

Project Dashboard

Re-estimating the abundance of the Lancaster Sound (LS) polar bear subpopulation via genetic mark-recapture sampling (149332)

Proposal Status: Conformity Determination Issued

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Project Overview

Type of application: **New**

Proponent name:	Markus Dyck
Company:	Government of Nunavut
Schedule:	
Start Date:	2020-08-11
End Date:	2024-09-11
Operation Type:	Seasonal

Project Description:

The Government of Nunavut is planning to conduct a new population study (i.e., a research study) for the LS polar bear subpopulation with the objectives to obtain a new abundance estimate and up-dated demographic rates using less-invasive genetic biopsy sampling. In general, a genetic biopsy dart is fired from a helicopter and a small tissue sample is taken from a sampled bear without the need for immobilization of the animal. The sample then is used for genetic analysis to determine gender and identification of the animal. The survey will be flown during the spring (April – June) across the sea-ice. Because the study area is so large, and weather conditions are not great during the spring, we anticipate to have 3 field crews working in different areas across the study zone. We will mostly work out of communities, but there is a chance we utilize existing camps (Fort Ross, Creswell Bay camp, Gascoyne Inlet camp); there are several fuel caches throughout the study area that will be cached likely in the summer of 2020 to begin using the existing runways; and some caches will be filled during spring time. Our field component to search for bears begins likely April - June 2021, 2022, 2023.

Personnel:

Persons:	12
Days:	30

Project Map

List of all project geometries:

ID	Geometry	Location Name
6200	polyline	rough outline of the Lancaster Sound polar bear subpopulation boundary which is our study area

Planning Regions:

Qikiqtani
Kivalliq

Affected Areas and Land Types

Inuit Owned Surface Lands
Established National or Territorial Park
Settlement Area
North Baffin Planning Region

Project Land Use and Authorizations

Project Land Use

Scientific Research

Licensing Agencies

QIA: Land Use Licence I

CWS: National Wildlife Area permit under the Wildlife Area Regulations

CWS: Migratory Bird Sanctuary permit under the Migratory Bird Sanctuary Regulations

PC: 0

GN-DOE: Wildlife Research Permit

Other Licensing Requirements

No data found.

Material Use

Equipment

Type	Quantity	Size	Use
helicopter	1-3	LongRanger	we will use 1-3 helicopters to conduct our field operations during our search and sampling of polar bears within the study area during spring time. We search the sea ice but will re-fuel at our fuel caches that we have throughout the study area, or at airports when we are near communities. The field work is being conducted between April to June 2021, 2022, and 2023. There is likely a total of approx. 350 helicopter hours for the entire project flown. We will have several fuel caches throughout the study area; the Twin Otter will begin caching likely during summer (Aug/Sep 2020) at locations that have been used by Polar Continental Shelf, and that are safe to land and cache fuel. All fuel will be stored away from water sources, and checked while we are conducting the survey. The Twin Otter only comes in, drops off new fuel or collects empties throughout the length of the project. There are about 80 hrs of caching planned the first season.
Twin Otter	1	DeHavilland	
Generator 200W	1	Honda	If we camp out at some of the field location (Fort Ross, Polar Bear Pass Camp, Creswell Bay) we will have a generator to maintain the helicopter's fuel and oil temperatures during the cold nites through heat blankets, and we use the generator for camp use

Fuel Use

Type	Container(s)	Capacity	UOM	Use
Propane	2	100	Lbs	we will be using the propane for cooking in our camps through the April - June field season. Likely only need 1 per season for only 2 camps (camp duration is usually 2-3 weeks depending on weather)
Gasoline	12	5	Gallons	if we decide to stay in camps we need the fuel for the generators to maintain camp electricity and the helicopter; if there are 2-3 camps we need about 3-4 jerry cans per camp for 2-3 weeks each.
Aviation fuel	280	205	Liters	this fuel is spread throughout the study area in several fuel cache locations with number of drums ranging from 5 to 12; it is used for our polar bear survey so we can continue searching for bears effectively.
Diesel	2	205	Liters	if we stay at pre-existing camps we will use the diesel as heating fuel to keep the cabin warm and operational for the crew of 4 person per helicopter.

Hazardous Material and Chemical Use

Type	Container(s)	Capacity	UOM	Use
No records found.				

Water Consumption

Daily Amount (m³)	Retrieval Method	Retrieval Location
0.03	melting snow	surface of land

Waste and Impacts

Environmental Impacts

the environmental impacts of this project will be small since we are flying over the sea ice and spend most of our time working out of communities; the little time we are spending in camps is not different than anybody camping; the waste products are collected and returned to communities;

Waste Management

Waste Type	Quantity Generated	Treatment Method	Disposal Method
Sewage (human waste)	hard to estimate	none	solid human waste collected and brought back to communities and disposed of properly
Greywater	30-50 gal for entire project per year across 2-3 camps	none	disposed of into grey water pits
Non-Combustible wastes	2 large garbage bags/camp = 4-6 large bags total	none	will be collected and flown back to community