



PART 1 FORM PROJECT PROPOSAL INFORMATION REQUIREMENTS

For more information about the Nunavut Impact Review Board (NIRB) please visit our web site <http://nirb.nunavut.ca/> or to access NIRB documents, project screenings, and project reviews please visit the Nunavut Impact Review Board ftp site <http://ftp.nunavut.ca/nirb>.

IMPORTANT!

Please be advised that your application will not be processed until the Sections 1 - 9 are completed in their entirety, in both English and Inuktitut (+ Inuinnaqtun, if in the Kitikmeot).

SECTION 1: APPLICANT INFORMATION

1. Project Name Arctic Shorebird Monitoring Program

2. Applicant's full name and mailing address:

<u>Jennie Rausch, Canadian Wildlife Service</u>	Phone: <u>867-669-4709</u>
<u>PO Box 2310, 5019-52nd Street</u>	Fax: <u>867-873-6776</u>
<u>Yellowknife, NT X1A 2P7</u>	Email: <u>jennie.rausch@ec.gc.ca</u>

3. Primary contact's full name and mailing address:

<u>Same as above.</u>	Phone: _____
_____	Fax: _____
_____	Email: _____

SECTION 2: AUTHORIZATION NEEDED

1. Indicate all authorizations associated with the project proposal:

<input checked="" type="checkbox"/>	Regional Inuit Association (RIA)	<input type="checkbox"/>	Canadian Launch Safety (CLS)
<input type="checkbox"/>	Nunavut Water Board (NWB)	<input type="checkbox"/>	Environment Canada (EC)
<input type="checkbox"/>	Nunavut Planning Commission (NPC)	<input checked="" type="checkbox"/>	Government of Nunavut (GN)
<input type="checkbox"/>	Indian and Northern Affairs Canada (INAC)	<input type="checkbox"/>	Department of National Defense (DND)
<input type="checkbox"/>	Department of Fisheries and Oceans (DFO)	<input type="checkbox"/>	Hamlet
<input type="checkbox"/>	Community Government & Services (CG&S)	<input type="checkbox"/>	Parks Canada (PC)
<input type="checkbox"/>	Nunavut Research Institute (NRI)	<input checked="" type="checkbox"/>	Canadian Wildlife Service (CWS)
<input type="checkbox"/>	Department of Culture, Language, Elders, and Youth (CLEY)	<input type="checkbox"/>	Other (please specify): _____

2. List the active permits, licenses, or other authorizations related to the project proposal, and their expiry date(s):

Canadian Wildlife Service Scientific Permit, NWT(NUN)-SCI-13-01, Exp 31 December 2015

Canadian Banding Permit, 10565M, Exp 31 December 2013

Environment Canada Animal Care Authorization, EC-PN-13-006, Exp 04 April 2014

Nunavut Land Use Planning Conformity Check



3. List the **pending** permits, licenses, or other authorizations related to the project proposal:

GN Wildlife Research Permit

IOL exemption

Canadian Wildlife Service Migratory Bird Sanctuary and National Wildlife Area Permits

4. Has this project or **any components of this project** been previously screened or reviewed by NIRB?

☒ YES

☐ NO

If YES, indicate the previous project name and NIRB File No.

Ground surveys of breeding shorebirds in QMGBS - Vicky Johnston, NIRB#05AN070 and
Ground surveys and aerials surveys of breeding shorebirds in Arviat and Baker Lake – Vicky
Johnston, NIRB#08YN017, Ground surveys and aerial surveys of breeding shorebirds on King
William and Victoria Island and Arctic Shorebird Monitoring Program – Jennie Rausch,
NIRB#05AN070/08YN017

SECTION 3: PROJECT PROPOSAL DESCRIPTION

1. Indicate the type of project proposal (check all that apply)^(1,2):
 (See Appendix A for Project Type Definitions)

1	All-Weather Road/Access Trail	<input type="checkbox"/>	9	Site Cleanup/Remediation	<input type="checkbox"/>
2	Winter Road/ Winter Trail	<input type="checkbox"/>	10	Oil and Natural Gas Exploration/Activities	<input type="checkbox"/>
3	Mineral Exploration	<input type="checkbox"/>	11	Marine Based Activities	<input type="checkbox"/>
4	Advanced Mineral Exploration	<input type="checkbox"/>	12	Scientific/International Polar Year Research*	<input checked="" type="checkbox"/>
5	Mine Development /Bulk Sampling	<input type="checkbox"/>	13	Harvesting Activities*	<input type="checkbox"/>
6	Pits and quarries	<input type="checkbox"/>	14	Tourism Activities*	<input type="checkbox"/>
7	Offshore Infrastructure (port, break water, dock)	<input type="checkbox"/>	15	Other ⁽²⁾ :	<input type="checkbox"/>
8	Seismic Survey	<input type="checkbox"/>			<input type="checkbox"/>

Please note:

- All project types listed above, except those marked with an asterisk (*), will also require the Proponent to submit a **Part 2 Project Specific Information Requirement (PSIR) Form**. The NIRB application process will not be considered complete without the Part 2 PSIR Form.
- Please be advised that in order to complete the NIRB process, the NIRB may request additional information at any time during the process.
- If "Other" is selected, contact NIRB for direction on whether a Part 2 PSIR Form is required.



2. If Project Type 3, 4 or 5 was selected above, please indicate the mineral of interest that is being extracted. Include a brief description.

<input type="checkbox"/>	Base Metals (zinc, copper, gold, silver, etc)
<input type="checkbox"/>	Diamonds
<input type="checkbox"/>	Uranium
<input type="checkbox"/>	Other: _____

3a. If Project Type 13, 14 or 15 was selected above, complete the table and questions below.

Transportation Type	Quantity	Proposed Use	Length of Use

3b. Describe any docks, piers, air strips or related structures that are to be used in conjunction with the proposed project activities. **Please note:** the building of new structures may require a Part 2 Form.

Not applicable.

3c. If a temporary camp site is to be established, describe the proposed structures in detail and indicate the type and source of power for the camp site if applicable.

Our camps will have two large (10'x12') tents for kitchen and storage, and a personal sleeping tent for each person in camp. Our only sources of power will be propane for cooking and small solar panels for re-charging scientific equipment.

4. Personnel

Total No. of personnel on site = (A)	10	Total No. of days on-site = (B)	20	Total No. of Person days (A) x (B) = 200
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5. Timing

Period of operation: from 15 May to 31 August

Proposed term of authorization: from 15 May 2013 to 31 August 2016 (or longer; anticipated end date 2020)

6a. Region (check all that apply):

<input type="checkbox"/> North Baffin	<input checked="" type="checkbox"/> Kivalliq	<input checked="" type="checkbox"/> Kitikmeot	<input type="checkbox"/> Transboundary: _____
<input type="checkbox"/> South Baffin	<input type="checkbox"/> National Park	<input checked="" type="checkbox"/> Qikiqtaaluk	

6b. Describe the location of the proposed project activities in a regional context, noting the proximity to the nearest communities and any protected areas.

Since the project began, and by the time it is finished in 2020 (expected completion date), we plan to have surveyed near all communities in Nunavut, and near or in all protected areas in Nunavut.

6c. Discuss the history of the site if it has been used for any project activities in the past.



We have done these shorebird surveys in the Kitikmeot in 1995 (Rasmussen Lowlands), 2001-2002 (Kent Peninsula), 2005-2006 (Queen Maud Gulf Bird Sanctuary) and 2010 (Victoria Island and King William Island).

We have done these shorebird surveys in the Qikiqtaaluk in 2003-2004 Baffin Island, and 2007 Axel Heiberg Island, Ellesmere Island, and Melville Island).

We have done these shorebird surveys in the Kivalliq in 2004 (Southampton Island), and 2008 (Arviat and Baker Lake).

6d. Indicate if there are any known archaeological/palaeontological historical sites in the area.

There are none that we know of, however, if we encounter any sites, or find any artifacts, we will leave them in their place and contact the Inuit Heritage Trust or CLEY to report our findings.

7. Land Status (check all that applies):

☒ Crown ☐ Commissioners' ☐ Municipal
☒ Inuit Owned Surface Lands ☒ Inuit Owned Sub-Surface Lands

8a. Co-ordinates:

Min Lat (degree/minute) 59° 50' N Min Long (degree/minute) -64° 30' W
Max Lat (degree/minute) 82° 50' N Max Long (degree/minute) -121° 00' W

NTS Map Sheet No: 015E,L,M; 016C-G,J,N; 017B; 025E-P; 026A-P; 027A-G; 028B; 029G; 035E,I-P; 036A-P; 037A-H; 038A-D,F,G; 039A-H; 045F-P; 046A-P; 047A-H; 048A-H; 049A-H; 054M; 055C-F,I-P; 056A-P; 057A-H; 058A-H; 059A-H; 064M-P; 065A-P; 066A-P; 067A-H; 068A-H; 069A-H; 076A-P; 077A-H; 078A-H; 079A-H; 086G-P; 087A-F; 096P; 097A,D,E; 120B-H; 340A-H; 560A,B,D.

(Please ensure that maps of the project are attached (1:50,000 if **available**, 1:250, 000 **Mandatory**) available from Natural Resources Canada)

8b. If the project proposal includes a **camp**, please provide the coordinates of the camp location

1-3 tent camps per year. Location to be determined annually; always located on crown lands.

Please note that additional location information may be required in a subsequent Project Specific Information Requirement (PSIR) submission. This may take the form of a digital Geographic Information Systems (GIS) file.

SECTION 4: NON-TECHNICAL PROJECT PROPOSAL DESCRIPTION

Please include a non-technical description of the project proposal, no more than 500 words, in English and Inuktitut (+Inuinnaqtun, if in the Kitikmeot). The project description should outline the following:

- The project activities, their necessity and duration;
- Method of transportation;
- Any structures that will be erected (permanent/ temporary);
- Alternatives considered; and
- Long-term developments, the projected outcome of the development for the area and its timeline.

IMPORTANT: IF THE PROPOSED ACTIVITIES REQUIRE SUBMISSION OF A NIRB PART 2 PSIR FORM, PLEASE COMPLETE SECTION 8 ONLY, OTHERWISE CONTINUE ON WITH SECTION 5.



SECTION 5: MATERIAL USE

1. List equipment to be used (including drills, pumps, aircraft, vehicles, etc.):

Equipment type and number	Size – dimensions	Proposed use
Helicopter (2)	Bell 206 Long ranger	Slings in/out camp equipment; transportation between ground survey plots; aerial surveys while travelling between plots.
Twin Otter (2)		Fly in people and camp equipment to camp.

2a. Detail fuel and hazardous material use:

Fuel	Number of Containers and Capacity of Containers	Total Amount of Fuel (in Litres)	Proposed Storage Methods
Diesel			
Gasoline			
Aviation fuel	18	3690	Fuel caches from Polar Shelf and/or stored in a portable berm.
Propane	6 – 20 lb	180	Stored upright outside of tents
Other			
White Gas	2 – 1 L	2	Stored in emergency kits on helicopters
Hazardous Materials and Chemicals		Total Amount of Hazardous Materials and Chemicals (in Litres)	
Batteries (AAs and AAAs)	150		Taken out when camp ends.

2b. Describe the proposed Spill Prevention Plan.

Helicopter fuel will fall under the Polar Continental Shelf Program's Spill Prevention Plan.

3a. Detail the anticipated daily water consumption rates

Daily amount (m ³)	Proposed water retrieval methods	Proposed water retrieval location
0.2	Buckets	Nearby lakes, ponds and streams

3b. Have you applied for a water License with the Nunavut Water Board?

☐ YES

☒ NO

The project is exempt per Nunavut Waters Regulations (April 2013), Schedule 2, column 2 (4), column 3.

If yes, what class of licence?



- ☐ Class A Water Licence
☐ Class B Water Licence

SECTION 6: WASTE DISPOSAL AND TREATMENT METHODS

1. List the types of waste associated with the proposed project activities:

Type of waste	Projected amount generated	Method of Disposal	Additional treatment procedures
Sewage (human waste)	10 people once a day for 20 days.	Portable dry toilet system	None
Greywater	10 people 100 L per day for 20 days.	Sump pit	Pit treated with environmentally friendly lime substitute regularly
Combustible wastes	5 bags	Removed with camp	None
Non-Combustible wastes	5 bags	Removed with camp	None
Overburden (organic soil, waste material, tailings)			
Hazardous waste	150 AA and AAA batteries	Removed with camp	None
Other:			

2. Describe the proposed Waste Management Plan.

We will be using portable dry toilet systems in each camp (waste is contained and removed with the camp). Waste will be stored in bear proof containers until our departure and then flown out of camp and taken to waste facilities in Resolute Bay. When we are away from camp during the day (toilet system is not available), waste will be buried and water bodies will be avoided.

SECTION 7: COMMUNITY INVOLVEMENT & REGIONAL BENEFITS

1. List the community representatives that have been contacted and provide the minutes of the meetings if available:

Community	Name	Organization	Date Contacted
Arviat	Donna Bigelow	Nivvialik Area Comangement Committee	11 February 2013
Cape Dorset	Martha Padluq	Isulijarniq Area Comangement Committee	11 February 2013
Resolute	Jason Akearok	Resolute Bay Area Comangement Committee	11 February 2013
Qikiqtarjuaq	Mia Pelletier	Sululiit Area Comangement Committee	11 February 2013
Clyde River	Siu-Ling Han	Ninginganiq Area Comangement Committee	11 February 2013
Coral Harbour	Jean-Francois Dufour	Coral Harbour Area Comangement Committee	11 February 2013
Grise Fiord	Lisa Pirie	Grise Fiord Area Comangement Committee	11 February 2013
Cambridge Bay & Gjoa Haven	Jennie Rausch	Ahiak Area Comangement Committee	11 February 2013



All	Martha Padluq	Inuit Field Research Assistant Program and Inuit Student Mentorship Program	11 February 2013
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SECTION 8: GENERAL QUESTIONS

1. Will you be disturbing any known archaeological sites?

☐ YES

☒ NO

Please sign and date your application:

Signature

Shorebird Biologist
Title

25 April 2011
Date





APPENDIX A Project Type Definitions

Access Trail: A project proposal with the objective of providing vehicular access to an area of interest involving minimal alteration to the terrain.

Advanced Exploration: A project proposal with the objective of identifying size, grade, and physical characteristics of a mineral occurrence and to assess the economic and technical feasibility of developing the mineral deposit into a producing mine

All-Weather Road: A project proposal with the objective of road construction for use in all seasons.

Bulk Sampling: A project proposal with the objective of extracting of large samples of mineralized material involving hundreds to thousands of tonnes. Samples are selected as representative of the potential mineral deposit being sampled. May involve crushing/milling (on small-scale)

Harvesting activities: A project proposal with the objective of harvesting animals, marine mammals and/or fish from their natural habitats by means of hunting or trapping for traditional and commercial use.

Marine Based Activities: Any activity occurring in the marine environment, such as vessel use associated with land-based activities or disposal at sea.

*Please note that normal community re-supply or individual ship movements not associated with land-based project proposals shall not be screened by NIRB (Section 12.12.2 of NLCA).

Mine Development: A project proposal with the objective of extracting broken rock with mineralization of sufficient grade and tonnage to sustain commercial mining operations (ore). Mining a body of ore can be achieved by either open pit and/or underground development. Mine development may involve milling. Milling involves treatment of the extracted ore through a combination of mechanical and chemical processes to selectively recover the valuable mineral.

Mineral Exploration: A project proposal with the objective of exploring an area to find geological anomalies. It involves site reconnaissance (ground and/or air) to locate broad and fiscal mineral deposits.

Offshore Infrastructure: A project proposal with the objective of building off loading facilities constructed off the shoreline and connected to the mainland of the marine or freshwater environment. Examples include a jetty, dock, or port facility.

Oil and Gas Exploration/Activities: A project proposal that includes 1) exploration, such as seismic or geological mapping, 2) drilling of oil and gas wells, 3) construction and operation of a pipeline, a gas processing plant or any oil and gas facility within Nunavut.

Pits and Quarries: A project proposal with the objective of pitting, which involves the extraction of granular material (i.e. sands and gravels) and quarrying, which involves the removal of consolidated rock (i.e. bedrock, frozen soil).

Scientific Research: A project proposal with the objective of implementing a series of site activities comprised of observation of phenomena, measurement and collection of data necessary for scientific investigation in designated areas within a limited time period.

Seismic Survey: A project proposal with the objective of conducting a survey to map the depths and contours of rock strata by timing the reflections of sound waves released from the surface. Survey site locations may be offshore (not within 12 nautical miles of any coast), near shore, and extended onshore.

Site Cleanups: A project proposal with the objective of site cleanups (includes DEW line site cleanups), which focuses on the remediation of chemically contaminated soils, stabilization of landfills and dumps, demolition/disposal of infrastructure and debris and monitoring after cleanup is completed.

Tourism Activity: A project proposal with the objective of conducting travel predominantly for recreational, sport or leisure purposes within a designated area and limited time period.

Winter Road: A project proposal with the objective of building a road for winter use by leveling and compacting surface snow and ice. Winter road is removed at end of season.

Winter Trail: A project proposal with the objective of building a trail for winter use by a single pass of a tracked vehicle using a blade, if necessary.

PROJECT SUMMARY:

Arctic Shorebird Monitoring Program / Arctic Program for Regional and International Shorebird Monitoring (Arctic PRISM)

We are concerned about the populations of shorebirds that breed in the Arctic. Recently, studies that count these birds on their migration routes have found that numbers of most species are declining. No one is sure why this is happening, though some possible causes are: loss of habitat in countries where the birds spend the winter, human developments at their migration stopping points, climate change, and toxic substances on their wintering grounds.

Our knowledge of the size of shorebird populations is not very good, and some of the species that breed in the Arctic are difficult to monitor on their migration routes. We want to monitor the birds on their breeding grounds because we will get better estimates of their true population sizes. Canadian and American biologists have developed a method to monitor the population size of shorebird species that breed in the Arctic. We want to use this method to keep track of shorebird populations over the years, so we will know if they are increasing or decreasing. We can use this information to detect problems with the shorebird populations and then try to figure out what is causing the problem.

The Arctic Shorebird Monitoring Program, which is also called the Arctic Program for Regional and International Shorebird Monitoring (Arctic PRISM), is made up of two types of surveys: Tier 1 surveys (short term over a large area) and Tier 2 surveys (long term at a few specific sites). The coverage area for the program is all of arctic Canada, and our U.S. partners cover the parts of the arctic located in Alaska (Figure 1).

Tier 1 Surveys

Tier 1 surveys take place in June and are in a different location each year, so over time we survey many locations, but only once. There may be more than one Tier 1 crew each summer, but each 4 person crew would be stationed at a different location. The crews stay in a temporary tent camp and at the end of the season everything is removed so there is no trace of the camp having been there. The goal is to find out which species are there, if they are breeding or not, how many there are, what habitats they are using, and if there are species at risk, what subspecies they are.

Surveyors will only be in the same area for 2-3 hours at a time and will not harass wildlife or leave garbage. To do ground surveys, 2 people walk 25 m apart back and forth over a 12 hectare area. They record the type and number of all birds seen. Aerial surveys for shorebirds will be done while flying from one plot

to the next. Surveys will be flown at a speed of 80 - 90 kph at a height of about 30 m. If large mammals are spotted, we will fly higher to avoid disturbing them.

Tier 2 Surveys

Tier 2 surveys take place for 5-8 weeks in June and July and are long-term surveys. They are at a few locations within Bird Conservation Region #3 (Arctic), and we go back to the same sites each year and look at the same birds and the same locations. These crews of 3-5 people at each Tier 2 site monitor the health of the birds, if they are having a successful breeding season, how many predators are in the area, what the weather is like, what food sources there are for the birds and look for changes over time. Again, we ensure that there is no trace of our presence after we leave each year, but we return to the same site.

The Tier 2 surveys walk over a large area each day looking for birds and nests. Camp set up and take down is supported by twin otter and helicopter, but once the camp is set up, they have no aircraft support and do all their travelling on foot and by small boat.

Currently, there are Tier 2 camps near Kendall Island MBS and East Bay MBS and we are planning on new sites on Coats Island, NU and in the central arctic (Kitikmeot Region).

Other Permitting and Community Involvement

Some of our survey plots may be on Inuit Owned Lands and we ensure that we have requested appropriate permissions from the Regional Inuit Association(s) prior to access. We ensure that we have all other required permits for our work such as water board, environmental screening committees, and land use plan conformity.

The work conducted in the MBSs and NWAs may include work covered under a Canadian Banding Permit, Canadian Wildlife Service Scientific Permit and/or Environment Canada Animal Care Committee Approval.

We plan on hiring local people through Canadian Wildlife Service's Inuit Field Research Assistant and Inuit Student Mentorship Programs to assist with our surveys. We purchase our groceries and supplies from local communities.

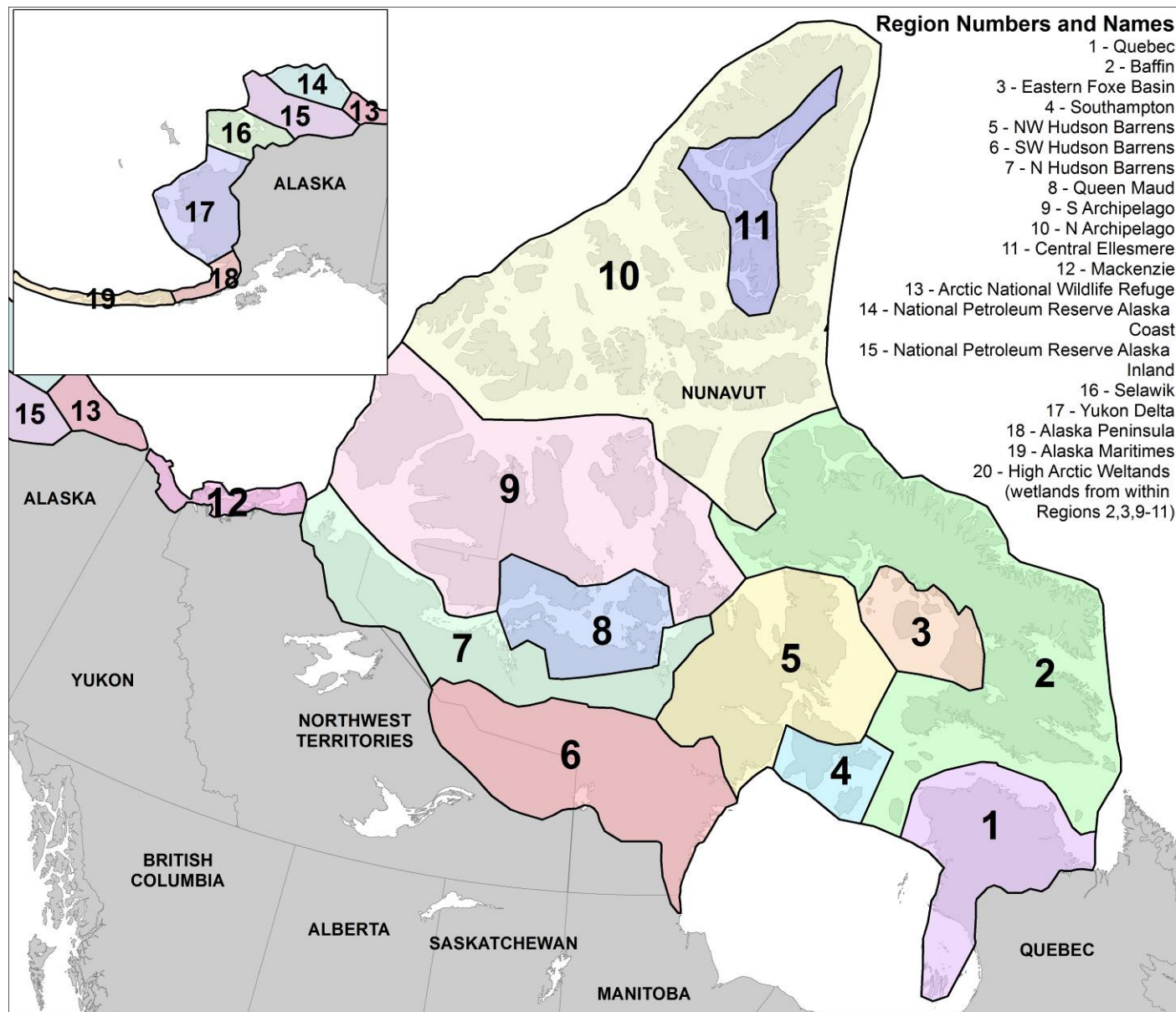


Figure 1. Survey regions and coverage area for the Arctic Shorebird Monitoring Program (Arctic Program for Regional and International Shorebird Monitoring), a U.S.- Canadian partnership project.



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