NIRB Uuktuutinga Ihivriuqhikhamut #125697
Water Resource Assessment for Coral Harbour

Uuktuutinga Qanurittuq: New

Havaap Qanurittunia: Scientific Research

Uuktuutinga Ublua: 5/19/2022 10:45:31 AM

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

Piumayaat Angirutinga: from 0001-01-01 to 0001-01-01

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QANURITTUT

Tukihiannaqtunik havaariyauyumayumik uqauhiuyun

Qablunaatitut: Water supply for Coral Harbour, Nunavut is sourced from a river-fed reservoir. There have been instances of high electrical conductivity, which raises concerns regarding saltwater intrusion from Hudson Bay. A team (Dr. Barret Kurylyk and Dr. Julia Guimond) from the Dalhousie Coastal Hydrology Lab plans to conduct a reconnaissance field campaign to characterise the river hydrodynamics and to investigate potential sources and pathways for saltwater, including via the river, the shallow subsurface, and sea spray. The team will use non-invasive instruments to investigate the interactions between the bay and the river and to assess potential subsurface salinity dynamics. Loggers will be placed along the river to measure water level, salinity, and temperature, which will provide new understanding on coastal zone mixing in the river. Geophysical instruments will be used to measure the ground electrical resistivity to map where there are saltwater (low resistivity) and freshwater (high resistivity) zones. Surveys will be taken along the coastline and the riverbanks. Water samples will be collected to transport back to Halifax to assess the water chemistry and to fingerprint salt sources. Sensors may be used to measure total dissolved solids, dissolved oxygen, and other water quality parameters in the river. Collectively, these data will reveal the tidal dynamics in the river and help identify potential mechanisms for drinking water salinization. The first trip will be in early July (e.g. 5 days in Coral Harbour), and a potential follow-up trip will likely be undertaken later in the summer (late July to early August). Results will be shared with and interpreted for the community and Territory as desired.

Uiviititut: L'approvisionnement en eau de Coral Harbour, au Nunavut, provient d'un réservoir alimenté par une rivière. Il y a eu des cas de conductivité électrique élevée, ce qui soulève des inquiétudes concernant l'intrusion d'eau salée de la baie d'Hudson. Une équipe (Dr Barret Kurylyk et Dr Julia Guimond) du Laboratoire d'hydrologie côtière de Dalhousie prévoit mener une campagne de reconnaissance sur le terrain pour caractériser l'hydrodynamique de la rivière et étudier les sources et voies potentielles d'eau salée, y compris via la rivière, le sous-sol peu profond, et embruns marins. L'équipe utilisera des instruments non invasifs pour étudier les interactions entre la baie et la rivière et pour évaluer la dynamique potentielle de la salinité souterraine. Des enregistreurs seront placés le long de la rivière pour mesurer le niveau d'eau, la salinité et la température, ce qui fournira une nouvelle compréhension du mélange de la zone côtière dans la rivière. Des instruments géophysiques seront utilisés pour mesurer la résistivité électrique du sol afin de cartographier les zones d'eau salée (faible résistivité) et d'eau douce (haute résistivité). Des levés seront effectués le long du littoral et des berges. Des échantillons d'eau seront prélevés pour être ramenés à Halifax afin d'évaluer la chimie de l'eau et d'identifier les sources de sel. Des capteurs peuvent être utilisés pour mesurer les solides dissous totaux, l'oxygène dissous et d'autres paramètres de qualité de l'eau dans la rivière. Ensemble, ces données révéleront la dynamique des marées dans le fleuve et aideront à identifier les mécanismes potentiels de salinisation de l'eau potable. Le premier voyage aura lieu au début de juillet (par exemple, 5 jours à Coral Harbour), et un voyage de suivi potentiel sera probablement entrepris plus tard au cours de l'été (de la fin juillet au début août). Les résultats seront partagés avec et interprétés pour la communauté et le territoire comme souhaité.

Inuktitut: ᐃᒪᕐᓂ ᐊᑐᖅᑕᐅᔪᓐᓇᕐᓂᖕᒥᓐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᔪᑦᐃᒥᕐᑕᕐᕕᒃᓴᖅ ᓴᓪᓕᖅ, ᓄᓇᕗᑦ ᐃᒥᕐᑕᕐᕕᐊ ᑰᒻᒥᖖᓛᖅᑐᖅ-ᐃᒻᒥᕐᕕᒃ. ᑕᐃᒪᐅᔪᑦ ᐆᒻᒪᖅᑯᑎᑦ ᐊᐅᓚᔪᑦ ᑕᐃᑲᓂ, ᐱᔾᔪᑎᖃᖅᑐᑦ ᐃᓯᓛᕈᑎᒋᔭᐅᔪᓂᑦ ᑕᕆᐅᑉ ᐃᒪᖓᓂᑦ ᐊᑲᐅᙱᓕᐅᕆᑕᐅᔪᓂᑦ ᑲᖏᖅᓯᐊᓗᒃ ᐃᓗᐊᓂᑦ. ᐃᖅᑲᓇᐃᔭᖅᑎᑦ (ᓘᑦᑖᖅ ᐸᕆᑦ ᑯᕆᓕᒃ ᐊᒻᒪ ᓘᑦᑖᖅ ᔪᓕᐊ ᒍᐃᒪᓐ) ᑎᐅᕼᐊᐅᓯ ᓯᓪᔭᐸᓯᒥ ᐃᒪᓕᕆᓂᕐᒧᑦ ᐊᓪᓚᕝᕕᒃ ᐸᕐᓇᒃᑐᑦ ᑲᒪᓂᐊᕐᓗᑎᒃ ᖃᐅᔨᒥᐊᕋᓯᐊᕐᓗᑎᒃ ᓂᕈᐊᖅᑕᐅᒐᓯᐊᓂᕐᒧᑦ ᖃᐅᔨᒥᐊᒃᑲᓐᓂᕈᑎᒥᓗᒥᑦ ᑰᑉ ᐃᒪᓕᕆᓂᕐᒧᑦ ᐊᒻᒪ ᖃᐅᔨᓴᕐᓗᑎᒃ ᑕᐃᒪᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᓂᑦ ᐊᑐᐃᓐᓇᐅᔪᒃᓴᓂᑦ ᐊᒻᒪ ᐊᖅᑯᑎᓂᑦ ᑕᕆᐅᑉ ᐃᒪᖓᓄᑦ, ᐃᓚᒥᓗᒍ ᑰᒃᑯᑦ, ᐃᒃᑲᑦᑐᖅ ᐃᒪᖅ, ᐊᒻᒪ ᑐᓚᓐᓂᕐᒥᑦ ᐃᒪᐃᑦ ᒪᓕᒃᑐᑦ. ᐃᖅᑲᓇᐃᔭᖅᑎᑦ ᐊᑐᕐᓂᐊᖅᑐᑦ ᐊᑲᐅᙱᓕᐅᕆᑕᐅᙱᑦᑐᓂᑦ ᓴᓇᕿᑎᓂᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓗᑎᒃ ᖃᓄᐃᓕᐅᖅᑐᓂᑦ ᑲᖏᖅᓯᐊᓗᒻᒥᑦ ᐊᒻᒪ ᑰᒻᒥᑦ ᐊᒻᒪ ᖃᐅᔨᒥᐊᕐᓗᑎᒃ ᑕᐃᒪᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᓂᑦ ᑕᕆᐅᖃᖅᑐᓂᑦ ᐊᓯᙳᖅᐸᓪᓕᐊᔪᓂᑦ. ᓇᐹᖅᑐᓂᑦ ᐃᓕᓯᓂᐊᖅᑐᑦ ᑰᒻᒧᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓗᒥᒃ ᐃᒪᐅᑉ ᐊᑦᑎᓐᓂᕐᒥᑦ, ᑕᕆᐅᑦ, ᐊᒻᒪ ᓂᓪᓚᓇᕐᓂᕐᒥᑦ/ᐆᓇᕐᓂᕐᒥᑦ, ᑐᓂᓯᓂᐊᖅᑐᑦ ᓄᑖᓂᒃ ᑐᑭᓯᐊᔾᔪᑎᒃᓴᓂᑦ ᓯᓪᔭᐸᓯᐅᑉ ᓇᔪᕐᕕᖕᒥᓐᓂ ᐊᑦᑐᐊᓂᖃᖅᑐᑦ ᑰᒻᒧᑦ. ᓯᓚᕐᔪᐊᓕᕆᓂᕐᒧᑦ ᓴᓇᕿᑎᑦ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓗᒋᑦ ᓄᓇᐅᑉ ᐆᒻᒪᖅᑯᑎᖓᑦ ᐊᐅᓚᓂᕐᒥᓐᓂᑦ ᓄᓇᙳᐊᓕᐅᕆᑎᒥᓂᐊᕐᓗᒋᑦ ᓇᒥ ᑕᕆᐅᖃᕐᒪᖕᓛᑦ (ᐊᑦᑎᙱᑦᑐᓂᑦ ᐊᐅᓚᔪᑦ), ᐊᒻᒪ ᐃᒪᑦᑎᐊᕙᐃᑦ (ᐊᑦᑎᑦᑐᖅ ᐊᐅᓚᔪᑦ) ᓇᔪᕐᕕᖕᒥᑦ. ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᑲᒪᒋᔭᐅᓂᐊᖅᑐᑦ ᓯᓪᔭᐸᓯᒥ ᐊᒻᒪ ᑰᒥ. ᐃᒪᐃᑦ ᖃᐅᔨᓴᕿᑎᒃᓴᐃᑦ ᑲᑎᖅᓱᖅᑕᐅᓂᐊᖅᑐᑦ ᐊᐅᓪᓚᖅᑎᑕᐅᓗᑎᒃ ᕼᐊᓕᕙᒃᔅᒧᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᐊᕐᓗᑎᒃ ᐃᒪᓕᕆᓂᕐᒧᑦ ᖃᐅᔨᓴᕐᓂᕐᒧᑦ ᐊᒻᒪ ᑕᕆᐅᓂᑦ ᑕᐃᒪᐅᔪᓂᑦ. ᖃᐅᔨᓴᕿᑎᒃᓴᐃᑦ ᐊᑦᑐᐊᓂᖃᖅᑐᒃᑯᑦ ᐊᑐᖅᑕᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᑦ ᖃᐅᔨᓴᕐᓂᐊᓗᕐᑎᒃ ᐃᒪᖕᒍᖅᓯᒪᔪᑦ ᑎᓯᔪᓂᑦ, ᐃᒥᖅ, ᐊᒻᒪ ᐊᓯᖕᒥᑦ ᐃᒪᓕᕆᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᔪᓂᑦ ᑰᒥ. ᑲᑎᖅᓱᖅᑕᐅᓂᒃᑯᑦ, ᑖᒃᑯᐊ ᑎᑎᕋᖅᓯᒪᔪᑦ ᓇᓗᓇᐃᔭᐃᓂᐊᖅᑐᑦ ᑎᓕᓐᓂᕐᒥᑦ ᐊᔾᔨᒌᙱᑦᑐᒃᑯᑦ ᑰᒥ ᐊᒻᒪ ᐃᑲᔪᕐᓂᐊᖅᑐᑦ ᓇᓗᓇᐃᔭᐃᓗᑎᒃ ᑕᐃᒪᐅᑐᐃᓐᓇᕆᐊᖃᖅᑐᑦ ᐃᒥᖅᑕᐅᕙᒃᑐᓂᑦ ᑕᕆᐅᖃᖅᑐᓂᑦ. ᓯᕗᓪᓕᖅᐹᖅ ᐃᖕᒥᕐᕋᓂᕐᒧᑦ ᔪᓚᐅᖕᒍᓕᖀᖅᑎᓪᓗᒍ (ᐆᑦᑑᑎᒥᓗᒍ 5 ᐅᓪᓗᐃᑦ ᓴᓪᓕᓂ), ᐊᒻᒪ

ᑕᐃᒪᐅᑐᐃᓐᓇᓗᐊᕐᑲᕐᑐᑦ ᒪᓕᒡᓗᒍ ᐃᖏᕐᕿᓂᕐᒧᑦ ᑲᒪᒋᔭᐅᓂᐊᕐᑐᑦ ᐊᐅᔭᒃᑯᑦ (ᔪᓚᐃ ᓄᙵᒍᐊᓂ ᐅᒡᒍᓯ ᐱᒋᐊᓕᓵᕐᑎᓪᓗᒍ)ᔭ ᕐᑲᐅᔮᔭᐅᔪᑦ ᑐᓴᕐᑎᑕᐅᓂᐊᕐᑐᑦ ᐊᒻᒪ ᑐᑭᓯᐊᓇᕐᑎᑕᐅᓂᐊᕐᑐᑦ ᐅᕐᑲᐅᓯᓚᔭᐅᔪᒃᑯᑦ ᓄᓇᓕᒧᑦ ᐊᒻᒪ ᐊᕕᒃᓯᒪᔪᓄᑦ ᓄᓇᕐᑲᕐᑐᓄᑦ ᐊᑐᐃᓐᓇᐅᔭᓇᐊᕐᑲᕐᑎᓪᓗᒋᑦ.

Inuinnaqtun: NA

Personnel

Personnel on site: 4

Days on site: 20

Total Person days: 80

Operations Phase: from 2022-07-05 to 2022-07-25

Hulilukaarutit

Inigiya	Hulilukaarut Qanurittuq	Nunannga Qanurittaakhaanik	Initurlinga qanuritpa	Initurlinga utuqqarnitat unaluuniit Ingilraaqnitat Uyarannguqtut akhuurninnga	Qanitqiyauyuq qanitqiamut nunallaat kitulluuniit ahiruqtailiyainnit nuna
Water systems	Sampling sites	Municipal	Municipal water sources	None	Within municipal boundary
Coral Habour	Researching	Municipal	Coral Carbour	N/A	Water system of Coral Harbour

Nunaliin Ilauyun, Aviktuqhimayuniitunullu Ikayuuhiarunguyun

Nunauyuq	Atia	Timiuyuq	Upluani Uqaqatigiyaungmata
Salliq	Leonie Pameolik	SAO	2021-05-19

Angiuttauvaktunik

Naunaiqlugu nunanga talvani havauhikhaq ittuq:

Kivalliq

Angiuttauvaktunik

Munariniqmut Ayuittiaqtuq	Angirutinga Qanurittuq	Tadja Qanurittaakhaanik	Ublua Tuniyauyuq/Uuktuqtuq	Umikvikhaa Ublua
Nunavunmi Ihivriuqniqmut Timiqutigiyanga	Land and Water research permit	Applied, Decision Pending		
Nunavut Imaligiyit Katimayit	Use of water without a license	Applied, Decision Pending		

Project transportation types

Transportation Type	Qanuq Atuqtauniarmangaa	Length of Use
Air	Flying to coral harbour	
Land	walking	

Project accomodation types

Nunauyuq

Ihuaqutivaluin Atuqtauyukhan

Hanalrutit atuqtaunahuat (ukuallu ikuutat, pampiutainnik, tingmitinik, akhaluutinik, hunaluuniit)

Hanalrutit Qanurittuq	Qaffiuyut	Aktikkulaanga – Qanurittullu	Qanuq Atuqtauniarmangaa
Soil resistivity meter	1	1ft x 0.2 ft	measure the ground electrical resistivity
water sampler	1	0.5 ft x 0.2 ft	basically a bucket on a stick

Qanurittuq Urhuqyuaq unalu Qayangnaqtut Hunavaluit Aturninnga

Qanurittuq urhuqyuaq hunavaluit aturninnga:	Urhuqyuaq Qanurittuq	Qaffiuyut qattaryut	Qattaryuk Aktikkulaanga	Atauttimut Qaffiuyut	Ilanga	Qanuq Atuqtauniarmangaa
Information is not available						

Imaqmik Aturninnga

Ubluq qanuraaluk (m3)	Aturumayain imavaluin utiqtittagaani qanuq	Atulirumayain imavaluin utiqtittagani humi
0	plastic sampling jar on a telescopic stick	River and lakes associated with primary and alternative water supply sources for Coral Harbour

Iqqakuq

Ikkakunik Munakgiyauyunik

Havauhikhaq Hulilukaarut	Qanurittuq Iqqakut	Ihumagiyauyuq Qanuraaluktut Atuqtait	Qanuq Iqqakuurniarmangaa	Halummaqtirarnirutikhan piyutin
Information is not available				

Avatiliriniqmut Ayurhautingit:

None

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

Qanurittuq Ittunik Avatinga: Avatingalluanga

Qanurittuq Ittunik Avatinga: Inuuhimayunut Avatinga

Qanurittuq Ittunik Avatinga: Inungit-maniliurutingit Avatinga

Miscellaneous Project Information

Naunaiyainiq ukuninnga Ayurhautingit unalu Piumayaat Ikikliyuumiutinahuarutit

Tamatkiumayunik Ihuikgutivaktunik

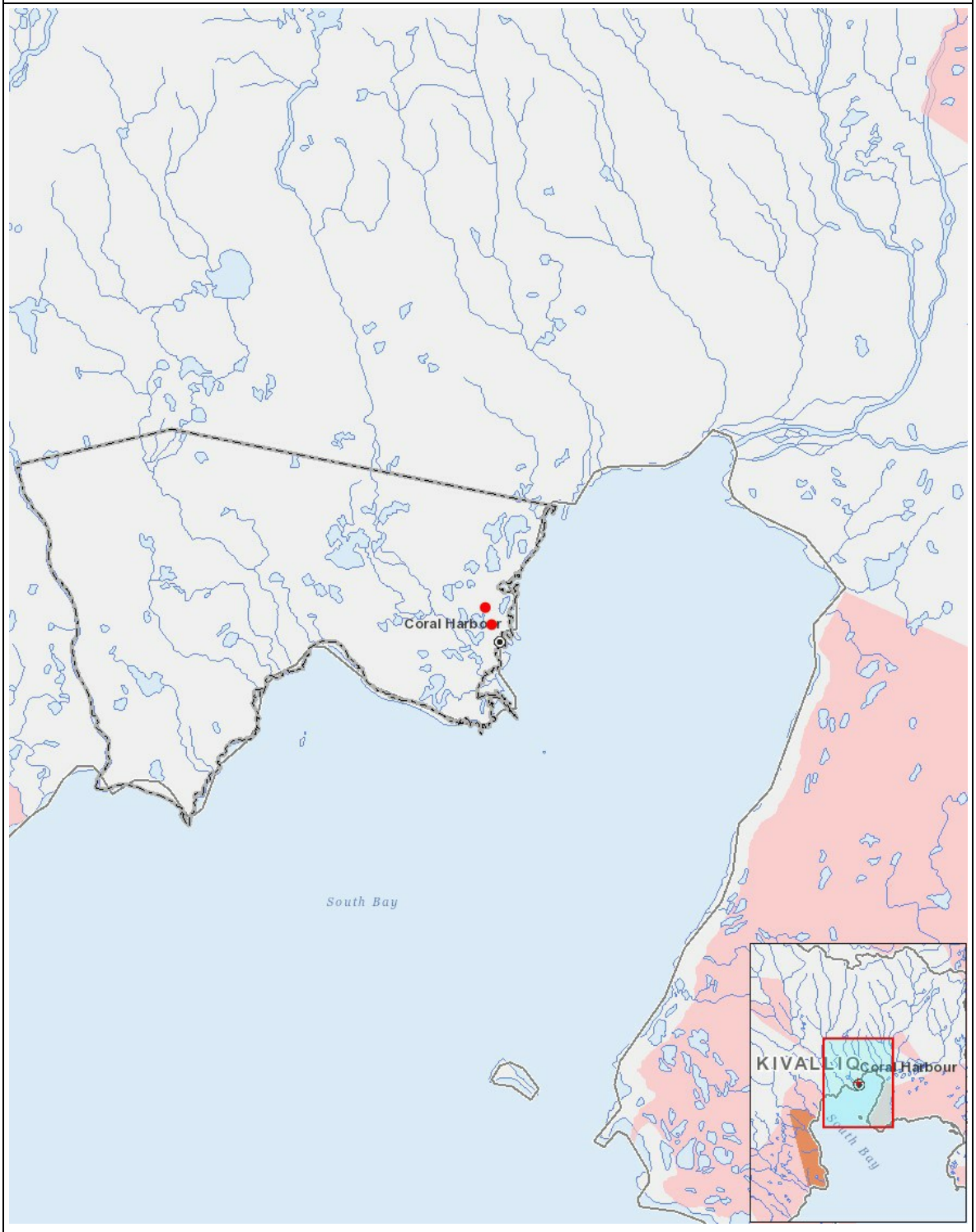
Impacts

Ilitariyauniq Avatiliriniqmut Ayurhautingit

	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
Havakvinga																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Aulapkaininnga																									
Researching		-	-	-	-	P	-	-	-	-	-	-	-		-	-	-	-	-		-	P	-	P	-
Piiqtauniq																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Nakuuyuq, N = Nakuungittut unalu mikhilimaittuq, M = Nakuungittut unalu mikhittaaqtuq, U = Naluyauyuq)

Havaariyauyukhamut Nayugaa



List of Project Geometries

1	point	Coral Habour
2	point	Water systems