

## 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:** Jim Schaefer  
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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 ekaloxtumi ovaniikaluktutiap oataani. Elittogihimaliktonga 8-nik allatkiinik naovaktonik nunami tahamani. Ema ela, opeet, evgit, avalakiatlo takokhaoyot nattiknani talvanik nunainaot ataa hikokyoakaktomi. Aopayangattot ivgit, eghotitlo, kagioyatlo nunami naovaktot nunap tigvani. Apotitlo nunamiitotlo naovaktot aolavaktot. Nunami naovaktot ekitkangamik apot nutkakvikhainami 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 naohimayugianikmi evvigiaxtomi avalakiagiaxtomi ovalo apotikokilgomi apotit naptuvalanggitoni. Niggivaktot okpiknik, evviknik avalakianiklo. Nikkitoangit malgoinak evgitloat: emakmiitot evgit (Carex aquatilis) okoninggalo kangguyanik (Eriophorum angustifolium). Opinggami mahaktiligangat, umingmait nigginiakvikakpaktot nuutotik nunamot apotailgomot. Talvani opingami, naovaktot naoligangata niggitalakivaktot umingmait, ova ehivgioktaovaktot nikkait annakkoitigot niggitallikpakuniktot. Talvani oblumami, umingmait nigginiaktot oblotoak akopivakhotiklo. Okiok opingakhakaliagangat, akkopikatagoikpaliavaktot ovalo nigginiakloakpalikhotik. Umingmait oblak 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**

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)