

SUBMISSION TO THE
NUNAVUT WILDLIFE MANAGEMENT BOARD
FOR



Information:

Decision: X

Issue: New proposals for the Nunavut Wildlife Study Fund (NWSF) 2013-2014

Background:

Wildlife staff feel that the recently implemented changes to the NWSF policy and application evaluation criteria, approved during Regular Meeting (RM) 001-2012, have helped to align these criteria with the goals of the NWSF.

The NWSF file numbers identify the community-based organization associated with the project, the year of original application and project number.

The projects were evaluated using the criteria outlined in the NWSF policy, with the inclusion of changes approved during Regular Meeting (RM) 001-2012, in the same manner as NWRT projects. Projects were scored based on the information submitted by the applicant, and then ranked based on their total score. Proposals were scored based on the following four sections, for a total score out of 100:

- Priorities / 25 (NWMB Priority 17.50 and Regional Priorities 7.50);
- Quality of research / 35;
- Funding and training / 25; and
- Consultation and reporting / 15.

NWSF projects are not considered for multi-year funding. NWMB Wildlife staff would like to note that of the 5 proposals received, the highest score was 79.50%. The NWSF Policy indicates that proposals must receive a score of at least 50% to be brought to the Board for consideration; therefore, 4 of 5 proposals¹ are being brought to the Board for consideration. These 4 proposals for the Board to consider this year that have requested a total of **\$120,000**.

The proposal² that is not being brought to the Board for consideration failed to meet the minimum criteria due to a substantial lack of detail in outlining the methodology, budget, and consultation and reporting. The letter to the applicant has addressed these issues, and indicated that NWMB

¹ Monitoring narwhal in Milne Inlet (111-13-3 Qikiqtani Inuit Association); Non-invasive grizzly bear monitoring (222-13-4 Arviat HTO); Exploratory char fishery in M'Clintock Channel (244-13-1 Gjoa Haven HTO); M'Clintock Channel polar bear non-invasive sampling (244-13-2 Gjoa Haven HTO)

² Arctic char study / exploratory fishing (111-13-5 Inuarak Outfitting)

Wildlife staff are willing to assist in the completion of future applications to ensure sufficient detail is presented.

The Board determined in its 2013-2014 budget **\$120,000** is available for NWSF for this fiscal year; therefore, the Board has the option of funding all 4 projects that will be presented.

A summary of the scores and projects are provided in the table below. Project proposals and project reviews are included in **Tabs 28-31**.

Prepared by: Peter Kydd, Wildlife Management Biologist, NWMB

Consulted: Rebecca Jeppesen, Director of Wildlife Management, NWMB

New Nunavut Wildlife Studies Fund Proposals for 2013-2014.					
Project #	Title	Amount Requested	Score	Rank	Tab
111-13-3	Monitoring narwhal response to open-water shipping in Milne Inlet.	\$30,000	79.50	1	29
222-13-4	Non-invasive community-based grizzly bear population monitoring.	\$30,000	77.88	2	30
244-13-1	Exploratory Fishery Study of M'Clintock Channel and Surrounding Islands: Initial Fishery Feasibility Studies for Arctic Char and Marine Fish	\$30,000	77.40	3	31
244-13-2	Increasing the power of a census estimate of M'Clintock Channel polar bears through Inuit-based non-invasive sampling.	\$30,000	69.50	4	32
Total Funds Requested:		\$120,000			
Total Funds Available:		\$120,000			

PROPOSAL REVIEW

Project Number: 111-13-03

Applicant: Stephen Williamson Bathory

Title: Monitoring Narwhal Response to Open-Water Shipping in Milne Inlet

Funding Requested: \$30,000

Rank: 1 / 4

Total Score 79.50 /100

(0 points deducted)

Scoring Breakdown: NWMB Priority: 8.50 / 17.50
Regional Priority: 7.50 / 7.50
Quality: 26.50 / 35.00
Consultation: 12.00 / 15
Funding: 25.00 / 25

Project Summary: The proposal states that the project's main objectives are to: 1) monitor narwhal response to shipping traffic in Milne Inlet; 2) train local monitors; and 3) develop a community-based monitoring program that is responsive to local concerns and information needs.

Project Contributions:

Requested from NWMB	\$ 30,000	26%
Other Contributions	<u>\$ 86,000</u>	<u>74%</u>
Total	\$116,000	100%

NWMB Staff Evaluation:

NWMB Priority: #4 - Contributes to the provision of advice regarding the Nunavut Settlement Area's marine areas and proposed decisions which would affect those marine areas.

Regional Priority: # 1 Baffin – Increase community involvement in wildlife management.

Project design: During the observational component of this study data will be collected on visually spotted narwhal groups; this data will include group composition, age descriptions, and sex identification. Environmental data will also be collected, including sea ice presence, sea state, weather conditions, visibility, and tide position. Narwhal behavioral states will be recorded during observation, enabling the identification of stress or avoidance behavior in the presence of vessels. Vessel types will be categorized to distinguish behavioral changes related to various vessels (e.g. cruise ships, private sailboats, etc.).

Passive acoustic monitoring will be used to detect whales by the distinctive sounds they emit during communication, foraging and geolocation. With increased recognition of the negative impacts of human-made underwater noise on marine mammals, the use of passive acoustic monitoring will increase the ability to document vocalizations by marine mammals (indicating presence) and provide information on human-made noise. Information on the number and size of ships operating in an area will be used in conjunction with data on presence/absence of marine mammals to help determine the impacts that shipping is having on these animals.

Application of results: Documenting narwhal response to increased vessel traffic will play a critical role in developing appropriate mitigation and adaptive management options to reduce

negative impacts, should they occur. The information collected will be used by Qikiqtani Inuit Association (QIA), Baffinland Iron Mines Corporation (BIMC) and Fisheries and Oceans Canada (DFO) to ensure that the development of the mine site at Mary River, and subsequent shipping of ore, is done in a manner that ensures access to resources and sustainability of harvests.

Community involvement / consultation: Mittimatalik Hunters and Trappers Organization, Pond Inlet Mary River Review Committee, and Pond Inlet, Nunavut Arctic College Environmental Technology Program have each been consulted, and have provided their formal or preliminary support, evidence of the formal support has been provided. Members of the Hunters and Trappers Organization, and students from the Nunavut Arctic College will be hired and provided the appropriate training for data collection and analysis. The proposal also indicates that in-community consultation will occur throughout, and upon completion of the research.

Recommendations:

NWMB staff recommends that funding, if awarded, should be used to hire local employment.

Prepared By: Peter Kydd, Wildlife Management Biologist, NWMB

Consultations: Anna Magera, Wildlife Management Biologist, NWMB

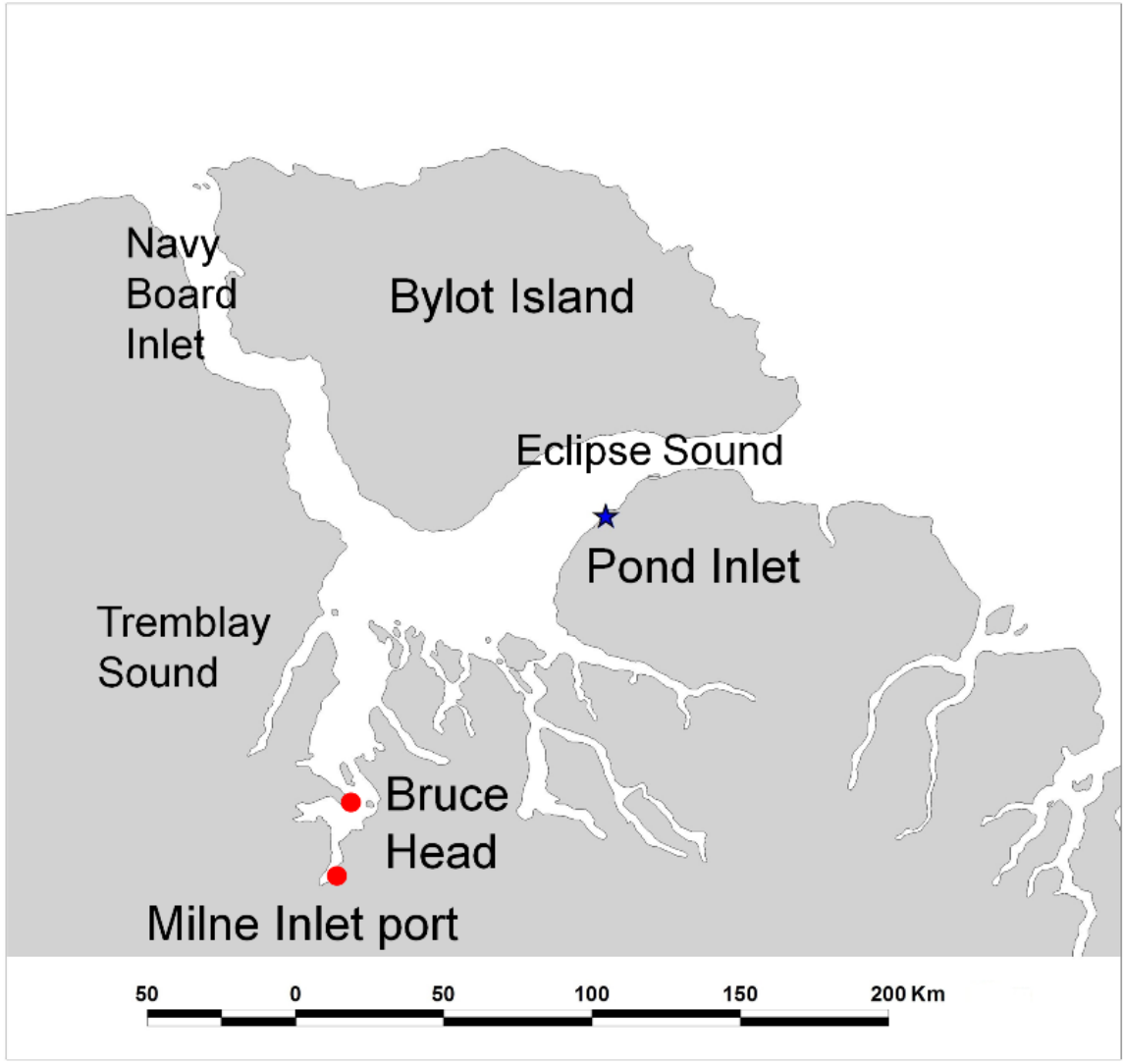


Figure 1: Milne Inlet study area.

PROPOSAL REVIEW

Project Number: 222-13-04

Applicant: Leah Muckpah

Title: Non-Invasive Community-Based Grizzly Bear Population Monitoring

Funding Requested: \$30,000

Rank: 2 / 4

Total Score 77.88 /100

(0 points deducted)

Scoring Breakdown: NWMB Priority: 17.50 / 17.50

Regional Priority: 7.50 / 7.50

Quality: 30.00 / 35.00

Consultation: 10.50 / 15

Funding: 12.38 / 25

Project Summary: The primary objectives of this monitoring project are to establish a network of bear scratching posts from which hair samples will be collected, and to develop a community-based monitoring protocol for grizzly bears in Nunavut through a combination of scientific methods and Inuit Qaujimagatuqangit. Specific objectives are to: 1) use data of individually identified bears to monitor population distribution and abundance over time; 2) determine landscape use and movements through DNA analysis; 3) provide field work and training opportunities to members of the local Hunters and Trappers Organization; and 4) increase collaboration between government and co-management partners and to enhance the Hunters and Trappers Organizations monitoring capacity.

Project Contributions:

Requested from NWMB	\$30,000	100%
Other Contributions	<u>\$ 0,000</u>	<u>0%</u>
Total	\$30,000	100%

NWMB Staff Evaluation:

NWMB Priority: #1 - Contributes to the establishment, modification or removal of levels of Total Allowable Harvest (S 5.6.16 to S 5.6.18) for stocks or populations where there is believed to be a conservation concern or that are priority species for harvest by Inuit.

Regional Priority: # 1 Kivalliq – Grizzly bear management plan – amendments to Section 24 of the Nunavut Act needed to improve grizzly bear management.

Project design: About 125 scratching posts, wrapped with barbed wire, will be deployed around Henik Lake in late June 2013. The posts will be visited 5 times at about 14-day intervals, where all visible hair will be collected. All scratching post deployment and hair collection will be done by members of the Hunters and Trappers Organization or local hunters, using their own boat or all-terrain vehicle. At the end of the season, the hair samples will be sent to Wildlife Genetics International Lab, Nelson, British Columbia for individual grizzly bear identification.

Application of results: One result of this study will be the establishment of a database containing “DNA fingerprints” of individual grizzly bears which could be used in future monitoring. This study will also provide direction for future grizzly bear management actions.

The project will help build a monitoring capacity for Hunters and Trappers Organizations and will generate a benchmark of monitoring information that will be used for future comparisons.

Community involvement / consultation: The Arviat Hunters and Trappers Organization has been consulted and support has been requested; however, there is no indication that support has been obtained. Members of the Hunters and Trappers Organization will be hired as survey team members for data collection. The proposal also indicates that in-community consultation will occur before, during, and after completion of the research.

Recommendations:

NWMB staff have no recommendations.

Prepared By: Peter Kydd, Wildlife Management Biologist, NWMB

Consultations: Sarah Spencer, Wildlife Management Biologist, NWMB

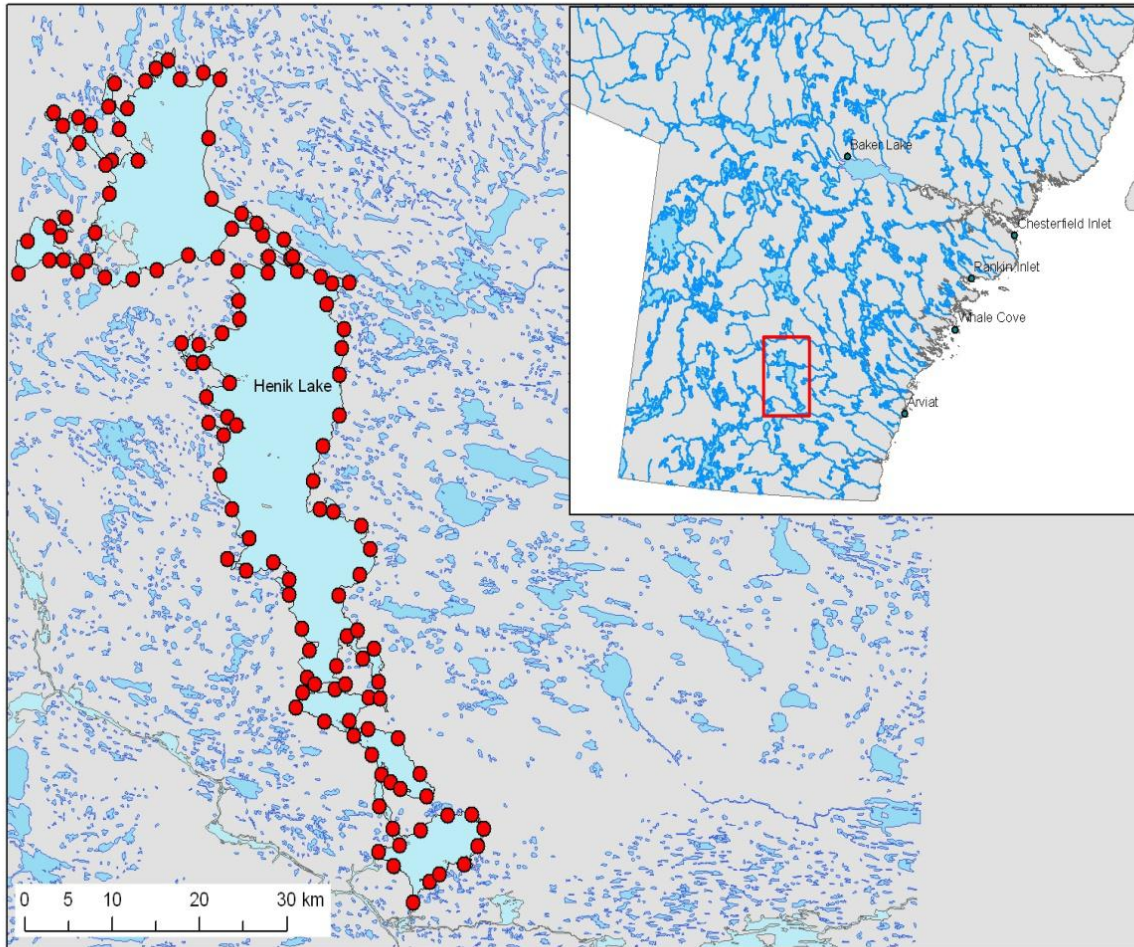


Figure 1: Locations of 125 proposed scratching posts around Henik Lake.

PROPOSAL REVIEW

Project Number: 244-13-01

Applicant: James Qitssualik

Title: Exploratory Fishery Study of M'Clintock Channel and Surrounding Islands: Initial Fishery Feasibility Studies for Arctic Char and Marine Fish

Funding Requested: \$30,000

Rank: 3 / 4

Total Score 77.40 /100

(0 points deducted)

Scoring Breakdown: NWMB Priority: 17.50 / 17.50

Regional Priority: 5.50 / 7.50

Quality: 23.00 / 35.00

Consultation: 10.00 / 15

Funding: 21.40 / 25

Project Summary: The two main objectives of this study are to: 1) characterize basic biological data to begin STAGE II of the Exploratory Fisheries program for Arctic char; and 2) evaluate marine fish for a more rigorous STAGE I (feasibility) study for a marine fish Exploratory Fisheries program near King William Island and M'Clintock Channel.

Project Contributions:

Requested from NWMB	\$30,000	30%
Other Contributions	<u>\$70,375</u>	<u>70%</u>
Total	\$100,375	100%

NWMB Staff Evaluation:

NWMB Priority: #1 - Contributes to the establishment, modification or removal of levels of Total Allowable Harvest (S 5.6.16 to S 5.6.18) for stocks or populations where there is believed to be a conservation concern or that are priority species for harvest by Inuit.

Regional Priority: #3 Kitikmeot – Assessment of feasibility of commercial char fisheries in Gjoa Haven.

Project design: Multi-mesh nets will be set for 20-24 hours to obtain 150-200 Arctic char from up to four lakes. Data from Arctic char sampling will include catch per unit effort for each lake, length, weight, sex, and age of each fish, and tissue samples for genetic and contaminant analysis. Drop lines of up to 150 meters, with hooks every two feet, will be baited and set for roughly 12 hours. Marine taxa data collected from droplines set in up to eight auger holes on the sea ice will include catch per unit effort for each hole, species identification, length, weight, age, and sex for each fish, as well as tissue samples for genetic and contaminant analysis.

Application of results: The results of this study will provide much-needed basic biological data to further investigate the feasibility of an expanded Arctic Char fishery on M'Clintock Channel Islands. Using four targeted coastal lake populations, the contaminants study will provide insights on the edibility of the fish; the age and size distributions of fish will suggest the harvest potential of these populations; and the genetic data will provide insight into whether there is a single or multiple stocks at the scale of M'Clintock Channel. The results of the marine study will

quantify the species that are present and will be used to create contaminant profiles for all species of captured fish to determine their edibility.

Community involvement / consultation: The selection of Arctic char populations for this study will rely on Traditional Ecological Knowledge of the residents of Gjoa Haven. The hunters and elders will choose up to four sites that have provided historically rich yields of Arctic char. The Gjoa Haven Hunters and Trappers Organization has been consulted and support has been requested; however, there is no indication that support has been obtained. Community members from Gjoa Haven will be hired as survey team members for data collection, as well as field logistics. The proposal also indicates that in-community consultation will occur before, during, and upon completion of the research.

Recommendations:

Should this project receive funding NWMB staff recommend that funds be used for analyses of samples or the hiring of local Inuit employees, and not be used for student funding. It should also be noted by the Board that Nunavut Wildlife Research Trust policy does not support exploratory fishery studies, or those investigating the effects of contaminants on human health. The Board may also wish to consider that there are concerns in regards to the researcher listed as the secondary contact in the proposal, Peter de Groot. It appears as though professors and students from Queen's University are conducting the majority of the work involved with this project; therefore, it is not truly a community or Hunters and Trappers Organization led project.

Prepared By: Peter Kydd, Wildlife Management Biologist, NWMB

Consultations: Anna Magera, Wildlife Management Biologist, NWMB

PROPOSAL REVIEW

Project Number: 244-13-02

Applicant: James Qitssualik

Title: Increasing the Power of a Census Estimate of M'Clintock Channel Polar Bears through Inuit-Based Non-Invasive Sampling.

Funding Requested: \$30,000

Rank: 4 / 4

Total Score 69.50 /100

(0 points deducted)

Scoring Breakdown: NWMB Priority: 3.50 / 17.50
Regional Priority: 7.50 / 7.50
Quality: 24.50 / 35.00
Consultation: 12.00 / 15
Funding: 22.00 / 25

Project Summary: The main objectives of this study are to: 1) genetically sex hair snag samples, biopsy plugs, and feces; 2) attempt to genetically age hair snag samples and biopsy plugs; 3) genetically identify most recent polar bear diet items from feces; 4) determine recent polar bear feeding patterns from feces; 5) determine nutritional stress of polar bears from feces; 6) determine contaminant profiles of polar bears from feces, biopsy plugs and hair snag samples; and 7) genetically identify disease causing agents (e.g. viruses, bacteria, etc.) in polar bear feces.

Project Contributions:

Requested from NWMB	\$30,000	20%
Other Contributions	<u>\$121,125</u>	<u>80%</u>
Total	\$151,125	100%

NWMB Staff Evaluation:

NWMB Priority: #6 - Contributes to the development of plans for the management, classification, protection, restocking or propagation, cultivation or husbandry of particular wildlife (S 5.2.34 (i)).

Regional Priority: #1 Kitikmeot – M'Clintock Channel polar bear population assessment.

Project design: Between 150 to 200 sampling stations at different locations in M'Clintock Channel will be deployed to collect polar bear hair snag samples for a suite of laboratory analyses. The intention is to bait and re-bait the sampling stations twice over a month of field work. Participating Inuit hunters will provide an estimate of sex, age and body size for each polar bear that visits the sampling stations. Opportunistically, polar bears will be approached by skidoo, and shot with biopsy darts to collect tissue samples, which will complement hair snag and fecal sample collection, and to improve accuracy assessments of Inuit track diagnoses. All hair snag, biopsy plugs, and feces will be genetically aged and sexed, and genotyped to identify individual polar bears.

Application of results: This work will: 1) provide a minimum known alive population estimate, which will be used in the subsequent census of the management unit; 2) provide non-invasive

estimates of sex and age for genetically tagged animals; and 3) document Inuit Traditional Ecological Knowledge estimates of sex, age, and body size for all sampled individuals.

Community involvement / consultation: Local hunters will be employed and trained to erect sampling stations and collect hair and feces samples. The Gjoa Haven Hunters and Trappers Organization has been consulted and support has been requested; however, there is no indication that support has been obtained. Community members from Gjoa Haven will be hired as survey team members for data collection, as well as field logistics. The proposal also indicates that in-community consultation will occur before, during, and after completion of the research.

Recommendations:

NWMB staff have no recommendations.

Prepared By: Peter Kydd, Wildlife Management Biologist, NWMB

Consultations: Sarah Spencer, Wildlife Management Biologist, NWMB

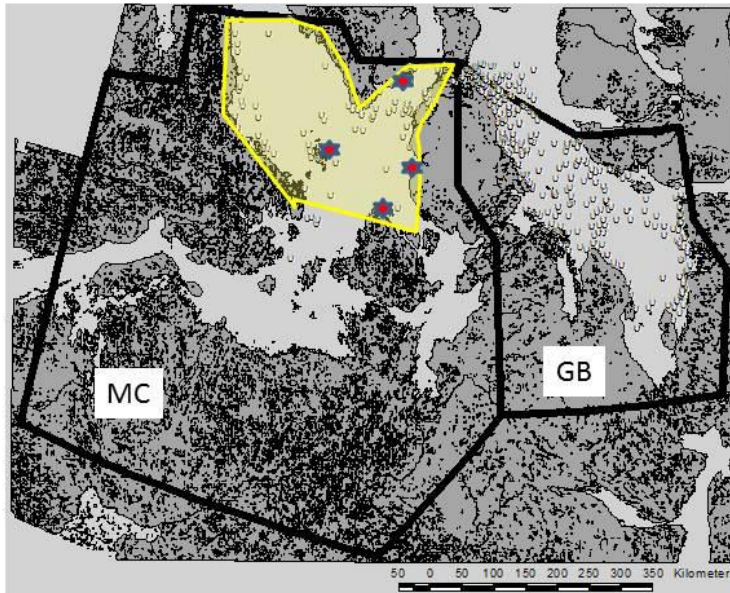


Figure 2. General Area of proposed non-invasive sampling of the M'Clintock Channel management unit (MC) shown as yellow polygon. The white dots on the map refer to locations of polar bear captures during 1998-2000 GN aerial mark recapture survey. The area of our proposed survey includes most of the bear capture locations in the 1998-2000 survey in MC. The red stars indicate locations of Research Cabins and camps.