



Demande de la CNER faisant l'objet d'un examen préalable #126421

Coastal dynamics in Kugluktuk and Grise Fiord (Ajuittuq), Nunavut.

Type de demande : New

Type de projet: Scientific Research

Date de la demande : Friday, March 20, 2026

Period of operation: from 2026-04-01 to 2028-04-30

Promoteur du projet: Stephanie Coulombe
Polar Knowledge Canada
CHARS Campus, 1 Uvajuq Road, PO Box 2150
Cambridge Bay Nunavut X0B0C0
Canada
Téléphone :: 867-983-6676, Télécopieur ::

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
Jones Sound	Researching	Marine	N/A	N/A	Grise Fiord
Jakeman Glacier	Researching	Inuit Owned Surface Lands	N/A	N/A	Grise Fiord
Norwegian Bay	Sampling sites	Marine	N/A	N/A	Grise Fiord
Camp 1	Camp	Marine	N/A	N/A	Grise Fiord
Camp 2	Camp	Crown	N/A	N/A	Grise Fiord (and Eureka)
Camp 3	Camp	Crown	N/A	N/A	Grise Fiord (and Eureka)
Camp 4	Camp	Crown	N/A	N/A	Grise Fiord (and Eureka)
Camp 5	Camp	Crown	N/A	N/A	Grise Fiord (and Eureka)
Camp 6	Camp	Crown	N/A	N/A	Grise Fiord (and Eureka)
Greely Fiord	Sampling sites	Marine	N/A	N/A	Grise Fiord (and Eureka)
Eureka Sound	Sampling sites	Marine	N/A	N/A	Grise Fiord (and Eureka)
Nansen Sound	Sampling sites	Marine	N/A	N/A	Grise Fiord (and Eureka)
Kugluktuk	Researching	Municipal	N/A	N/A	Kugluktuk
Grise Fiord	Researching	Municipal	N/A	N/A	Grise Fiord

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Kugluktuk	Amanda Dumond	Kugluktuk HTO	2025-10-06
Kugluktuk	Richard Akana	Kugluktuk HTO	2025-10-06
Grise Fiord	David General	Hamlet	2025-08-18
Grise Fiord	Marty Kuluguqtuq	Hamlet	2025-08-18
Grise Fiord	Terry Noah	Ausuittuq Adventures	2025-08-18
Grise Fiord	Laisa Watsko-Audlaluk	Hamlet	2025-08-18

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

Transboundary
Kitikmeot
North Baffin

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Nunavut Planning Commission	The NPC has determined that the project proposal is a significant modification to the initial project because of the expanded research objectives, additional sample sites, and the use & establishment of temporary camps and fuel cache.	Active	2025-12-17	
Institut de recherche du Nunavut	Not issued yet.	Applied, Decision Pending		
Office des eaux du Nunavut	Not issued yet.	Applied, Decision Pending		

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Air	Commercial and PCSP flights	
Water	Transportation by local boats operated by community members.	
Land	Transportation by ATV and truck.	

Project accommodation types

Temporary Camp
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
Portable earth auger	1	100 cm x 60 cm x 60 cm	Permafrost drilling with sampling
GNSS system	1	100 cm x 30 cm	High-precision mapping
Small fixed-wing drone	1	116 cm (wingspan)	High-precision mapping (Aerial surveys of the coastal zone)
Buoys	1	42 cm x 31 cm	Measure wave and water levels (ice-free season). The instrument will be retrieved before freeze-up.
Bottom-mounted sensors	3	3 cm x 10 cm	Measure wave and water levels in the intertidal zone during low tide. All the sensors will be retrieved before freeze-up
Automatic time-lapsed cameras	3	10 cm x 10 cm x 10cm	Monitor and quantify coastal erosion in relations to storms.
ATVs	2	2.5 m x 1.2m x 1.4 m	Access study sites
ERT	1	1 m x 1 m x 1 m	Non-invasive, subsurface investigation technique to map near-surface permafrost structures.
Snowmobile	2	1 m x 1 m x 3 m	Travel to study sites
Ocean profiler	2	0.5m x 0.5m x 0.75m	Measure ocean properties

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	1	20	20	Liters	Portable earth auger refuelling.
Gasoline	fuel	10	200	2000	Liters	Snowmobile refueling
Other	fuel	20	4	80	Liters	Naphtha (stove fuel)
Other	fuel	20	4	80	Liters	Kerosene (heater fuel)

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0	Water for drinking and cooking will come from melted snow or	At camps and sampling sites.

natural freshwater. Small ocean samples (<2 L per site) will be collected for microbial and chemical laboratory analyses.

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Camp	Other, Empty fuel drums	10 x empty metal drums	Cached in Eureka for disposal by PCSP or removeable by sealift.	N/A
Camp	Eaux usées (matières de vidange)	100 L	Disposed on or through sea ice for natural microbial decomposition in marine waters.	N/A

Répercussions environnementales :

No significant or lasting environmental effects are expected from this project. All field activities are designed to minimize disturbance to land, water, wildlife, and nearby communities, resulting in impacts that are minimal, localized, temporary, and fully reversible. The project will be conducted in close collaboration with northern communities to ensure alignment with local priorities, knowledge, and environmental stewardship practices. Potential risks are limited to the use of off-road vehicles, small boats, and hand-held tools. These activities will follow established safety and environmental protocols to prevent spills, soil compaction, and vegetation damage. Most methods, including mapping (GNSS, drones), geophysical surveys (GPR, ERT), and sensor deployment, are non-invasive and have negligible impact. Permafrost drilling will be localized (~15 m² per site), with care taken to avoid sensitive areas and prevent contamination. Sites will be restored after sampling, and spill response equipment will be available. Ocean profiling instruments will be temporarily deployed and recovered through sea ice, leaving no trace. A single mooring near Grise Fiord will remain in place, consisting of passive, battery-powered sensors that emit no sound or chemicals. Its location will be selected with community input to avoid sensitive habitats. Small water samples (<2 L) will be collected with no environmental risk. Multibeam sonar surveys may cause brief disturbances but will follow best practices and avoid sensitive periods. All equipment will be securely deployed and removed promptly.

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

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

Répercussions cumulatives

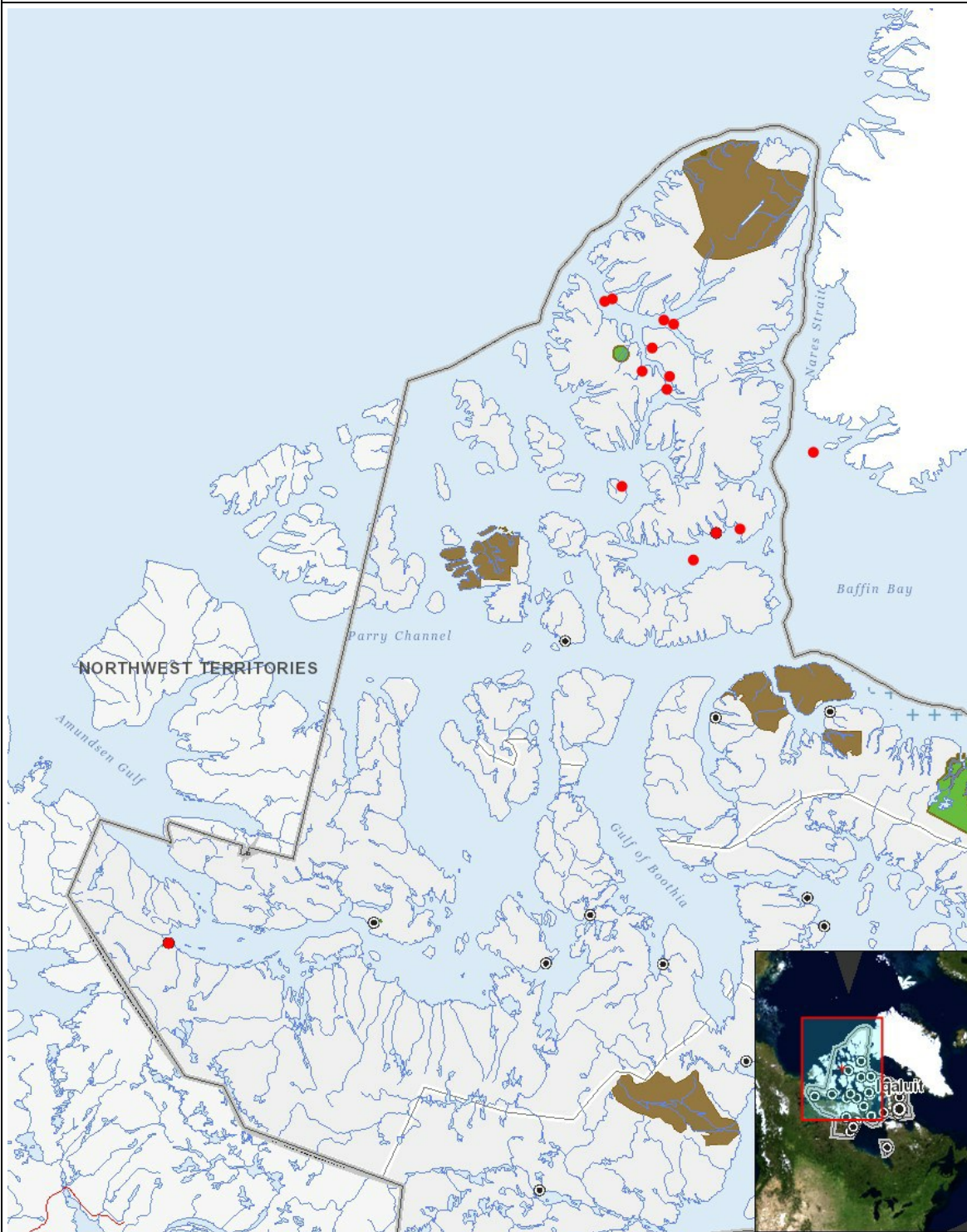
Impacts

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
Construction	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Exploitation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Désaffectation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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

Site du projet



Liste des géométries de projet

1	point	Jones Sound
2	point	Jakeman Glacier
3	point	Norwegian Bay
4	point	Camp 1
5	point	Camp 2
6	point	Camp 3
7	point	Camp 4
8	point	Camp 5
9	point	Camp 6
10	point	Greely Fiord

11	point	Eureka Sound
12	point	Nansen Sound
13	point	Kugluktuk
14	point	Grise Fiord