NIRB Application for Screening #125088

Coastal Surveys of Common Eider Nesting Islands Along the South Baffin Coast

Application Type:	New
Project Type:	Research
Application Date:	3/9/2017 10:09:18 AM
Period of Operation:	From 2017-07-01 to 2017-07-31
Proposed Authorization:	From 2017-07-01 to 2017-07-31
Project proponent:	Grant Gilchrist

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DETAILS

Non-technical project proposal description

English: We are investigating multiple issues of particular management importance. The first issue is outbreaks of avian cholera. Our objective is to determine the geographic extent of the outbreaks and to collect epidemiological data for laboratory analysis in order to help us to predict the severity and spread of disease. The second issue that we are examining is predation of common eider nests by polar bears. Our objective is to estimate nest predation rates by polar bears, determine the energetic benefits and limitations of this resource for bears, and examine the effects of increased nest predation on eider reproductive rates and population dynamics. Our research methodology emphasizes close collaboration with local communities. Our common eider surveys are boat-based and we hire local Inuit guides as boat captains and to assist with data collection. During portions of the surveys we will be camping on islands to facilitate sampling of areas far from town (Cape Dorset).

French: Nous examinons diverses questions d'intérêt particulier pour la gestion. La première question concerne l'épidémie de choléra aviaire. Notre objectif est de déterminer l'étendue géographique de l'épidémie de choléra aviaire et de recueillir des données épidémiologiques pour des analyses laboratoires afin d'aider à prédire la sévérité et l'étendue de la pathologie. La deuxième question que nous examinons est la prédation de l'eider à duvet par l'ours polaire. L'objectif est d'estimer le taux de prédation des nids par l'ours polaire, de déterminer les bénéfices et limites énergétiques de cette ressource pour l'ours, et d'examiner les effets de l'augmentation de la prédation sur la reproduction des eiders et la dynamique des populations. La méthodologie de recherche employée met l'emphase sur les collaborations avec les communautés locales. Les inventaires d'eiders à duvet sont faits à partir de bateaux et nous engageons des guides locales Inuit comme capitaines ainsi que pour contribuer à la récolte de données. Lors des inventaires, nous campons sur des îles afin de faciliter l'échantillonnage de certains secteurs éloignés de la communauté (Cape Dorset).

Inuktitut: ᖁᐱᕐᓄᖅᑐᒃ ᐊᒡᕿᓂᒃ ᖃᒪᑐᐃᓐᓇᓂᒃ ᐱᔪᒃᑲᐅᕗᓂᒃ ᐊᕗᓪᑎᐅᔾᕈᑎᕋᖅᑕᓄᓪᒃ ᐊᒍᐱᓕᕆᓐᐱᒃ ᐱᓪᓇᐅᔅᑎᒃ. ᐊᖅᓄᓯᖅ ᐱᔪᓯᕆᖁᔅᖅ ᐛᓇᐊᕿᓄᑐᖅ ᐅᓐᓇᖅᑎᑎᓇᖅᑐᖅ ᑎᖅᕌᓄᑦ (avian cholera). ᑕᐅᓇ ᐅᑭᓕᖅᐱᑎᓕᕆᖅᑕᐃ ᖃᑲᑎᓐᐊᕝᕋᕐᓇᐊᕋᐅᑎᒍᑦ ᓄᐊᒐ ᑎᕝᐃᕌᔅᒃᓗᑐᒍ ᐊᖑᓪᐊᖅᑕᕟᕝᕝᑲᐊᕋᖅᑦ ᐊᑲᑎᓐᒃᕿᑐᒃ ᐊᒍᒪ ᓄᐅᑎᕟᕝ ᐊᑲᑎᓪᑐᕝᐅᕝᓄᕝᐊᕿᖅ ᖃᐅᔅᐊᐱᕝᒃᑲᐅᕿᕈ ᖃᐅᔅᐊᕐᐊᕟᐊᕿᓐᐊᕝᖅ ᐊᑉᕟᐊᕿᓐᐊᓪᕝᕆ ᐅᐊᑎᓐᕐᐊᕝ ᓄᐊᔅᐊᕐᐊᕝᕆ ᖃᑲᐃᒃᑲᒃᕐᐊᕝᕝ ᐊᒍᒪ ᖁᒻᐊᔅᐊᕝᐊᕐᐊᕝᕝ ᐊᐊᓪᐊᕝᕆ ᓄᐊᕝᐅᕝ. ᐅᐊ ᐱᕝᒥᐃ ᐱᔪᓯᕆᐊᕟ ᐅᑦᕝᐊᕐᕌ ᖃᐅᔅᐊᕐᐊᑐᕝᕝᐱᐊᕝᒃᐊᕝᐊᕐᐊᕝ ᖃᑲᐅᐊᕝᐊᕝᐅᕝᕝᐊᕐᐊ ᓄᐊᑐᕝᐊᑦ ᑕᑕᒃᐊᕟᕝᐅ ᐊᒍᐱᕝᐊᕝᒃᑲᒻᕝ ᐊᕝᐊᕝᓄ ᓄᖅᒃᕝᕝᐊᕝᑦᕝᑦ ᖃᖃᐅᑕᕟᕝᕝᑐ ᓄᐊᕿᓄᕝ, ᖃᐅᔅᐊᕝᒻ ᐅᕐᐊᓐᐊᕝᕌᕝᐱᐊᕝᕝᕝᑐ ᐊᐃᕝᐊᕟᐊᕝᕝᑐᒃ ᐊᒍᓐᐊᕐ ᐱᔅᐊᕝᐊᕐᐅᕟᐊᕝᑐᑐᕝ ᑕᑕᒃᐊ ᐊᐃᕝᐊᕝᑦ ᓄᐊᕝᐊ, ᐊᕝᐊᕝᒻᒪ ᖃᐅᔅᐊᕟᐊᕝᐊᑐᕝᑦ ᐊᖅᐅᓐᐊᕝ

ᐅᓄᖅᑐᓂᑦ ᐃᕙᐱᖕᒋᓂᑦ ᓂᖅ�ᖅᑐᑦ ᐊᓕᐅᕆᕐᐳᐊᑦ ᐅᓄᖅᓚ� ᐊᑎᑎᓯᓂᑦ ᐊᒻᒪ ᐊᓕᐅᕆᐸᐊᑦ ᖃᓄᖒᑎᖕᒥᑦ. ᖃᐅᔨᓴᕐᒋᔭᕐ ᖃᐅᔨᓴᕐᒥᓯᕐᓇᐊᖅᑕᖑ
ᖃᓂᒋᒥᑦ ᐃᑲᕐᖃᑎᒡᐅᓚ ᓄᓇᓯᓚ. ᐅ� ᐊᓕᐅᕆᐸᐊᑦ ᖃᐅᕆᖅᑎᐅᓂᒥᑦ ᐅᒐᕇ ᐱᓚᕆᐅᓚᓂᑦ ᐊᒻᒪᓪ ᐃᖅᑲᓇᐃᓚᑕᑲᕐᓚ ᓄᓚᕐᖅᓂ ᐊᐅᓚᕐᕏᐆᒃᑐᓂᑦ
ᐅᒐᕇᓗ ᐊᖅᓚᐊᖅᐃᖅᐅᒐᓂᑦ ᐊᒻᒪᓚ ᐃᑲᕐᖃᓂᑦ ᖃᐅᕆᔭᕐᓂᒥᑦ ᓚᐊᑎᓗᑕ. ᑕᐃᑲᓄ ᖃᐅᕆᓚᐃᓂᖅᓚ ᑕᖅᖅᒥᓚᖃᖅᑐᔾᑦ ᖅᐱᖃᑕᓄ ᐱᖓᐊᖕᑎᖖᓗᒥᑦ ᐱᕐᕈᒥᑦ
ᖃᐅᕆᖅᑎᕐᑕᖅᐊᐅᔾᑦ ᓄᓇᐃᑦ ᐅᖖᓚᕐᕐᖅᖅᖕᒥᓂᑦ (ᕿ·ᖅᖕᐃᑦ).

Personnel

Personnel on site: 11
Days on site: 21
Total Person days: 231
Period of operation: from 2017-07-01 to 2017-07-31
Proposed term of operation: from 2017-07-01 to 2017-07-31

ACTIVITIES

Project Activities

Location	Activity Type	Land Status	Site History	Site Archaeological or Palentological Value	Proximity to the nearest communities and any protected areas
Survey and Camping Area	Researching	Inuit Owned Surface Lands	We have been conducting coastal surveys in the area since 2010.	We do not know of any archaeological sites on the islands that we plan to study. If we discover any archaeological sites we will report them.	The nearest community is Cape Dorset. The coastal surveys occur within approximately 100km of Cape Dorset.

Community Involvement and Regional Benefits

Community	Name	Organization	Date Contacted
Cape Dorset	Annie Suvega	Aiviq Hunters and Trappers Organization	2017-01-17
Cape Dorset		Aiviq Hunters and Trappers Organization	2015-02-04
Cape Dorset	Annie Suvega	Aiviq Hunters and Trappers Organization	2016-02-08
Cape Dorset		Aiviq Hunters and Trappers Organization	2016-03-23

AUTHORIZATIONS

Project Locations

South Baffin

Project Authorization

Authorizing Agency	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Qikiqtani Inuit Association	Certificate of Exemption: Q15X007	Active	2015-05-08	2017-08-31
Nunavut Water Board	Approval for the Use of Waters and Deposit of Waste without a Licence. Approval for 2016 field season (NWB File # 8WLC-ASR1617) is still active. However, we need to re-apply for the 2017 field season.	Active	2016-04-02	2017-04-01
Canadian Wildlife Service	Scientific Permit to take slavage or disturb migratory birds (NUN-SCI-16-02)	Active	2016-04-13	2018-09-01
Other	Nunavut Planning Commission - Application 148512 (renewal of application 148225)	Applied, Decision Pending		
Government of Nunavut, Department of Environment	Nunavut Wildlife Reseach Permit. This permit was approved and issued for previous field seasons (for example, permit WL 2016-042 in 2016). We will re-apply for this permit again for the 2017 field season.	Not Yet Applied		

MATERIAL USE

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Boats	2 or 3	20-25ft	Transport crew to campsites and eider colonies to conduct surveys
Generator	2	1000 Watts	Electricity

Detail Fuel and Hazardous Material Use

Fuel / Material	Type	Number of Containers	Container Capacity	Total Amount	Units	Proposed Use
Gasoline	fuel	10	20	200	Liters	Fuel for boat motors/jerry cans
Other	fuel	5	4	20	Liters	White gas: fuel for camp stove

Project Water Consumption

Daily Amount (m3)	Proposed Water Retrieval Methods	Proposed Water Retrieval Location
1	Sea water/Streams	N 64.37411°, W 75.75430°

WASTE

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Researching	Greywater	<0.1 cubic meters per day	Sump	Sump located > 100m away from water source and buried before leaving camp
Researching	Non-Combustible wastes	< 1 cubic meter	Transported to Cape Dorset	Disposed of at municipal dump
Researching	Sewage (human waste)	<0.05 cubic meters per day	Sump	Sump located > 100m away from water source and buried before leaving camp

Environmental Impacts

We attempt to minimize the impact our project has on the land, water, and wildlife. We store food and gear appropriately to avoid contaminating the surrounding areas. We transport all garbage and solid waste back to the municipal landfill in Cape Dorset. We dispose of grey water in sumps that are back-filled to match the contours of the landscape. We have an Emergency Spill Kit and Spill Contingency Plan, including a Nunavut Spill Report Form and MSDS for the fuels used at each camp. Fuel is stored in a sump to localize any potential spills. We will camp at established campsites recommended by our local guides to reduce our impacts on the land. We will not be camping for long at each campsite, so the effects of long-term site occupancy will be avoided.

Description of Existing Environment: Physical Environment

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socioeconomic Environment

Identification of Impacts and Proposed Mitigation Measures

Cumulative Effects

IMPACTS

TABLE 1 - 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																									
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OPERATION																									
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DECOMMISSIONING																									
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(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Map

Survey and Camping Area