

Activités

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
General Research area of the Coastal Marine Area Near Chesterfield Inlet and Repulse Bay. Reserach will be conducted from the landfast Ice	Scientific/International Polar Year Research	Marine	N/A	In Chesterfield Inlet and Naujaat there are numerous Thule sites along the shore. Many of these sites are well marked by the community. However, our experienced local guides, will ensure we do not snowmobile near these sites, so as not to disturb these archeological sites.	This marine based, community driven, sea-ice and winter oceanographic research will be conducted from the communities of Chesterfield Inlet and Naujaat. Working from the land fast ice, we will travel with hired local guides from the communities of Chesterfield Inlet and Naujaat to sea-ice and water sampling locations. We will return each day to the community. Thus, our sampling sites will not be far from these communities.

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Naujaat	Dolly Mablik	Arviq Hunters and Trappers Organization	2017-03-06
Naujaat	Robert Hedley	Hamlet of Naujaat	2017-11-07
Chesterfield Inlet	Maryanne Issalik, Harry Aggark, Barney Aggark	Aqigiq Hunters and Trapper Organization	2017-01-09
Chesterfield Inlet	Simonie Sammurtok	Hamlet of Chesterfield Inlet	2017-03-22
Chesterfield Inlet	Janice Issalik	Aqigiq Hunters and Trapper Organization	2017-09-20

Autorisations

Indiquez les zones dans lesquelles le projet est situé

Kivalliq

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Pêches et Océans Canada	We will require a DFO research license for our spring 2018 field work as we will be collecting ice cores that would include ice algae	Not Yet Applied		
Institut de recherche du Nunavut	Land and Water Based Research licence	Not Yet Applied		

Project transportation types

Transportation Type	Quantité	Utilisation proposée	Length of Use
Air	0	We will travel to Chesterfield Inlet and Naujaat via Calm Air Scheduled flights	
Water	0	We will rely on existing community dock structures to embark and disembark local boats.	
Land	0	Local hunters/guides will be hired to transport individuals and equipment from town to sampling sites on landfast ice by snowmobile. If work takes place in the summer months, we will rely on existing community dock structures to embark and disembark local boats.	

Project accomodation types

Collectivité

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
Local Snowmobile	4	10.2 ft long	Transportation across landfast ice to access sampling locations
Ice Auger	2	5 ft long	To make a hole in the sea ice to measure sea ice thickness and collect water samples from below sea ice

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
Gasoline	fuel	30	20	600	Liters	For Snowmobiles and Ice Augers
Lithium Batteries	hazardous	1	1	1	Liters	For powering oceanographic equipment like CTD
10% Hydrochloric Acid	hazardous	1	0.5	0.5	Liters	For cleaning lab glassware and sample bottles. This will be done where we are staying and all chemicals are brought back to winnipeg for proper disposal

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0		

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Scientific/International Polar Year Research	Dangereux	0.5 L 10% Hydrochloric Acid	The dilute acid will be brought back to University of Manitoba for appropriate disposal.	All lithium batteries will be packaged and ship back to University of Manitoba in applicable dangerous goods packaging
Scientific/International Polar Year Research	Déchets non combustibles	40 AA lithium batteries	All lithium batteries will be brought back to the university of Manitoba for appropriate disposal.	All lithium batteries will be packaged and ship back to University of Manitoba in applicable dangerous goods packaging

Répercussions environnementales :

We expect no environmental impacts from this project. We will be staying in a house in the communities and traveling with hunters on their snowmobiles each day onto the land fast sea ice. Everything we bring onto the ice will return with us. Supplies such as augers will be stored in the community, while all dangerous goods including lithium batteries and 10% hydrochloric acid will be shipped (in

appropriate DG packaging) back to University of Manitoba.

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 de l'environnement existant : Environnement physique

Repulse Bay lies north of Southampton Island. From the entrance of Repulse Bay, Frozen Strait runs southeast to Foxe Basin and Roes Welcome Sound runs south-southwest between Southampton Island and the mainland to the more distant Hudson Bay. The open water (ice-free) season near Naujaat is shorter than the season near other Kivalliq communities. Between 1981 and 2010 the open water season typically ran from mid-July to mid-October, with considerable year to year variation. Southeastern Foxe Basin, east of Naujaat, sometimes contains sea ice for most of the year. Repulse Bay and Frozen Strait area has a complex oceanography due to variable depths and strong currents. Chesterfield Inlet or Igluligaarjuk is located in Fisher Bay, at the mouth of Chesterfield Inlet. The Inlet is a long (~160 km), narrow inlet that connects Baker Lake to Hudson Bay. The marine coastline near the community has many small points and bays, and there are numerous islands and rocky reefs. On average between 1981 and 2010, the open water (ice-free) season near the community ran from early July to early November, though year-to-year variation is high and the bays near the community can sometimes freeze quite early and can hold ice longer into the summer. The ice cover near Chesterfield Inlet and Roes Welcome Sound to Naujaat is a mix of landfast and mobile ice with a recurrent large polynya along the fast ice edge that is formed by prevailing winds, and presents dangerous conditions for locals travelling or hunting on the ice.

Description de l'environnement existant : Environnement biologique

The northwest region of Hudson Bay, including Repulse Bay and coastal waters at the mouth of Chesterfield Inlet are considered a biological hotpot of productivity in Hudson Bay. The coastal ecosystem of this region supports many larger marine mammals including Walrus, Beluga, Narwhal, and various species of seal. Anadromous Arctic Char are also abundant in the coastal waters in and near Chesterfield Inlet during the summer months. However, very little is known about the nutrient cycling, primary production and the base of the food chain near Chesterfield Inlet and Repulse Bay which support larger marine mammals and fish species.

Description de l'environnement existant : Environnement socio-économique

The social and economic structure of Naujaat and Chesterfield Inlet (Igluligaarjuk) straddles traditional and modern Nunavut lifestyles. In Naujaat, Roughly 40% of the population is under the age of 15 and roughly 60% is below the age of 25. Many community residents live a fairly traditional lifestyle and the community's business industry is relatively small. The employment rate in Naujaat is roughly 40%, the unemployment rate is roughly 34.5%, and the Hamlet is the main employer. The average income is roughly \$11,000. There is currently a diamond mine in the exploratory stage one kilometer north of Naujaat. Traditional harvesting continues to play an essential role in food provisioning in Naujaat. Important harvest species include Caribou; Beluga; Ringed Seal; Narwhal; Polar Bear; and Arctic Char. For example, the Nunavut Wildlife Harvest Study of 2004 estimated that Naujaat residents harvested, on average, ~745 Caribou, ~415 Ringed seal, ~45 Narwhal, ~23 Beluga, ~12 Polar Bear, and ~4,300 Arctic Char per year between 1996 and 2001. Chesterfield Inlet contains a health centre, a school, a Co-op, and a Northern Store, but participation in traditional subsistence activities such as hunting, trapping, and fishing remains strong. Over a third of the community's population is under 15 years of age and over two thirds of residents are under 35 years of age. The employment rate for the community is roughly 65%, the unemployment rate is roughly 16%, and the average income is roughly \$20,000. Igluligaarjuk has a school and an Arctic College learning centre. With regard to industry, there is a fish processing plant in Igluligaarjuk, as well as a hotel, several retail outlets, several construction-related ventures, a health centre, and a care home. Also, some residents of Igluligaarjuk are involved with the Meadowbank gold mine near Baker Lake. Hunting and fishing are commonly practiced by Igluligaarjuk residents. This includes Caribou hunting on the surrounding land, seal hunting on the ice and at the floe edges, Char fishing, and other pursuits. There is a commercial fishery for Arctic Char in the summer and residents fish for Char year-round; much of this fishing is done in the Inlet and other marine areas near the community. Other important harvest species include Beluga, Polar Bear, and Waterfowl. Igluligaarjuk residents sometimes travel considerable distances when hunting. For example, some residents travel to Repulse Bay to hunt Narwhal. The 2004 Nunavut Wildlife Harvest Study (NWHS) provides some idea of the scale of harvesting in Igluligaarjuk: for example, NWHS estimates suggest residents harvested, on average, ~655 Caribou, ~92 Ringed seal, ~17 Beluga, ~9 Polar Bear, and ~2500 Arctic Char per year between 1996 and 2001.

Identification des répercussions et mesures d'atténuation proposées

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Répercussions cumulatives

N/A

