



ArcticNet Project 1: The Northwest Passage at the end of the Last Glaciation. ArcticNet Project 2: River sampling during 2017 ArcticNet expedition

Application Type:	New
Project Type:	Research
Application Date:	5/29/2017 3:22:35 PM
Period of operation:	from 2017-07-13 to 2017-10-12
Proposed Authorization:	from 2017-05-25 to 2017-10-12
Project Proponent:	Anissa Merzouk ArcticNet 1045, avenue de la Médecine, room 4081, Université Laval Québec Quebec G1V0A6 Canada Phone Number.: 418-656-2356, Fax Number.: 418-656-2334

Non-technical project proposal description

English: These two ArcticNet subprojects constitute an amendment to the ArcticNet ship-based scientific license (NIRB# 06YN071) for activities conducted from the Canadian research icebreaker CCGS Amundsen. The proposed activities include river and shore sampling. Descriptions of both sub-projects are attached as PDFs containing English, Inuktitut and Inuinnaqtun versions. Project 1: Project Title: The Northwest Passage at the end of the Last Glaciation ArcticNet Researcher: Dr. Mark Furze, MacEwan University Project Location: Maxwell Bay, Devon Island, Nunavut Planned activities: Beach surveys on foot and collection of a small number of empty beach shells (5-10) (no excavations required) for radiocarbon dating. Dates: 1 day between 30 July and 10 August 2017 Project 2 Project title: River sampling during 2017 ArcticNet expedition ArcticNet Researcher: Dr. Cara Manning, University of British Columbia Project location: Rivers in the Kitikmeot and Qikiqtaaluk regions, Nunavut (list of rivers provided in the attached proposal; A few (not all) of these sampling locations will be selected from this list during the ArcticNet research cruise, based on factors such as weather). Planned activities: Collection of river water samples for chemical analysis, including measurement of greenhouse gases. Dates: Depending on the Amundsen cruise track, between 30 July and 17 August 2017.

French: N/A

[illegible]

[illegible]

Personnel on site: 2
Days on site: 10
Total Person days: 20
Period of operation: from 2017-07-13 to 2017-08-17
Proposed term of operation: from 2017-05-25 to 2017-10-12

Activities

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
River at Black Cliffs	Sampling sites	Crown	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	Located in Sirmilik National Park on Bylot Island
Glacier River	Sampling sites	Crown	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	Located in Sirmilik National Park on Bylot Island
Charles York River	Sampling sites	Crown	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	Located in Sirmilik National Park on Bylot Island
Creswell River	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Cunningham River	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
River on Devon Island	Sampling sites	Crown	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Ellice River	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Freshwater Creek	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	Cambridge Bay
Garnier River	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Jayko River, just upstream of weir	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Le Feuvre Inlet (East Side)	Sampling sites	Crown	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Mecham River	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	Resolute Bay
Pasley River	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Saaqu River	Sampling sites	Crown	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Simpson River	Sampling sites	Crown	Collection of river water samples for chemical analysis, including measurement of greenhouse gases.	N/A	N/A
Tingmeak River	Sampling sites	Inuit Owned Surface Lands	Collection of river water samples for chemical	N/A	N/A

			analysis, including measurement of greenhouse gases.		
Shore survey Maxwell Bay	Sampling sites	Crown	Beach surveys on foot and collection of a small number of empty beach shells (5-10) (no excavations required) for radiocarbon dating.	N/A	N/A

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Information is not available			

Authorizations

Indicate the areas in which the project is located

Kitikmeot
North Baffin

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Research Institute	ArcticNet multiyear license renewal 0601016R-M	Applied, Decision Pending		2018-03-31
Parks Canada	3 rivers are located in Sirmilik National Park on Bylot Island	Applied, Decision Pending		
Canadian Wildlife Service	3 river sampling sites are located in Queen Maud Gulf Migratory Bird sanctuary	Applied, Decision Pending		
Fisheries and Oceans Canada	ArcticNet 2017 Scientific Licence S-17/18-1006-NU	Active	2017-05-23	2018-05-23
Other	Nunavut Impact Review Board ArcticNet license #06YN071	Active		2018-03-31
Other	NPC File # 148573	Applied, Decision Pending		

Material Use

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
CCGS Amundsen Helicopter Bell 429	1	N/A	The helicopter of the Coast Guard research icebreaker CCGS Amundsen will be used to access the sampling sites

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		

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Information is not available				

Environmental Impacts:

The landscape, flora, and fauna will not be altered in any way. No waste will be produced and no structures of any kind will be erected.

Description of Existing Environment: Physical Environment

Description of Existing Environment: Biological Environment

Description of Existing Environment: Socio-economic Environment

Identification of Impacts and Proposed Mitigation Measures

Cumulative Effects

Impacts

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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Operation	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Decommissioning	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

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

Project Map

