



## Demande de la CNER faisant l'objet d'un examen préalable #125362

### Watershed and permafrost responses to a changing climate in the Resolute Bay area

Type de demande : New

Type de projet: Scientific Research

Date de la demande : 6/27/2018 1:21:18 PM

Period of operation: from 0001-01-01 to 0001-01-01

Autorisations proposées: from 0001-01-01 to 0001-01-01

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## DÉTAILS

### Description non technique de la proposition de projet

Anglais: See document tab

Français: See document tab

Inuktitut: See document tab

### Personnel

Personnel on site: 2

Days on site: 28

Total Person days: 56

Operations Phase: from 2018-07-23 to 2018-08-20

## 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
McMaster River Watershed	Researching	Municipal	Scientific research has been conducted in the watershed since the 1960s by other parties.	Archeological sites in the area have already been established and will be avoided.	The nearest limit of the watershed is about 2.5 km from Resolute Bay.
North Lake River	Researching	Municipal	To our knowledge, no scientific research has been conducted in the river, but lakes and biology research have certainly been conducted in the surrounding in the past.	The area is not an archeological site, and is well explored by local residents	The community of Resolute Bay is 7 km away from the watershed.
Resolute Bay	Researching	Municipal	Hamlet of Resolute Bay	N/A	N/A

### Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Resolute Bay	Phillip Manik	Hunters Trappers Organizations	2018-02-24

## Autorisations

Indiquez les zones dans lesquelles le projet est situé:

North Baffin

### Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Institut de recherche du Nunavut	N/A	Not Yet Applied		

### Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Land	ATV transport on the roads an in the watershed	

### Project accomodation types

Autre,

## 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
Portable core drill	1	3m	Permafrost coring down to 3m
ATV	1	2m	transport

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	3	20	60	Liters	For ATV and Drill

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0	Grab sampling	McMaster River, North River

# Déchets

## Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Researching	Déchets combustibles	1 kg/d	By PCSP	By PCSP
Camp	Eaux grises	50 l/d	By PCSP	by PCSP
Researching	Eaux grises	20 L/d	By PCSP	By PCSP
Camp	Déchets non combustibles	1 kg/d	By PCSP	By PCSP
Camp	Eaux usées (matières de vidange)	1L/d	By PCSP	By PCSP

## Répercussions environnementales :

This project involves water sampling (< 10L per day, not everyday) from the two main rivers and coring permafrost in a few (~10) locations. All operations are to be performed on foot, except transport to and from the areas on an ATV. The potential impacts are very limited: 1) Soil disturbance in soil pits when permafrost coring. Mitigation: Backfilling the soil pits after the operation 2) Gas spill from ATV and Drill engine fueling operations. Mitigation: Use of a spill kit, filling in Polar continental shelf garage instead of in the field. The research is based at the Polar Shelf facilities, so all potential waste will be dealt with through their system

# **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**

McMaster and North rivers are mostly natural environments, extending from Allen Bay to the interior of Cornwallis Island, up to 16 km inland. The area is a polar desert: slopes are mostly devoid of vegetation except close to the rivers and where lingering snowbanks occur. Permafrost depth is greater than 600m and active layer thaws to 40-70 cm depending on soil properties and conditions.

### **Description de l'environnement existant : Environnement biologique**

### **Description de l'environnement existant : Environnement socio-économique**

## **Miscellaneous Project Information**

### **Identification des répercussions et mesures d'atténuation proposées**

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### **Répercussions cumulatives**

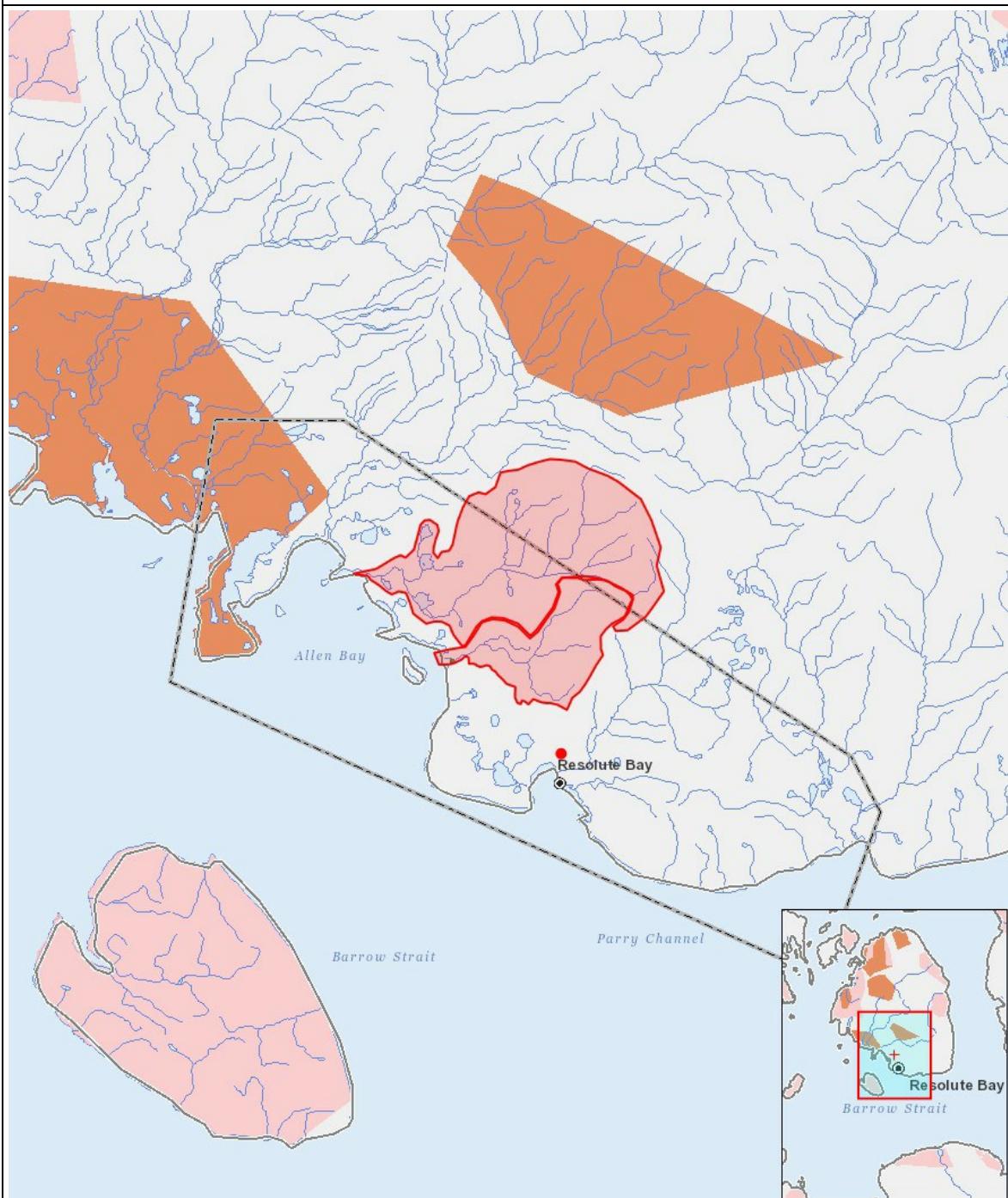
# Impacts

## Identification des répercussions environnementales

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																			

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

## PROJECT MAP



### LIST OF PROJECT GEOMETRIES:

1	polygon	McMaster River Watershed
2	polygon	North Lake River
3	point	Resolute Bay