



NIRB Application for Screening #125939

Estimating the abundance of the Foxe Basin polar bear subpopulation

Application Type: New

Project Type: Scientific Research

Application Date: 4/17/2024 1:29:59 PM

Period of operation: from 2024-07-28 to 2024-08-27

Project Proponent: Alyssa Bohart
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Canada
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Non-technical project proposal description

[illegible]

Days on site: 30

Total Person days: 240

Operations Phase: from 2024-07-28 to 2024-08-27

Closure Phase: from 2025-03-28 to 2025-10-27

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
1. ESRI Shapefile FB polar bear subpopulation boundary	Aerial surveys	Inuit Owned Surface Lands	This region is seasonally ice-free, spanning some 1.1 million km ² across Nunavut and Nunavik. The last polar bear survey of the area was done in 2010. At that time, collaring was still being done. The 2024 survey plan is currently being developed. It is based on the survey plan flown in 2010 but will include input from affected stakeholders and feedback received during the 2024 consultations. No collaring will be done.	There has been archeological sites identified in Ukkusiksalik National Park that we will avoid disturbing.	Eight communities in Nunavut (Kinngait, Chesterfield Inlet, Coral Harbour, Sanirajak, Igloolik, Kimmirut, Nauyasat, and Baker Lake) and four communities in Quebec (Akulivik, Ivujivik, Puvirnituq, and Salluit) lie within the FB bounds. Foxe Basin is a seasonal sea ice ecoregion, meaning that ice is lost completely or almost completely in the summer and bears amalgamate on land until the ice returns.
1. ESRI Shapefile FB polar bear subpopulation boundary	Airstrip use or construction	Inuit Owned Surface Lands	Fixed wing aircraft will be landing on frozen areas during fuel caching and cleanup. Helicopters will be landing for fuel and biopsy dart pickup. No new airstrips will be constructed.	All archeological sites will be avoided for landing aircraft. There has been archeological sites identified in Ukkusiksalik National Park that we will avoid disturbing.	Will be landing in communities for fuel (Kinngait, Chesterfield Inlet, Coral Harbour, Sanirajak, Igloolik, Kimmirut, Nauyasat, and Baker Lake) and in Ukkusiksalik National Park, and Dewey Soper (Isulijarnik), East Bay (Qaqsaqtuuq), Harry Gibbons (Ikkattuaq) migratory bird sanctuaries.
1. ESRI Shapefile FB polar bear subpopulation boundary	Camp	Inuit Owned Surface Lands	We will be camping at established camps run by Environment and Climate Change	N/A	Niko is 347 km from Kinngait PCI is 389 km from Sanirajak

			Canada: Niko Camp and Prince Charles Island Camp.		
Foxe Basin Fuel Cache Locations	Fuel and chemical storage	Inuit Owned Surface Lands	Fuel will be used from remote caches (Jet B fuel stored in drums) or from in community. Fuel drums will be cached at 70 sites through Foxe Basin to enable the work.	There has been archeological sites identified in Ukkusiksalik National Park that we will avoid disturbing.	Some caches are in communities.
1. ESRI Shapefile FB polar bear subpopulation boundary	Researching	Inuit Owned Surface Lands	In addition to the aerial survey, we propose to biopsy dart via helicopter to collect genetic material from bears in key subpopulation areas and in areas discussed with affected communities. The biopsy darting involves the darting of a bear which takes a small amount of genetic material (a small sample of tissue (<5 mm diameter) of skin, hair, fat) that is recovered when it ejects from the bear immediately after impact. Biopsy darting does not involve any handling or capturing of the bears and i	We will not be biopsy darting near identified archeological sites in Ukkusiksalik National Park.	We will not be biopsy darting near communities.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Baker Lake	Angel - HTO Manager	Baker Lake HTO	2024-02-07
Cape Dorset	Annie Suvega	Aiviq HTO	2024-02-16
Chesterfield Inlet	Venissa - HTO Manager	Aqigiq HTO	2024-02-15
Coral Harbour	Noah Nakoolak	Aiviit HTO	2024-02-14
Hall Beach	Elizabeth - HTA Manager	Hall Beach HTA	2024-02-17
Igloolik	Andrew Qaunaq	Igloolik HTO	2024-02-18

Kimmirut	Neevee Akavak	Mayukalik HTA	2024-02-09
Naujaat	Dolly Mablik	Arviq HTO	2024-02-13

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	Canadian Wildlife Service - required for work within the Migratory Bird Sanctuaries (Dewey Soper (Isulijarnik), East Bay (Qagsauqtuuq), Harry Gibbons (Ikkattuaq)); work can continue outside of these areas if permit not acquired	Applied, Decision Pending	2024-02-15	
Government of Nunavut, Department of Environment	Received 3 support letters: Coral Harbour, Sanirajak, and Naujaat.	Applied, Decision Pending	2024-03-05	
Hunters and Trappers Associations/Organizations	Held community consultations with 7/8 communities in Feb 2024. Received 3 support letters thus far: Coral Harbour, Sanirajak, and Naujaat. Will be meeting with Baker Lake next month.	Applied, Decision Pending	2024-02-17	
Kivalliq Inuit Association	Inuit Owned Lands Permit	Applied, Decision Pending	2024-04-16	
Qikiqtani Inuit Association	Inuit Owned Lands Permit	Applied, Decision Pending	2024-04-16	
Parks Canada	For work in Ukkusiksalik National Park.	Applied, Decision Pending	2023-10-30	

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	ransportation between sites and in the field will be by 2 rotary aircraft.	
Land	Transportation within communities will be by rental trucks.	

Project accomodation types

Permanent Camp

Community

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Helicopter	2	N/A	Aerial survey & travel between sites
Truck	2	N/A	Transport field crews to and from airport
Biopsy darts	800	17x1.5cm	collect biopsy (DNA) samples from bears
Biopsy darts	800	17x1.5cm	collect biopsy (DNA) samples (<5 mm diameter) from bears
Dart Gun	4	13Hx55Wx4D - 12lbs	Shoots the biopsy dart from 0-15 meters
Steel posts	45	6ft	Hold barbed wire and camera traps
Barbed wire	350m	10mx10mx10m	Attach to 3 poles (form a triangle) - bears hair snags on them, providing a DNA sample
Heavy duty zip ties	200	200lb strength	attach barbed wire to posts
Camera Trap with security box	11	~ 5.5 x 4.5 x 3 inches	Collect images of bears that hair is collected from
Scented bait	11L	11L	Draw in bears to trap - No meat or food reward ONLY scent
Sandbags	45	2'x1'	Hold posts down
Guy lines	45	6ft	Tie posts to sandbags

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Aviation fuel	fuel	325	200	65000	Liters	Helicopter fuel
Gasoline	fuel	2	25	50	Gallons	Generator Fuel at camps

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	In plastic containers.	From the nearby freshwater lakes to Niko and PCI camps.

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Camp	Greywater	40 Gallons	Established greywater pit at both camps.	N/A
Camp	Sewage (human waste)	10L	Established outhouses at both camps.	N/A

Environmental Impacts:

Disturbance caused by the project will be mitigated as much as possible. Landings will be kept to a minimum, and will only be undertaken when essential (to refuel or to retrieve a biopsy dart). Disturbance to wildlife will be minimized to the extent possible. The objective of the survey is to determine the abundance of polar bears, and in some instances to collect biopsy samples. However, disturbance will not exceed a minute, and once the work conducted the area will be cleared and will not be returned to. Other wildlife will be noted, and work will continue without lingering in the area. Disturbance to water is expected to be minimal. Some ocean surveying will be conducted, but no sampling will take place over the ocean, and we expect the surveying to be rapid.

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

The study area will include Ukkusiksalik National Park & Migratory Bird Sanctuaries (Dewey Soper (Isulijarnik), East Bay (Qaqsauqtuuq), Harry Gibbons (Ikkattuaq)).

Description of Existing Environment: Biological Environment

The areas will include caribou, which we have mitigation methods in place to not disturb the species. We will avoid disturbing birds protected under the Migratory Birds Convention Act.

Description of Existing Environment: Socio-economic Environment

We will be operating out of Kimmirut, Kinngait, Igloolik, Sanirajak, Naujaat, Coral Harbour, and Chesterfield Inlet. We have consulted with all of these communities about our proposed work. Part of the Parks Canada permitting process has been planning areas that we can access for research and the protected archeological sites that we will avoid to mitigate any disturbance. We will communicate with communities when operating our research to avoid any detrimental effects to harvesting or sport hunt opportunities.

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

The main impact that our work could have is to disturb wildlife. Any disturbance will be minimized by keeping exposure short and by clearing an area once surveyed.

Cumulative Effects

No cumulative effects are anticipated by this work.

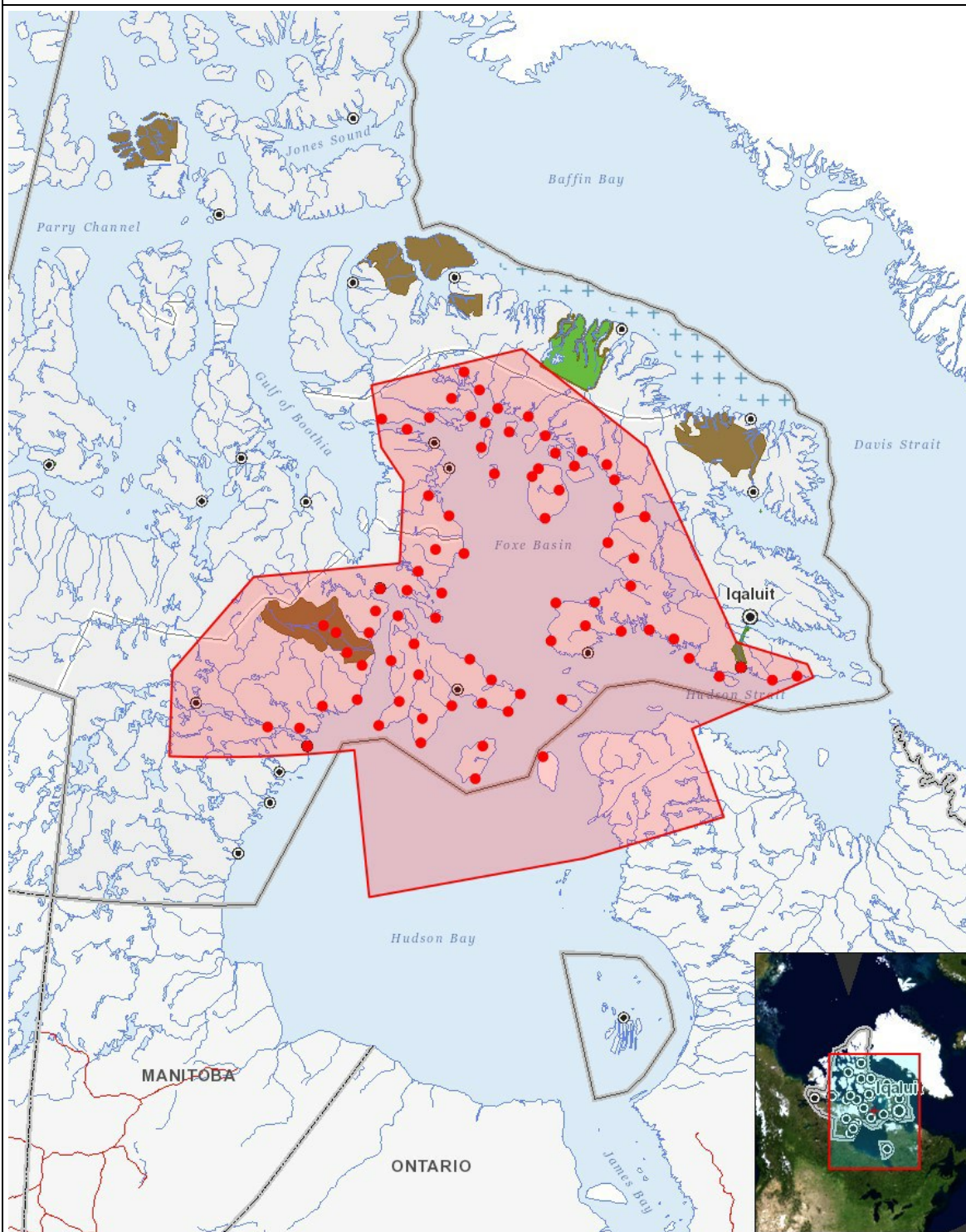
Impacts

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																										
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Operation																										
Aerial surveys		M	U	U	-	U	U	M	U	U	U	N	N		M	M	M	M	M		M	P	P	P	P	U
Decommissioning																										
Aerial surveys		M	U	U	-	U	U	M	U	U	U	M	M		M	M	M	M	M		M	P	P	P	P	P

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

Project Location



List of Project Geometries

1	polygon	1. ESRI Shapefile FB polar bear subpopulation boundary
2	point	Foxe Basin Fuel Cache Locations
3	point	Foxe Basin Fuel Cache Locations
4	point	Foxe Basin Fuel Cache Locations
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