NIRB Application for Screening #125685

Sirmilik National Park radio repeater operations at Paquet Bay & Cape Weld

Application Type:	New
Project Type:	Infrastructure
Application Date:	4/12/2022 12:16:45 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Proposed Authorization:	from 0001-01-01 to 0001-01-01
Project Proponent:	Tess Espey Parks Canada 125 Mittima Road, PO Box 300 Pond Inlet Nunavut X0A0S0 Canada Phone Number:: 8678998092, Fax Number::

DETAILS

Non-technical project proposal description

English: PROPONENT: Parks Canada Agency. PROJECT SCOPE: Parks Canada is proposing to install a new radio repeater station at Cape Weld and operate it for 10 years and also proposing to continue operating an existing repeater at Paquet Bay for 10 more years. Repeater stations include antennae, solar panels, metal supports, and a weatherproof box containing batteries and the repeater device; concrete foundations help secure the bases of the structural supports. This equipment is installed on geographic high points to help extend radio coverage across the largest area possible. To install or service radio repeaters, a helicopter is used to move personnel and equipment to remote, high elevation sites. Installing a new repeater takes about half a day, while conducting routine annual servicing of an existing repeater normally takes around 2 hours. Annual visits allow equipment to be tested and any damaged parts to be replaced; any broken parts or spent batteries are removed to Pond Inlet for disposal. Repeater equipment can be entirely dismantled and removed from the site, by helicopter, when a site is decommissioned, so that only a small amount of concrete foundation remains. OBJECTIVE: To facilitate and improve radio communications in and around Sirmilik National Park in order to support public safety and emergency response activities, occupational health and safety for Parks Canada staff, and routine park operations over the next decade. These objectives help meet targets within Sirmilik National Park's Management Plan (2016), particularly in fostering public safety within the park. PROJECT LOCATIONS (2):The existing repeater at Paquet Bay is located at 680 m elevation and is approximately 85 km south from Pond Inlet (coordinates: 71° 55.794' N, 78° 12.715' W). This location is about 5 km from the nearest boundary of Sirmilik National Park. The proposed repeater at Cape Weld is located at 800 m elevation and is approximately 75 km east from Pond Inlet (coordinates: 72° 33.351' N, 75° 48.8742' W). This location is about 38 km from the nearest boundary of Sirmilik National Park. TIMELINE: Project work will take place in mid-July 2022 and will include the installation of the proposed Cape Weld repeater as well as routine annual servicing visits to the Paquet Bay repeater and the three repeaters located within Sirmilik National Park. From then until March 31, 2032, annual servicing visits will occur at repeater sites each summer to maintain equipment and keep it in working order. In 2032, the future scope of the project and the repeater network will be re-evaluated, and any further licences, permits, and/or leases will be sought as appropriate.

French: N/A

Inuktitut: ᐱᓕᕆᑎᑦᑎᔪᖅ: ᑲᓇᑕᐅᑉ ᒥᕐᖑᐃᖅᓯᕝᕕᕆᔨᖏᑲ ᑎᒥᖁᑎᐊ. ᐱᓕᕆᐊᑉ ᐊᒃᑎᒋᓂᖓ: ᑲᓇᑕᐅᑉ ᒥᕐᖑᐃᖅᓯᕝᕕᓕᕆᔨᒃᑯᖏᑦ ᐅᒃᑐᕈᒪᓕᕆᕗᑦ ᐃᓕᓯᓗᑎᒃ ᓇᑉᐸᖅᑯᑎᒥᒃ ᓈᓚᐅᑎᐅᑉ ᐅᖓᕙᕆᐊᕈᑎᐊ ᑕᑲᓇᓂ ᕿᓐᓂᖅᑐᑦ ᐊᐅᓚᓪᓗᒍᓗ ᐊᕐᕋᒍᓄᑦ ᖁᓕᓄᑦ ᐊᒻᒪ ᐅᒃᑑᑎᖃᕆᓪᓗᑕ ᐊᐅᓚᐃᓐᓇᓪᓗᒍ ᓇᐸᕙᒦᖅᑐᖅ ᐅᖓᕙᕆᐊᕈᑎᕗᑦ ᑐᓃᑦ ᓄᓇᖕᒥᓂ ᖁᓕᒃᑲᓐᓂᓐᓄᑦ ᐊᕐᕌᒍᓄᑦ. ᐅᖓᕙᕆᐊᕈᑎ ᓇᑉᐸᖅᑯᑎᖃᕝᕕᑦ ᐃᓚᖃᓯᑦ ᓇᓚᒍᑎᒧᑦ ᓇᑉᐸᖅᓯᒪᔪᓂᒃ, ᓯᕿᓂᒻᒧᓐ ᓄᒃᑭᓪᓚᐅᑎᑦ, ᓴᕕᕋᔭᑦ ᓇᑉᐸᖓᔾᔪᑎᑦ, ᐊᒻᒪᑦᑕᐅᖅ ᓯᓚᕈᔪᒧᑦ ᐅᖅᑯᐄᕝᕕᖓ ᕿᑐᑦᑐᒐᐅᔭᖅ ᕚᑐᖃᖅᖢᓂ ᑖᔅᓱᒥᖓᓗ ᐅᖓᕙᕆᐊᕈᑎᐅᑉ ᐊᐅᓚᔾᔪᑎᖓᓂᒃ; ᕿᑯᖅᑎᓯᒪᔪᑦ ᑐᙵᕕᒃᓴᖏᑦ ᓇᑉᐸᖅᓯᒪᔾᔪᑎᖏᑕ. ᐃᓕᔭᐅᓲᑦ ᓄᓇᐅᑉ ᐳᖅᑐᓂᖏᓄᑦ ᖁᑦᑎᓛᖑᓇᓱᒃᖢᒥᑦ ᓈᓚᐅᑎᒃᑯᑦ ᐅᖓᓯᓖᒧᑦ ᑐᓴᖅᑕᐅᔪᓐᓇᖁᓪᓗᒥᑦ. ᐃᓕᓯᓂᐊᖅᖢᑕ ᑲᒪᒋᔭᖃᖅᖢᑕᓗ ᑕᒪᒃᑯᓂᖓ ᓈᓚᐅᑎᑦ ᐅᖓᕙᕆᐊᕈᑎᖏᓂᒃ, ᖁᓕᒥᒎᒻᒥᑦ ᐊᑐᓲᖑᔪᒧᑦ ᓴᓇᔪᑦ ᐱᖁᑎᒃᓴᖏᓪᓗ ᐅᓯᔭᐅᓪᓗᑎᒃ ᐅᖓᓯᒃᑑᔪᓄᑦ, ᐳᖅᑐᔪᐋᓗᓐᓄᑦ ᖃᖅᑲᑦ ᖄᖏᓄᑦ. ᐃᓕᓯᓕᕌᖓᑦᑕ ᓄᑖᒥᒃ ᐅᖓᕙᕆᐊᕈᑎᒥᒃ ᐃᒻᒪᖄ ᐅᑦᑑᑉ ᕿᑎᓪᓗᐊᖓᓂᒃ ᐊᑐᓲᖑᕗᒍᑦ, ᐊᑕᐅᑦᑎᒃᑯᑦ ᖃᐅᔨᓵᖑᓪᓗᑎᒃ ᐊᕐᕌᒍᓪᓗᐊᒧᑦ ᐸᖅᑭᔭᐅᑎᖏᓂᒃ ᓇᐸᕙᒦᖅᑐᑦ ᐅᖓᕙᕆᐊᕈᑎᑦ ᐃᑲᕐᕋᓪᓗᐊᓂᒃ ᒪᕐᕈᓐᓄᑦ ᑲᒪᒋᔭᐅᖃᑦᑕᖅᖢᑎ. ᐊᕐᕌᒍᑦᑕᕌᖓᑦ ᐅᐸᒍᑎᓲᕗᑦ ᑕᒪᒃᑯᐊ ᑐᓵᔾᔪᑎᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᓪᓗᑎᒃ ᐱᐅᓂᖏᓄᑦ ᓱᕋᒃᓯᒪᔪᓕᒫᓪᓗ ᑭᖑᕝᕕᖅᑕᐅᓪᓗᑎᒃ; ᓯᖁᒥᓐᓂᑯᑦ ᐅᕝᕙᓘᓐᓃᑦ ᕚᑐᑦ ᓄᒃᑭᒍᓐᓇᙱᑦᑐᑦ ᐊᒧᔭᐅᓪᓗᑎᒃ ᐅᑎᖅᑎᑕᐅᓪᓗᑎᒃ ᒥᑦᑎᒪᑕᓕᒻᒧᑦ ᐃᒋᑕᐅᓪᓗᑎᒃ. ᐅᖓᕙᕆᐊᕈᑎᑦ ᓈᓚᒍᑎᖏᑦ ᑕᒪᐃᓐᓂᒃ ᐲᔭᕐᒐᒃᓴᐅᓲᑦ ᐅᑎᐅᔾᔭᐅᔪᓐᓇᖅᖢᑎᒃ ᐃᓗᐃᑦᑑᓪᓗᑎᒃ ᓄᓇᖕᒥᓐᓂᒃ, ᖁᓕᒥᒎᒃᑯᑦ, ᓄᓇᖓ ᐊᑐᖅᑕᐅᔾᔮᕈᓐᓃᕈᓂ, ᐊᒥᒃᑯᕐᓗᑐᐊᖅ ᑖᒃᑯᐊ ᕿᑯᓕᖅᓯᖅᑕᐅᓲᑦ ᑐᙵᕕᒃᓴᖏᑦ ᓇᑉᐸᖅᑯᑎᕕᓂᑦᑕ. ᑕᑯᒃᓴᕈᖅᑕᐅᓇᓱᒃᑐᖅ: ᑐᑭᒧᐊᕆᔪᓐᓇᖁᓪᓗᑕ ᐱᐅᓯᕚᓪᓕᕋᓱᒃᖢᒍᓗ ᓈᓚᐅᑎᒃᑯᑦ ᐅᖄᓚᖃᑦᑕᓐᓂᕗᑦ ᐃᓗᐊᓂ ᐊᕙᑖᑕᓗ ᓯᕐᒥᓕᒃ ᑲᓇᑕᐅᑉ ᒥᕐᖑᐃᖅᓯᕝᕕᖓ ᑲᒪᒋᔭᖃᖅᖢᑕ ᑭᒃᑯᓕᒫᑦ ᐅᓗᕆᐋᓇᖅᑕᐃᓕᒪᔾᔪᑎᖏᓂᒃ ᑐᐋᕕᓐᓇᖅᑐᓪᓗ ᐊᐅᓚᑕᕆᔭᖏᓐᓄᑦ, ᓴᓇᔪᖁᑎᑦᑕ ᖃᓂᒻᒪᓯᓄᑦ ᐅᓗᕆᐋᓇᖅᑕᐃᓕᓂᒻᒧᓪᓗ ᐊᑐᓲᖏᑦ ᑲᓇᑕᐅᑉ ᒥᕐᖑᐃᖅᓯᕝᕕᓕᕆᔨᒃᑯᖏᑕ ᓴᓇᔨᖏᑦ, ᐊᑐᒐᔪᒃᑐᓄᓪᓗ ᐊᐅᓚᔾᔪᓯᑦ ᒥᕐᖑᐃᖅᓯᕝᕕᐅᑉ ᑲᒪᒋᔭᖏᓂᒃ ᐊᕐᕌᒍᓄᑦ ᖁᓕᓄᑦ ᐊᒡᒋᖅᑐᓄᑦ. ᑖᒃᑯᐊ ᑕᑯᒃᓴᕈᖅᑕᐅᓇᓱᒃᑐᑦ ᐃᑲᔪᐃᓲᑦ ᑎᑭᓐᓇᓱᒃᑕᐅᔪᓂᒃ ᐃᓗᐊᒍᑦ ᓯᕐᒥᓕᒃ ᑲᓇᑕᐅᑉ ᒥᕐᖑᐃᖅᓯᕝᕕᖓᑕ ᐊᐅᓚᑦᑎᓂᒻᒧᑦ ᐸᕐᓇᐅᑎᐊᓂᒃ (2016), ᐱᓗᐊᖅᑐᒥᒃ ᒥᕐᖑᐃᖅᓯᕝᕕᐅᑉ ᐃᓗᐊᓂ ᑭᒃᑯᓕᒫᑦ ᐅᓗᕆᐋᓇᖅᑐᒦᖁᓇᒋᑦ. ᐱᓕᕆᐊᑉ ᐃᓂᒃᓴᖏᑦ (2): ᓇᐸᕙᒦᖅᑐᖅ ᐅᖓᕙᕆᐊᕈᑎ ᑐᓃᑦ ᓄᓇᖕᒥᓂᒃ ᐃᓂᓪᓚᖓᔪᖅ 680 ᒦᑕᑦ ᖁᑦᑎᓐᓂᓕᒻᒥᑦ ᐃᒻᒪᖄᓗ 85 ᑭᓛᒥᑕᒥᒃ ᐃᓂᓕᒃ ᐅᖅᑯᐋᑕ ᒥᑦᑎᒪᑕᓕᐅᑉ (ᓄᓇᙳᐊᑉ ᓇᐄᓴᐅᑎᖏᑦ: 71° 55.794' N, 78° 12.715' W). ᐃᓂᒋᔭᖓ ᓇᑉᐸᖅᓯᒪᔭᑦᑕ ᐅᖓᓯᓐᓂᓕᒃ ᐃᒻᒪᖃ 5 ᑭᓛᒥᑕᒥᒃ ᑭᒡᓕᖃᕝᕕᐊᑕ ᓯᕐᒥᓕᒃ ᑲᓇᑕᐅᑉ ᒥᕐᖑᐃᖅᓯᕝᕕᐅᑉ. ᐅᒃᑑᑎᒋᔭᖅ ᐃᓕᔪᒪᔭᕗᑦ ᐅᖓᕙᕆᐊᕈᑎ ᕿᓐᓂᖅᑐᓂᑦ ᐳᖅᑐᓂᖃᖅᑐᒦᑦᑐᖅ 800 ᒦᑕᒥᒃ ᐊᒻᒪᓗ 75 ᑭᓛᒥᑕᒥᒃ ᐊᑖᖅᑐᒥᒃ ᒥᑦᑎᒪᑕᓕᒻᒥᑦ (ᓄᓇᙳᐊᑉ ᓇᐄᓴᐅᑖ 72° 33.351' N, 75° 48.8742' W). ᑖᓐᓇ ᐊᑭᓪᓗᐋᖓᓃᑦᑐᖅ ᐅᖓᓯᓐᓂᖃᖅᖢᓂ ᐃᒻᒪᖄ 38 ᑭᓛᒥᑕᒥᒃ ᖃᓂᓛᑉ

ᑭᒡᓂᖅᓴᐃᐊᑕ ᓄᖅᒥᓂᒃ ᖃᓄᑕᐅᑦ ᒥᖅᔪᐃᕐᓄᑦᓴᖅᓯᒪᑕ. ᐅᑉᓗᒋᓂᐊᖅᑕᖅᑭᑦ: ᐱᓕᒃᖏᐅᑦ ᖁᓇᐅᑕᖅᓯᒪᓂᖅ
ᑲᔪᓄᒥᐊᖅᓂᐊᖅᑐᖅ ᐃᒪᒪᖏᒃ ᖃᑎᖅᒪᑕ-ᔪᓕᐃᑦ 2022 ᐊᒪᒪᓗ ᐃᓕᖅᖃᓂᐊᖅᑐᑦ ᐃᓂᓕᐅᓂᖅᓱᓗᑦ ᐅᒃᑐᑎᑦᑕ ᖃᑭᖅᓂᖅᑐᑦ
ᐅᖅᓱᓪᓕᐊᑭᑎᒃᓴ ᐊᒪᒪ ᐊᑐᓂᕐᑦ ᐊᖅᑐᔪᑦᑕᖏᑦ ᐸᖅᑭᓄᖅᓗᑦ ᐅᐸᔪᑎᓂᕐᑦ ᑐᓂᑦ ᓄᓇᕈᓂ ᐅᖅᓱᓪᓕᐊᑭᑎᐊᑕ
ᒎᒃᓄᐊᓗ ᐱᖅᓱᓂᔪᑦ ᐅᖅᓱᓪᓕᐊᑭᑎᑐᑦ ᐃᓗᐊᓂᑐᑦ ᓄᖅᒥᓂᒃ ᐊᑐᓂ ᐅᖅᓱᓪᓕᐊᑭᑎᐅᑎᐊᑕ ᒎᒃᓄᐊᓗ ᐱᖅᓱᓂᔪᑦ
31, 2032, ᐊᖁᔪᑦᑐᖁᖅᓱᑦ ᐸᖅᑭᓂᓇᔭᔪᑎᑦ ᐅᐸᒃᑕᓂᕐᓄᑦ ᐊᑐᓂ ᐅᖅᓱᓪᓕᐊᑭᑎᐅᑎᐅ ᓄᓇᕈᓂᒃ
ᐊᐅᔾᑕᒻᒪᖅ ᐸᖅᑭᓗᑕᑦ ᐱᖁᑎᖅᑦ ᐊᐅᓕᐃᓂᓇᑭᓂᓗᑕ. ᐊᖁᖅᔪᖅᓄᓂ 2032, ᓄᑐᓂᐊᔪᑦ ᐊᖅᑕᓂᓇᔾᑕ
ᓇᐸᖅᔪᑎᖅᑭᐃᑦ ᐊᒪᒪᓗ ᐅᖅᓱᓪᓕᐊᑭᑎᑕ ᓇᐸᖅᔪᑎᖅᑦ ᖁᑕᖁᑭᐅᔾᐅᓇᓂᖅᓱᑦ ᐊᓄᖅᑕᔪᑦ ᐱᑕᖁᓕᓂᖅᑐᑦ,
ᑭᖅᓂᐊᔪᓪᓗ ᐊᑐᓇᐊᓀᑦ ᓯᐃᔾᓂᓛᑦ, ᐱᔪᖓᓇᐅᑎᑦ, ᐊᒪᒪ/ ᐅᑭᑐᓗ ᓄᓇᔪᑦ ᐊᑐᖅᑐᐊᑭᑎᑦ ᐱᔾᐅᓇᓄᓪᓗᑎᒃ ᒪᓕᓪᓗᔪ
ᓄᓇᖅᑕ ᖁᓄᖅᑐᓇᐊᖁᖅᑎᑦᑎᓂᖅᑕ.

Inuinnaqtun: N/A

Personnel

Personnel on site: 4
Days on site: 20
Total Person days: 80
Operations Phase: from 2022-07-01 to 2022-08-20
Operations Phase: from 2022-07-05 to 2032-03-31
Post-Closure Phase: from to

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Paquet Bay repeater location (existing)	Other	Inuit Owned Surface Lands	Parks Canada has operated a radio repeater at this site since 2010 and is concurrently (along with this submission) seeking a QIA land lease to continue operating at this site for 10 additional years, until 2032. Equipment currently at the site includes antennae on a mast, a solar panel array, and a watertight box containing batteries and the repeater; metal supports are held in place with concrete at the base. Annual maintenance involves servicing and replacing equipment.	There are no known archaeological, cultural, or paleontological features at or in the immediate vicinity of this site.	Site is located 85 km SSE from Pond Inlet, NU on IOL parcel PI-13/37G. The closest national park boundary (Sirmilik National Park) is just under 5 km away.
Cape Weld repeater location (proposed)	Equipment installation	Inuit Owned Surface Lands	Parks Canada is seeking to install and operate a radio repeater at this location for the first time; there is no known past use of this location. Equipment proposed to be installed at the site would include an aluminum ballast box housing the repeater and batteries and with solar panels (2) and antennae (2) mounted to the sides.	There are no known archaeological, cultural, or paleontological features at or in the immediate vicinity of this site.	Site is located 75 km ESE from Pond Inlet, NU on IOL parcel PI-11/38A,B. The closest national park boundary (Sirmilik National Park) is 38 km away, on Bylot Island.

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted

Pond Inlet	David Qammaniq	Mittimatalik Hunter's and Trapper's Organization (MHTO)	2022-05-02
Pond Inlet	Dave Stockley (SAO) and Joshua Arreak (Mayor)	Hamlet of Pond Inlet	2022-05-02

Authorizations

Indicate the areas in which the project is located:

North Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Qikiqtani Inuit Association	Land lease application submitted (QIA project #320384) to continue operating existing Paquet Bay repeater for 10 years and to install and operate new Cape Weld repeater for 10 years. Currently in review.	Applied, Decision Pending		
Industry Canada	Radio licence from ISED to operate existing repeater at Paquet Bay (010837248-001). ISED radio licence to operate now-decommissioned repeater at Mt. Morin (010837247-001) will need geographic location be updated to reflect relocation of repeater equipment to proposed Cape Weld location. Note: licences are renewed annually; current licences go to March 31, 2023.	Active	2019-04-01	2023-03-31

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Helicopter, sometimes with sling gear for bulky equipment	

Project accomodation types

Community

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Hand tools	15	30 cm x 10 cm	To install, adjust, and secure repeater components during site visits. Includes small hand tools such as wrenches, screw drivers, crimpers, wire snips and strippers, hammers or mallets, socket set components, and pliers.
Equipment box	1	1.8 m x 1 m	Watertight metal box (steel or aluminum)to contain batteries and repeater electronics. One installed at each site.
Repeater	1	60 cm x 50 cm	Relays radio messages. Housed inside a plastic waterproof case (Pelican case) inside metal equipment box. Cables attach to antenna and solar panel. One installed at each site.
Antennae on mast	2	2 m x 0.5 m	Detect and help broadcast radio communications relayed by repeater. One VHF and one UHF antenna installed at each site. Affixed to steel mast, which anchors to Trylon tower.
Handheld VHF radios	2	25 cm x 8 cm	To test repeater function while at site and to communicate with helicopter pilot.
Trylon support tower	1	4 m x 0.8 m	Supports antenna on mast and serves as anchor for solar panel. Concrete used to help anchor base. One installed at Paquet Bay; Cape Weld antenna masts to mount directly to equipment box.
Solar panel on mount	2	1.2 m x 60 cm	Provides solar power to repeater. Steel post mount supports panel. Two installed at each site.
Mixing pail and stirrer rod	1	8 gal	Large mixing pail to be used to mix concrete to repair tower foundation at Paquet Bay.
Aircraft	1	Helicopter	Helicopter to access site and transport personnel, equipment. Bell 206LR (or similar) on fixed floats.

Detail Fuel and Hazardous Material Use

Detail fuel	Fuel Type	Number of	Container	Total Amount	Units	Proposed Use

material use:		containers	Capacity			
Aviation fuel	fuel	20	250	5000	Liters	All fueling to be completed off site, at Pond Inlet airport or Bylot Island fuel cache. No fuel storage at site. Estimated fuel use at one drum per site per year.
Sealed gel batteries (non-hazardous)	hazardous	60	1	60	Liters	Store energy from solar panel to power repeater. 10 batteries per site, with two full replacement intervals anticipated over 10 years (initial 10/site, plus 2 full replacements of set). Contained within waterproof metal box at each site.

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0		

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Equipment installation	Non-Combustible wastes	2 m3 steel/aluminum (compacted), 40 gel batteries	Waste transport to Pond Inlet by helicopter for repurposing or repair at Parks Canada facilities (metals will be reused where possible), or for disposal at municipal landfill. Projected amounts are conservative maximum based on anticipated equipment replacement needs over 10 years.	Batteries to be recycled from Pond Inlet.

Environmental Impacts:

Helicopter access is the only feasible way to access remote, high-elevation repeater sites. As a result, noise will be generated when sites are visited for preventative maintenance and equipment installation. These impacts will be minimized by identifying safe landing locations near each repeater to ensure landings and takeoffs occur efficiently and rotors are not left running unnecessarily. While personnel are on site installing or servicing repeater equipment, there is potential for vegetation trampling, disturbance to loose surface rock, and/or wildlife disturbance due to human activities and presence in the area. Personnel will minimize the footprint of their activities, choosing the shortest route between the helicopter and the repeater and remaining at the repeater while conducting their tasks. They will retain any waste generated during their work (e.g. packaging of hardware or parts, food wrappers, human waste collected in WAG bags) to bring back to Pond Inlet for disposal; other than repeater equipment, no items or old equipment will be left in the field that may serve as attractants for wildlife. Repeater maintenance work is an area of park operations that, up to present, has been an activity where Inuit staff have received training (from a qualified radio technician), built capacity, and taken on leadership roles. It is hoped that ongoing repeater servicing can continue to be an avenue for Inuit staff in junior roles can learn from their colleagues, building skills with radiocommunications equipment and systems that may strengthen their candidacy for technical infrastructure-related roles within or beyond Parks Canada. Parks Canada and Pond Inlet Search & Rescue personnel have permission to use these radio frequencies. As such, it is anticipated that coverage from these two repeaters will serve to support communications during key public safety activities in the region, such as emergency incident responses.

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 of Existing Environment: Physical Environment

Both repeater sites are located on broad geographic high points (Cape Weld at 800 m, Paquet Bay at 680 m) on rocky plateaus featuring gravel- to boulder-sized surface rock, some of which is loose. Both locations primarily feature igneous and metamorphic rock (Mary River group). The existing Paquet Bay location is just under 5 km away from the boundary of Sirmilik National Park, and the proposed Cape Weld location is 38 km away from the park boundary.

Description of Existing Environment: Biological Environment

Both sites are sparsely vegetated with little soil; lichens, mosses, and hardy vascular plants such as saxifrages are expected, especially on the lee sides of rocks. It is expected that locations could feature habitat for small mammals, insects, some bird species (likely passerines, and possibly also raptors and ravens), and (at Paquet Bay) caribou (North Baffin subpopulation). Breeding evidence for these species at the Paquet Bay site has not previously been observed, and both locations are outside of the known (mapped) calving range for caribou on north Baffin Island (as per the 2021 population survey conducted by the GN and associated report).

Description of Existing Environment: Socio-economic Environment

Pond Inlet is the nearest community to both locations. Paquet Bay and the mouth of Tasiujaq (formerly Eclipse Sound), which is close to the proposed Cape Weld repeater location, are both areas through which Inuit travel and pursue traditional activities. In particular, the floe edge between north Baffin Island and Bylot Island sees frequent hunting activity by Mittimatalingmuit as well as guided tourism (floe edge tours) in spring and early summer. Inuit travel to the Paquet Bay area by boat in summer and fall, such as to hunt and fish; the adjacent lands within Sirmilik National Park see infrequent visitation, but the area is patrolled by Parks Canada staff. Visits to high-elevation repeater locations by the public are thought to be very rare owing to challenging land access and terrain; Parks Canada is not aware of any past public visits to the Paquet Bay repeater site since its establishment. Within the park boundaries, Parks Canada is the responsible authority for public incident response, while Pond Inlet Search & Rescue attends to incidents outside of the park boundary; both groups, which collaborate in the region, benefit from Parks Canada's radio repeater network coverage for essential communications that support public safety in and around the Pond Inlet area.

Miscellaneous Project Information

See attached supporting document for further information about each site, including photos and equipment schematics.

Identification of Impacts and Proposed Mitigation Measures

Personnel will be on site at these locations for only the required amount of time (i.e. only to complete work) to minimize possible disturbance to wildlife, including foraging, nesting, or other activities and behaviours. If wildlife are sighted on approach to a site, plans may be altered so as to return to the site later or chose a landing location where the

likelihood of disturbance or an encounter is less likely. Trampling of sparse vegetation and exposed soil will be minimized by placing equipment and tools on rocks and stepping on rocks (rather than soil) wherever feasible; helicopter landings will be made at the safest close location to the repeater structure such that impacts are spatially reduced. Wildlife attractants will be minimized by removing any waste products generated during time on site (e.g. wrappers of food consumed, spent batteries from repeater box), and plastic repeater components will be housed within the latched, weatherproof box (e.g. extra cable length within box so that a minimum amount of cable is exposed). Personnel will apply the same Leave No Trace principles that they use while within the national park.

Cumulative Effects

Cumulative effects are expected to be minimal owing to the small footprint of installed equipment and small amount of overall personnel time spent on site (approx. 3 hours/year on one day). Annual servicing visits at both locations may cause cumulative trampling of sparse vegetation growing near the repeaters and/or disturbance of surface rocks. Cumulative effects on wildlife are unknown given available information.

Impacts

Identification of Environmental Impacts

	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																									
Equipment installation		-	-	-	-	-	-	-	N	-	-	-	M		N	N	N	-	-		-	P	-	-	-
Operation																									
Other		-	-	-	-	-	-	-	M	-	-	-	N		M	M	M	-	-		-	P	P	-	-
Equipment installation		-	-	-	-	-	-	-	N	-	-	-	M		N	N	N	-	-		-	P	P	-	-
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location

List of Project Geometries

1	point	Cape Weld repeater location (proposed)
2	point	Paquet Bay repeater location (existing)