

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
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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: Talvani okiomi, ovanga ehivgiokpagatka nigginiaktot okiomi umingmait onalo nuna hilami ekaloktumi ovaniikaluktutiap oataani. Elittogihimaliktonga 8-nik allatkiinik naovaktonik nunami tahamani. Ema ela, opeet, evgit, avalakiatlo takokhaoyot nattiknani talvanik nunainaoat ataa hikokyoakaktomi. Aopayangattot ivgit, eghotitlo, kagioyatlo nunami naovaktot nunap tigvani. Apotitlo nunamiitotlo naovaktot aolavaktot. Nunami naovaktot ekitkangamik apot nutkavikhainami apotainggakpaktok. Talvanitaok naohima yugiakangami nuna apotigiakpaktok apotlo apitaanikpakhon evyohivloni apot. Talvani apotikoktuvalaagangat, umingmait apotmik algakpalakpaktot nigginiaktot; ovalo algaktatik nigginiakvigiloakpagait, ovalo nigginiakvitik allanit umingmaknit annigiloallkpagait. Talvani okiomi, umingmait nigginiakvikakpaktot nunami naohimayugiaknikmi evvigiaaktomi avalakiagiaktomi ovalo apotikokilgomi apotit naptuvalanggitoni. Niggivaktot okpiknik, evviknik avalakianiklo. Nikkitoangit malgoinak evgitloat: emakmiitot evgit (*Carex aquatilis*) okoninggalo kangguyanik (*Eriophorum angustifollum*). Opinggami mahaktiligangat, umingmait nigginiakvikakpaktot nuutotik nunamot apotailgomot. Talvani opingami, naovaktot naoligangata niggitalakivaktot umingmait, ova ehivgioktaovaktot nikkait annakkoitigot niggitalikpakuniktot. Talvani oblumami, umingmait nigginiaktot oblotoak akopivakhotiklo. Okiok opingakhakaliagangat, akkopikatagoikpaliavaktot ovalo nigginiakloakpalikhotik. Umingmait oblok kftikkokkangat akkopillkaktot. Okiomi apotainaoligangat umingmait akkopeenallkaktuniktot niggitiagoknaigaalotik apotlo evyuhigangat; taggioknafgangat nigginiakloallk angnikhotik nikkit kahakhiggangata akkopilloagoknaikhotik oblok obloktohigangat opingami.

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 accommodation types

Temporary Camp

Material Use

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

| Equipment Type | Quantity | Size - Dimensions | Proposed Use |
|------------------------------|----------|-------------------|--------------|
| Information is not available | | | |

Detail Fuel and Hazardous Material Use

| Detail fuel material use: | Fuel Type | Number of containers | Container Capacity | Total Amount | Units | Proposed Use |
|------------------------------|-----------|----------------------|--------------------|--------------|-------|--------------|
| Information is not available | | | | | | |

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 be 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

