



## **NIRB Uuktuutinga Ihivriughikhamut #125939**

### **Estimating the abundance of the Foxe Basin polar bear subpopulation**

|                                |   |
|--------------------------------|---|
| <b>Uuktuutinga Qanurittuq:</b> | New   |
| <b>Havaap Qanurittunia:</b>    | Scientific Research   |
| <b>Uuktuutinga Ublua:</b>      | 4/17/2024 1:29:59 PM  |
| <b>Period of operation:</b>    | from 2024-07-28 to 2024-08-27   |
| <b>Havauhikhaq</b>             | Alyssa Bohart   |
| <b>Ikayuqtinga:</b>            | Government of Nunavut<br>P.O. Box 1000, Stn 1310<br>Iqaluit Nunavut X0A 0H0<br>Canada<br>Hivayautit Nampanga:: 780-235-0992, Kayumiktukkut Nampanga:: |

## Tukihianaqṭunik havaariyaumayumik uqauhiyun

Uiviititut: N/A

Inuinnagtun: N/A

Personnel on site: 8

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

## Hulilukaarutit

| Inigiya  | Hulilukaarut Qanurittuq      | Nunannga Qanurittaakhaanik | Initurlinga qanuritpa  | Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyarannguqtut akhuurninnga  | Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtaiiyainnit nuna  |
|--|------------------------------|----------------------------|--|--|--|
| 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 <sup>2</sup> 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, Naujaat, 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, Naujaat, and Baker Lake) and in Ukkusiksalik National Park, and Dewey Soper (Isulijarnik), East Bay (Qaqsauqtuuq), Harry Gibbons (Ikkattuaq) migratory bird sanctuaries.  |
| 1. ESRI  | Camp                         | Inuit Owned Surface        | We will be   | N/A  | Niko is 347 km   |

|  |                           |                           |   |  |   |
|--|---------------------------|---------------------------|---|--|---|
| Shapefile FB polar bear subpopulation boundary         |                           | Lands                     | camping at established camps run by Environment and Climate Change Canada: Niko Camp and Prince Charles Island Camp.  |  | from KinngaitPCI is 389 km from Sanirajak       |
| 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 | We will not be biopsy darting near identified archeological sites in Ukkusiksalik National Park.           | We will not be biopsy darting near communities. |

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|--|--|--|--|--|--|
|  |  |  | handling or<br>capturing of<br>the bears and i |  |  |
|--|--|--|--|--|--|

**Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun**

| Nunauyuq      | Atia                    | Timiuyuq       | Upluani<br>Uqaqatigiyaungmata |
|---------------|-------------------------|----------------|-------------------------------|
| Qamaniittuaq  | Angel - HTO Manager     | Baker Lake HTO | 2024-02-07                    |
| Kinngait      | Annie Suvega            | Aiviq HTO      | 2024-02-16                    |
| Igluligaaryuk | Venissa - HTO Manager   | Aqigiq HTO     | 2024-02-15                    |
| Salliq        | Noah Nakoolak           | Aiviit HTO     | 2024-02-14                    |
| Sanirayaak    | 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                    |

# Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

Angiuttauvaktunik

| Munariniqmut<br>Ayuittiaqtuq                       | Angirutinga<br>Qanurittuq  | Tadja<br>Qanurittaakhaanik   | Ublua<br>Tuniyauyuq/Uuktuqtuq | Umikvikhaa<br>Ublua |
|--|--|------------------------------|-------------------------------|---------------------|
| Kaanatami Huradjat<br>Munariniq                    | Canadian<br>Wildlife Service<br>- required for<br>work within the<br>Migratory Bird<br>Sanctuaries<br>(Dewey Soper<br>(Isulijarnik), East<br>Bay<br>(Qagsauqtuuq),<br>Harry Gibbons<br>(Ikkattuaq));<br>work can<br>continue<br>outside of<br>these areas if<br>permit not<br>acquired | Applied, Decision<br>Pending | 2024-02-15                    |                     |
| Nunavut Kavamanga,<br>Avatiliriyikkut              | Received 3<br>support letters:<br>Coral Harbour,<br>Sanirajak, and<br>Naujaat.   | Applied, Decision<br>Pending | 2024-03-05                    |                     |
| Hunters and Trappers<br>Associations/Organizations | Held<br>community<br>consultations<br>with 7/8<br>communities in<br>Feb 2024.<br>Received 3<br>support letters<br>thus far: Coral<br>Harbour,<br>Sanirajak, and<br>Naujaat. Will be<br>meeting with<br>Baker Lake next<br>month.   | Applied, Decision<br>Pending | 2024-02-17                    |                     |
| Kivalliq Inuit Katimayiit                          | Inuit Owned<br>Lands Permit  | Applied, Decision<br>Pending | 2024-04-16                    |                     |
| Qikiqtani Inuit Katimayiit                         | Inuit Owned<br>Lands Permit  | Applied, Decision<br>Pending | 2024-04-16                    |                     |
| Pulaarviit Kaanata                                 | For work in<br>Ukkusiksalik<br>National Park.  | Applied, Decision<br>Pending | 2023-10-30                    |                     |

## Project transportation types

| Transportation<br>Type | Qanuq Atuqtauniarmangaa   | Length of Use |
|------------------------|---|---------------|
| Air                    | ransportation between sites and in the field will be by 2 rotary<br>aircraft. |               |

|      |   |  |
|------|---|--|
| Land | Transportation within communities will be by rental trucks. |  |
|------|---|--|

### **Project accomodation types**

Permanent Camp

Nunauyuq



# Ihuaqutivaluin Atuqtauyukhan

Hanalrutit atuqtaunahuat (ukuallu ikuutat, pampiutainnik, tingmitinik, akhaluutinik, hunaluuniit)

| Hanalrutit Qanurittuq         | Qaffiuyut | Aktikkulaanga – Qanurittullu | Qanuq Atuqtauniarmangaa  |
|-------------------------------|-----------|------------------------------|--|
| 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  |

## Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninga

| Qanurittuq urhuqyuaq hunavaluit aturninga: | Urhuqyuaq Qanurittuq | Qaffiuyut qattaryut | Qattaryuk Aktikkulaanga | Atauttimut Qaffiuyut | Ilanga  | Qanuq Atuqtauniarmangaa |
|--|----------------------|---------------------|-------------------------|----------------------|---------|-------------------------|
| Aviation fuel                              | fuel                 | 325                 | 200                     | 65000                | Liters  | Helicopter fuel         |
| Gasoline                                   | fuel                 | 2                   | 25                      | 50                   | Gallons | Generator Fuel at camps |

## Imaqmik Aturninga

| Ubluq qanuraaluk (m3) | Aturumayain imavaluin utiqittagaani qanuq | Atulirumayain imavaluin utiqittagani humi               |
|-----------------------|---|---|
| 0                     | In plastic containers.                    | From the nearby freshwater lakes to Niko and PCI camps. |

# Iqqakuq

## Ikkakunik Munakgiyauyunik

| Havauhikhaq<br>Hulilukaarut | Qanurittuq<br>Iqqakut       | Ihumagiyauyuq<br>Qanuraaluktut<br>Atuqtait | Qanuq<br>Iqqakuurniarmangaa                 | Halummaqtirarnirutikhan<br>piyutin |
|-----------------------------|-----------------------------|--|---|------------------------------------|
| Camp                        | Qirnarivyaktuq<br>imaq      | 40 Gallons                                 | Established greywater<br>pit at both camps. | N/A                                |
| Camp                        | Anaagun (inuin<br>anaaguin) | 10L  | Established outhouses<br>at both camps.     | N/A                                |

### Avatiliriniqmut Ayurhautingit:

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**

### **Qanurittuq Ittunik Avatinga: Avatingalluanga**

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

### **Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga**

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.

### **Qanurittuq Ittunik Avatinga: Inungit-maniliurutingit Avatinga**

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**

### **Naunaiyainiq ukuninnga Ayurhautingit unalu Piumayaat Ikikliyuumiutinahuarutit**

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.

### **Tamatkiumayunik Ihuikgutivaktunik**

No cumulative effects are anticipated by this work.

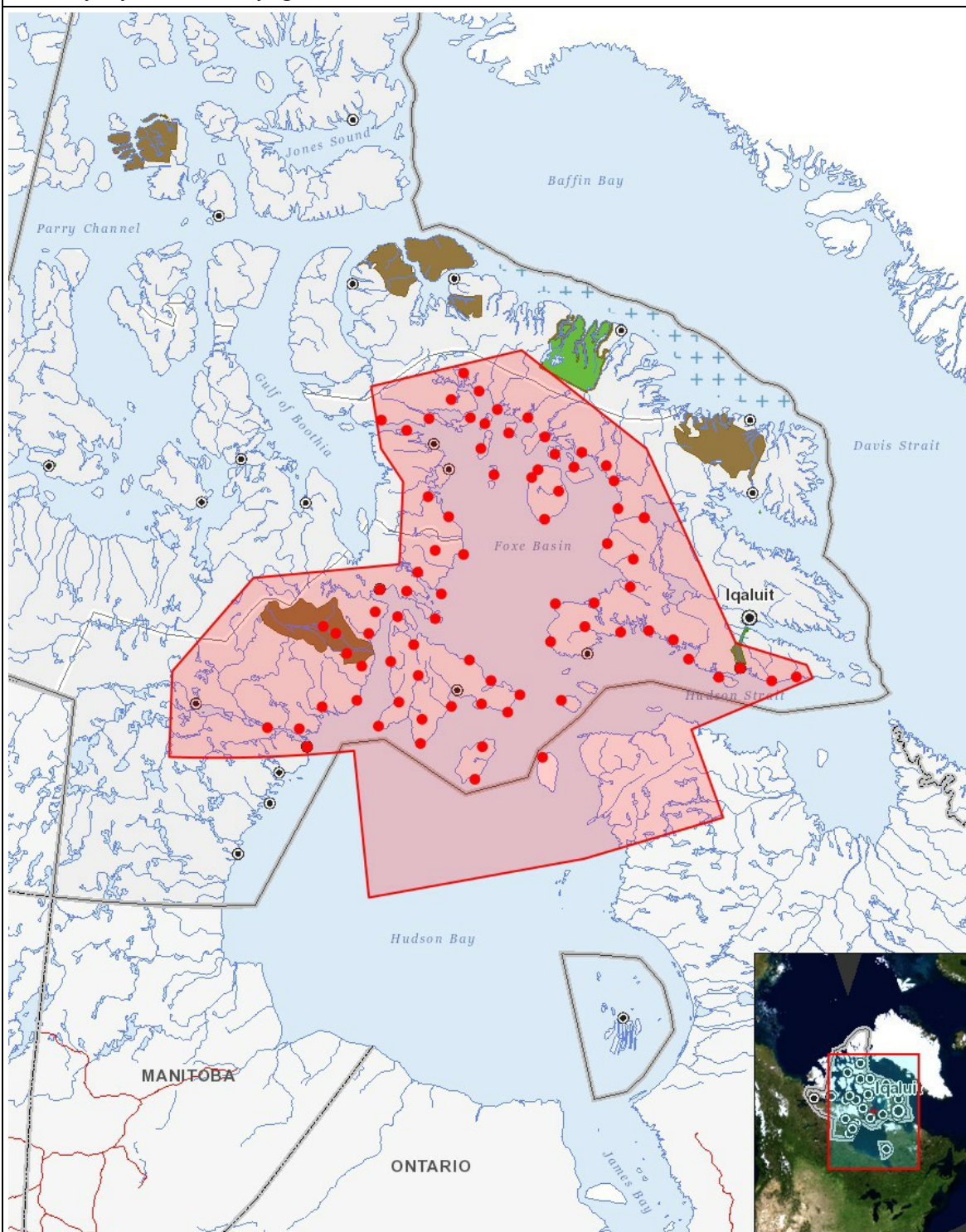
# Impacts

## Ilitariyauniq Avatiliriniqmut Ayurhautingit

|                |  | 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 |
|----------------|--|----------|--------------------------------|------------------|------------|-----------------------|---------------|--------------------|---|-----------------------------|---------------------------|--------------------------------|-------------|--------------|------------|------------|--|---|---|--------------------------|----------------|--|------------|--------------------|--------------------------|--------------|
| Havakvinga     |  |          |                                |                  |            |                       |               |                    |   |                             |                           |                                |             |              |            |            |  |   |   |                          |                |  |            |                    |                          |              |
| -              |  | -        | -                              | -                | -          | -                     | -             | -                  | -   | -                           | -                         | -                              | -           | -            |            | -          | -  | -   | -   | -                        |                | -  | -          | -                  | -                        | -            |
| Aulapkaininnga |  |          |                                |                  |            |                       |               |                    |   |                             |                           |                                |             |              |            |            |  |   |   |                          |                |  |            |                    |                          |              |
| Aerial surveys |  | M        | U                              | U                | -          | U                     | U             | M                  | U   | U                           | U                         | N                              | N           |              | M          | M          | M  | M   | M   |                          | M              | P  | P          | P                  | P                        | U            |
| Piiqtauniq     |  |          |                                |                  |            |                       |               |                    |   |                             |                           |                                |             |              |            |            |  |   |   |                          |                |  |            |                    |                          |              |
| 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 = Nakuuyuq, N = Nakuungittut unalu mikhilimaittuq, M = Nakuungittut unalu mikhittaaqtuq, U = Naluyauyuq)

## Havaariyauyukhamut Nayugaa



### 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                        |
| 5  | point   | Foxe Basin Fuel Cache Locations                        |
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| 80 | point | Prince Charles Island Camp      |