NIRB Application for Screening #125340

Back for the future: Long-term observations of vegetation and snowcover in the High Arctic

Application Type: New

Project Type: Scientific Research

Application Date: 4/30/2018 12:50:06 PM

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

Proposed Authorization: from 0001-01-01 to 0001-01-01

Project Proponent:
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DETAILS

Non-technical project proposal description

English: Long-term scientific observations are important to understanding environmental changes. Because of climate change, woody shrubs are expected to increase on the tundra; snow conditions will change, too. The goal of my study is to evaluate these long-term changes. During 1991-1993, I spent 15 months on the land at Ekalluktok, on Wellington Bay, west of Cambridge Bay. I established 80 vegetation and snow observation points during my research on muskoxen. I recorded the quantity and types of plants; I measured the hardness and thickness of snow. These observations are important for assessing changes over the past 25 years. They are also a baseline for the future. I intend to repeat this study. In 2018, I will return to these observation points. In 1991, I marked each point with a small metal stake. I left those stakes on the land; I expect to find them again. In August 2018, I will estimate the abundance and composition of plants again. In April 2019, I will return to measure snow conditions. I will compare my new observations to the observations from the 1990s. Finally, I will share my information. I will photograph each plot; I will demonstrate the techniques to local residents and/or the staff at the Canadian High Arctic Research Station; and I will store the photographs and data so that people can use them in future.

French: Not applicable

Inuktitut: Not applicable

Inuinnaqtun: Hivituyumik qauyiharnikkut tautukhimayangit aturnaqhuni kangiqhittiariami nunap avatingit aallannguqtiqhimayut. Hamna hilaup aallannguqpallianinga, qiyulingnit iviit naahuriyauyut amigainniaqhutik manirarmi; aputit qanurilinganingit aallanngurniaqhunilu, ilaa. Hamna hivunigiyara naunaiyainikhanut qimilruqtakhaat hivituyumik aallannguqpallianingit. Uvani 1991-1993, manirarmiitkaluaqtunga 15 nit tatqiqhiutigut uvani Iqaluktuuq, uataaniittuq Iqaluktuuttiarmi. Aulapkaivlunga 80 nit nauhimayunit apunmullu ihivriuqhugit qauyihaqhunga umingmainnit. Titiraqhungalu amihuuningit aallatqiinguyullu nauttiat; uuktuqhungalu naptunninga hilingningalu apunmut. Hapkuat ihivriuqhimayatka aturnaqhutik ihivriuqhigiami aallannguqpallianingit qangaraalungmit 25 nit ukiunganit. Kigliuvlutik hivunikhamut. Huli havaffaarumayatka naunaiqhiinianut. Uvani 2018 mi, utirniarmiyunga ihivriuffaariami. Uvani 1991 mi, nalunaiyaqhimayatka nuvuani naittumik havigalingnit naunaitkutarmik. Manirarmiittut naunaitkutait; naahurihimayara naniniaqtatka. Uvani Niqiliqivingmi 2018 mi, naunaiqhiiniaqtunga amihuuningit havaangillu nauttianut havaarilugillu. Uvani Qitiqqautiyuq 2019 mi, utiffaarniarmiyunga ihivriurlugit aputit qanurilinganingit. Ihivriurniarmiyatka nutaam ihivriurningit uumanngat naunaiyaihimayaraluatka hamanngat 1990 ngugaluaqtumi. Kinguani, ilittupkainiaqtatka avvautihimalugillu naunaiyainingit. Piksaliurniaqtatka tamait maniraq havaarihimayatkal ilittuqhiiniaqtatka qauyiharnianut nunaqatigiingnut unalu/havaktunut uvani Kanatamiunut Qulvahiktumut Ukiuqtaqtumi Qauyiharvik; piksallu naunaiyainingillu tutquumaniaqtut inuit aturumagumiuk hivunngani.

Personnel

Personnel on site: 2
Days on site: 21
Total Person days: 42
Operations Phase: from 2018-08-06 to 2018-08-27

Activities

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
Wellington Bay, in vicinity of Ekalluk River	Scientific/International Polar Year Research	Crown	Unknown	Unknown	Roughly 60 km west of the community of Cambridge Bay

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Cambridge Bay	Aili Pedersen	Canadian High Arctic Research Station	2018-01-19

Authorizations

Indicate the areas in which the project is located

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Government of Nunavut, Department of Environment	Nunavut Wildlife Research Permit Application	Applied, Decision Pending		

Project transportation types

Transportation Type	Quantity	Proposed Use	Length of Use
Air	0	Twin Otter	
Water	0	Canoe	
Land	0	On foot	

Project accomodation types

Temporary Camp

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Tent	3	2 m x 3 m	Accommodation
Canoe	1	5 m	Cross Ekalluk River to access sampling sites

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
	fuel	2	1	2	Gallons	Naptha for cooking

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
0	Buckets	Ekalluk River

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Researching	Non-Combustible wastes	Less than 1 kg per day	Return to Cambridge Bay and deposit in regular municipal waste or recycling	.
Researching	Sewage (human waste)	Less than 1 kg per day	Small open pit	.

Environmental Impacts:

Minimal. Our camp will be temporary; it will consist of just two people. No motorized vehicles will be used. No refuse (other than a small amount of sewage waste) will left on-site. On the other hand, the project will lead to better scientific understanding of long-term changes to tundra vegetation.

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

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

Miscellaneous Project Information

Identification of Impacts and Proposed Mitigation Measures

Cumulative Effects

Impacts

Identification of Environmental Impacts

Construction																								
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Operation																								
Scientific/International Polar Year Research		-	-	-	-	-	-	-	-	-	-	-	-		P	P	-	-	-		-	-	-	-	-
Decommissioning																								
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

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