

NPC 150407: Estimating the abundance of the Foxe Basin polar bear subpopulation

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Proposal Status: Conformity Determination Issued

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Type of application: New

Proponent name:

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Proponent company:

Government of Nunavut

Project Description:

The Foxe Basin polar bear subpopulation is one of Nunavut's largest polar bear subpopulations – it spans a geographical area of about 1.1 million km². It is a seasonally ice-free subpopulation with bears aggregating on the coast during the summer months. There is no recent data for Foxe Basin, and there is therefore a need to reassess the subpopulation. The most recent population estimate is of 2,585 polar bears, derived from surveys conducted in 2009 and 2010. Environmental changes and resulting changes in population abundance or distribution in surrounding areas (Western Hudson Bay and Southern Hudson Bay) creates further need for an updated population abundance estimate of the Foxe Basin subpopulation. To effectively understand the dynamics within the Hudson Bay complex between subpopulations, we aim to investigate movements between surrounding subpopulation boundaries. Insight into movements between subpopulations will help inform the management of bears within the Foxe Basin subpopulation, as well as in neighbouring subpopulations. We propose to start a new abundance and movement study for Foxe Basin in 2024. This will fulfill mandated wildlife monitoring objectives and provide management advice to the Nunavut Wildlife Management Board and provide much needed abundance information to a data deficit subpopulation. The proposed methods include using distance sampling via aerial survey to estimate the Foxe Basin polar bear subpopulation abundance and using biopsy darting and community-led hair snare stations to investigate movements at subpopulation boundaries. The initiation of the population abundance survey and biopsy darting are proposed for August 2024, with hair snare stations proposed to start summer 2024. In consort with the aerial survey, we propose to employ statistical mark recovery models to investigate Foxe Basin bear survival and movements among the surrounding subpopulations by comparing the genetic information from the proposed

Project Schedule

Project Map

Id
Geometry
Location Name

[11918](#)

polygon

Foxe Basin

NPC Planning regions:

No Approved Plan

North Baffin

Keewatin

Project Land Use and Authorizations

Project Land Use:

Scientific Research

Scientific Research

Licensing Agencies:

Government of Canada - Canadian Wildlife Service

Government of Nunavut - Department of Environment

Kivalliq Inuit Association

Qikiqtani Inuit Association

Nunavut Impact Review Board

Government of Canada - Parks Canada

Material Use

Equipment:

	Type Quantity Type Use
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Helicopter

2

N/A

Aerial survey & travel between sites

Truck

2

N/A

Transport field crews from the airport

Fuel Use:

	Type Container Capacity
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Use

Aviation fuel	325
	200
Helicopter Fuel	
Gasoline	2
	25

Generator Fuel at camp

Hazardous Material and Chemical Use:

Type
Container
Capacity
Use

No data found

Water Consumption:

Daily Amount (m ²)
Retrieval Method
Retrieval Location

0

Waste and Impacts

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.

Waste Management:

Waste Type
Quantity Generated

Treatment Method	Disposal Method
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Greywater	40 Gallons
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N/A

Established greywater pit at both camps.

Sewage (human waste)