq area.	Sampling sites	Marine	N/A.	N/A.	Approximately 40 km from the community of Sanikiluaq.
Location where sampling with occur in the northern extent of the Belcher Islands.	Sampling sites	Marine	N/A.	N/A.	Approximately 10 km from the community of Sanikiluaq.
Location where sampling with occur in the Rankin Inlet area.	Sampling sites	Marine	N/A.	N/A.	Furthest point approximately 67 km from the community of Rankin Inlet.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Rankin Inlet	Andre Aokaot	Kangiqliniq Hunters and Trappers Organization	2025-01-23
Rankin Inlet	Kivalliq Wildlife Board	Stanley Adjuk/Amy Kaludjak	2024-11-16
Sanikiluaq	Luccasie Arragutainaq	Sanikiluaq Hunters and Trappers Association	2024-11-26

Authorizations

Indicate the areas in which the project is located:

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Hunters and Trappers Associations/Organizations	The Kangiqliniq Hunters and Trappers Organization supported our proposed research in Rankin Inlet.	Active	2025-01-23	2026-04-01
Hunters and Trappers Associations/Organizations	The Kivalliq Wildlife Board supported our proposed research in Rankin Inlet.	Active	2024-11-16	2026-04-01
Hunters and Trappers Associations/Organizations	The Sanikiluaq Hunters and Trappers Association supported our proposed research in Sanikiluaq.	Active	2024-11-26	2026-04-01
Fisheries and Oceans Canada	Applied to the DFO Arctic animal care committee for an approved animal use protocol for all sampling and work that will be conducted within our research project. Committee has reviewed our application and will provide a decision in April 2025.	Applied, Decision Pending	2025-02-18	2026-04-01
Fisheries and Oceans Canada	Applied to the DFO Arctic licensing group for an approved license to fish for scientific purposes for all sampling and work that will be conducted within our research project. Committee has reviewed our application and will provide a decision upon approval of our projects by the NPC and NIRB.	Applied, Decision Pending	2025-02-18	2026-04-01
Other	Nunavut Planning Commission	Active	2025-04-05	2035-04-01

	screening decision.			

Project transportation types

Transportation Type	Proposed Use	Length of Use
Water	We will be travelling via boat to multiple sampling sites within Rankin Inlet and around the Belcher Islands (Sanikiluaq).	
Land	We will be travelling via ATV to multiple sampling sites within Rankin Inlet and around the Belcher Islands (Sanikiluaq).	

Project accomodation types

Community

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
ATV	4	83 in. (L) x 48 in. (H) x 47 in. (W)	ATV's will be used to transport the research team from town to the location of field work within Rankin Inlet and/or Sanikiluaq.
Boat and motor	1	22 feet (L) x 10 feet (W)	Boat and motor will be used to transport the research team from town to the location of field work within Rankin Inlet and/or Sanikiluaq.

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Gasoline	fuel	10	5	50	Gallons	Gasoline will be carried on the boat while completing field work within Rankin Inlet and/or Sanikiluaq as backup fuel reserves due to long distances travelled between field work study sites.
Ethanol	hazardous	1	1	1	Liters	Ethanol vials will be carried to store and preserve fish fin clips for genetic analysis.

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
Sampling sites	Non-Combustible wastes	10 lb	Food/beverage and miscellaneous waste generated throughout the duration of our field work will be brought back to town and disposed of in municipal landfills.	N/A.

Environmental Impacts:

The predicted environmental impacts of undertaking our scientific research in either Rankin Inlet or Sanikiluaq are all positive. All of our proposed scientific research assists in the management, conservation, and understanding of marine species such as fish and invertebrates.

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

In both Rankin Inlet and Sanikiluaq, there are trails from the community to our locations of sampling in each respective community. These trails are maintained by the local municipalities for use to access subsistence harvesting locations near the communities.

Description of Existing Environment: Biological Environment

Typical Arctic species (caribou, polar bears, seals, whales, fish, birds, small mammals, medium mammals, mosses, lichens, flowers) can be found in proximity to all of our sampling sites in Rankin Inlet and Sanikiluaq.

Description of Existing Environment: Socio-economic Environment

Our locations of sampling in each community are areas of local importance for subsistence and economic harvesting of fish species (majority being for Arctic char). These locations have been selected by the respective community HTO/HTA's to learn more about the wildlife species they harvest and consume through the examination of movement patterns, diet, and contaminant loads. Given unemployment rates in both Rankin Inlet and Sanikiluaq are moderate, our research project will hire up to three local individuals from the respective communities to assist with all field-related work.

Miscellaneous Project Information

Our scientific research is developed and guided alongside co-management partners (HTO/HTA/RWOs). We DO NOT conduct any research that these bodies have not been in support of, nor at locations that they have not been supportive of. We are in constant communication with the respective local bodies throughout the year, providing dates research will occur, research plans (that have already been approved), providing updates on work completed to date and results when available in the form of plain language summaries and reports shared to local HTO/HTA/RWOs and the communities as a whole.

Identification of Impacts and Proposed Mitigation Measures

There are no foreseeable impacts of this research that are negative - all impacts of our scientific research are positive as they assist in the conservation, management, and understanding of marine species such as fish and invertebrates.

Cumulative Effects

There are no foreseeable cumulative effects of this research that are negative - all effects of our scientific research are positive as they assist in the conservation, management, and understanding of marine species such as fish and invertebrates.

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																									
Sampling sites		P	U	U	-	P	P	U	U	U	P	U	P		U	P	U	P	P		U	P	P	U	P
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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

Project Location

List of Project Geometries

1 polygon Location where sampling with occur in the large lake in the Sanikiluaq area.

2 polygon Location where sampling with occur in the southern extent of the Sanikiluaq area.

3 polygon Location where sampling with occur in the northern extent of the Sanikiluaq area.

4 polygon Location where sampling with occur in the northern extent of the Belcher Islands.

5 polygon Location where sampling with occur in the Rankin Inlet area.