



New

Scientific Research

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► Description du promoteur La Section de recherche en géomatique se concentre sur l'utilisation de données et d'informations géospatiales pour soutenir le mandat de conservation et de protection de la faune d'Environnement et Changement climatique Canada. La Section de recherche en géomatique contribue à un certain nombre de programmes ministériels prioritaires, notamment la délimitation de l'habitat essentiel des espèces en péril et la conservation des oiseaux migrateurs.

2. Résumé du projet

Résumé non technique du projet La santé globale des océans du Canada est fortement influencée par l'environnement marin côtier. Dans le cadre du Plan de protection des océans (PPO), Environnement et Changement climatique Canada s'efforce de protéger, de préserver et de

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Southern Coastline of Lancaster Sound (This polygon shows the approx. extent of the mapping area) This mapping work will be performed from a Canadian Coast Guard vessel. (Timing - Sept 7-13, 2023)	Aerial surveys	Inuit Owned Surface Lands	NA	NA	Proximity to nearest communities: Arctic Bay, Pond Inlet and Resolute Bay.Proximity to nearest protected areas: Simirlik National Park, Bylot Island NBS, Prince Leopold MBS.
Southern Coastline of Lancaster Sound (This polygon shows the approx. extent of the mapping area) This mapping work will be performed from a Canadian Coast Guard vessel.	Aerial surveys	Crown	NA	NA	Proximity to nearest communities: Arctic Bay, Pond Inlet and Resolute Bay.Proximity to nearest protected areas: Simirlik National Park, Bylot Island NBS, Prince Leopold MBS.

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ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ	Seeking permission to fly over Bylot Island MBS and Prince Leopold MBS to capture geotagged videos and photos.	Applied, Decision Pending		
ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ	Seeking permission to place one fuel cache on Inuit owned lands. Fuel cache will allow the helicopter to refuel during helicopter surveys.	Applied, Decision Pending		
ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ	Application submitted for a scientific research license to conducting shoreline videography in Nunavut.	Applied, Decision Pending		
ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ	Parks Canada notified me that I do not require a National Park permit for Simirlik National Park as I will not be landing in the park. They provided me with some flight guidelines for flying over the park.	Active	2023-03-30	
ᐃᐱᑦᑐᑦᑭᑏᑦᑭᑏᑦᑭᑏᑦ	CIRNAC - Lands	Active	2023-05-04	

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Project transportation types

Transportation Type	የፍትህ ሚኒስቴር ማረጋገጫ	Length of Use
Air		

Project accomodation types

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Λ⁹δ^c 4⁹π² 4⁹π²CDσD4⁹ Δ^cπ²π²π² Δ^cπ²Δ^c, Γ^cπ²π²π², π²π²π², π²π²π²

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Helicopter	1	20 X 8	To collect key shoreline information and establish a shoreline database, low-altitude helicopter overflights (approximately 60-70 knots, 200-300 feet elevation above the water, and 300ft off the shoreline) are conducted at the study site to capture video of the shoreline characteristics.
Video camera	1	24 x 6	Video camera on a gimbal to collect geotagged videos.
Camera	1	6 x 4	Digital camera to collect geotagged photos.
GPS	2	2 x 3	GPS to record our flight path.
Tough book tablet	1	4 x 6	Toughbook tablet to display map and to record our flight path.
Drone	2	2x2	Fly drone along the coastline to see if we can collect high resolution imagery suitable to doing a remote sensing classification.

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Aviation fuel	fuel	0	208	0	Liters	Access to aviation fuel from the Gjoa Haven and Taloyoak Airports.
Aviation fuel	fuel	0	208	0	Liters	Access to aviation fuel from the coastguard

						ship for mapping in Lancaster Sound.
Aviation fuel	fuel	5	208	1040	Liters	We have applied to the Polar Continental Shelf Program for logistical research support in the Arctic. They have proposed one fuel caches with 5 drums at Cape Sydney - Cabin (69 50.667 N; 97 39.159 W) - and planned removal of drums by August 27th, 2023.
Aviation fuel	fuel	6	208	1248	Liters	We have applied to the Polar Continental Shelf Program for logistical research support in the Arctic. They have proposed one fuel caches with 6 drums at Kinngaak Peninsula (68 03.470 N; 95 24.250 W) - and planned removal of drums by August 27th, 2023.

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We anticipate the low-altitude helicopter overflight will have a relatively low potential impact of wildlife and the environment. Wildlife may be impacted by: Noise, sudden movements, physical contact with helicopter (unlikely). Anticipated wildlife impact may include: brief periods of alertness while maintaining activities, animals may watch the aircraft, minor changes in animals existing travel speeds, methods and routes, and no change in animal group size or movements. Some moderate impacts might include flight to escape terrain, or flocks of birds taking flights or other changes in animal behavior. Mitigation measures:

- Prior to initiation, identify and map sensitive sites (such as breeding, nesting, calving, migration) so we are aware of their location.
- Seasonally (mid May-mid-July) avoid caribou birthing/rearing habitats by limiting helicopter flights altitudes to a minimum of 400m above the ground.
- Select particular routes, heli-pads, heli-spots for all helicopter activities to avoid caribou birthing/rearing areas.
- Avoid landing sites on or near critical seasonal caribou habitats.
- No circling above wildlife if spotted.
- Avoid bear feeding sites, by limiting helicopter flights altitudes to a minimum of 400m above the ground and avoid general bear habitat by limiting helicopter flights altitudes to a minimum of 200m above the ground.
- Limiting helicopter overflights to a minimum of 400m above the ground in areas around waterfowl and shorebirds, and no circling over wetlands and flocks of birds.
- Utilizing existing airstrips or using existing disturbed areas for helicopter takeoff and landings.
- Predetermine suitable flight routes to: maintain avoidance distance, visual screening and reduced frequency of flights near critical areas.
- Identify suitable landing sites in advance.
- Plan fieldwork outside of calving/nesting/birthing season.
- Convey the mitigation measures to all staff.

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

The helicopter does a single pass along the shoreline and moves along the coast. We typically fly at 110km an hour, so we pass by sites fairly quickly, reducing and limiting impact to the wildlife present. We anticipate the low-altitude helicopter overflight will have a relatively low potential impact of wildlife

and the environment. Wildlife may be impacted by: Noise, sudden movements, physical contact with helicopter (unlikely). Anticipated wildlife impact may include: brief periods of alertness while maintaining activities, animals may watch the aircraft, minor changes in animals existing travel speeds, methods and routes, and no change in animal group size or movements. Some moderate impacts might include flight to escape terrain, or flocks of birds taking flights or other changes in animal behavior. As we are doing a single pass in the helicopter, past the coastline, we do NOT anticipate the single flight having an impact on changes in animal activity periods, change in animal bedding and feeding areas, lower productivity or abandonment of preferred habitats. Aircraft are noisy machines that travel at high speed with the ability to approach wildlife closely. All aircraft approaches will invoke some kind of reaction from animals. It is difficult to assess the impact of short-term reaction on populations, productivity and habitat use. Helicopters are also associated with rotor downwash and brownouts: high velocity wind vortices are generated by helicopter blades when the machine is hovering above a runway or bushland. This generates blankets of airborne dust particles, reduces habitat values and exposes vegetation and wildlife to lethal wind velocities. Direct physical damage such as to hearing or vegetation being shredded by rotor downwash. Mitigation measures:-Prior to initiation, identify and map sensitive sites (such as breeding, nesting, calving, migration) so we are aware of their location.-Seasonally (mid May-mid-July) avoid caribou birthing/rearing habitats by limiting helicopter flights altitudes to a minimum of 400m above the ground. -Select particular routes, heli-pads, heli-spots for all helicopter activities to avoid caribou birthing/rearing areas. -Avoid landing sites on or near critical seasonal caribou habitats.-No circling above wildlife if spotted.-Avoid bear feeding sites, by limiting helicopter flights altitudes to a minimum of 400m above the ground and avoid general bear habitat by limiting helicopter flights altitudes to a minimum of 200m above the ground. -Limiting helicopter overflights to a minimum of 400m above the ground in areas around waterfowl and shorebirds, and no circling over wetlands and flocks of birds.-Utilizing existing airstrips or using existing disturbed areas for helicopter takeoff and landings. -Predetermine suitable flight routes to: maintain avoidance distance, visual screening and reduced frequency of flights near critical areas. -Identify suitable landing sites in advance.-Plan fieldwork outside of calving/nesting/birthing season.-Convey the mitigation measures to all staff.

Cumulative Effects

Disturbance for wildlife is an additive effect. While the occasional disturbance may be of limited short-term impact (such as this shoreline mapping project), each successive disturbance (other projects in the area) can escalate the impact. The duration of disturbances can be of escalating importance. Wildlife initial response to disturbance is to flee to a secure area, so the ability to have a security area available where there is no disturbance is crucial for mitigation for short-term and long-term impacts. The following may be considered to mitigate cumulative impacts:-Where aircraft operations impact wildlife, impacts should be restricted to a minority of their habitat use areas. -For anticipated cumulative impacts, consider implementing protocols can which can identify: oOnly one flight path to be used. oHelicopter will not standby in or around higher elevation habitats oWhere possible flight paths will be restricted to lower elevation corridors oIn the event of an emergency situation, helicopter access with no restrictions will be permitted oAircraft meeting stricter noise standards be allowed to fly in a special incentive corridor.

Impacts

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1	<p>Southern Coastline of Lancaster Sound (This polygon shows the approx. extent of the mapping area) This mapping work will be performed from a Canadian Coast Guard vessel. (Timing - Sept 7-13, 2023)</p> <p>Coastline around Gjoa Haven and Taloyoak (This polygon shows the approx. extent of the mapping area) This mapping work will be performed based out of Gjoa Haven. (Timing - Aug 15-23, 2023)</p>
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