# **PROPOSAL REVIEW**

Project Number: 2-14-09

Applicant: Markus Dyck

Title: M'Clintock Channel polar bear genetic mark-recapture

Funding Requested: Single Year Funding - \$75,000 for 2014-2015

Rank: 2 / 18	Scoring Breakdown:	NWMB Priority: 17.50 / 17.50
Total Score 85.60 /100	-	Regional Priority: 7.50 / 7.50
(no deductions)		Quality: 28.00 / 35.00
		Consultation: 15.00 / 15
		Funding: 17.60 / 25

# Project Summary:

The primary objective of this project is to assess the size and status of the M'Clintock Channel polar bear subpopulation by: 1) estimating the size and composition of polar bears in M'Clintock Channel through a genetic mark-recapture; 2) comparing new abundance estimates to those derived from past studies; 3) estimating survival and reproductive parameters for population viability analyses; and 4) comparing polar bear distribution to environmental variable such as ice conditions and prey availability.

# **Project Contributions:**

Requested from NWMB	\$ 75,000	14%
Other Contributions	\$446,000	86%
Total	\$521,000	100%

#### NWMB Staff Evaluation:

<u>NWMB Priority</u>: #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 Kitikmeot – M'Clintock Channel polar bear population estimate

#### Project design:

During April and May 2014 biopsy darting will be carried out on the sea ice and coastal areas of M'Clintock Channel, Victoria Strait, Franklin Strait, James Ross and Rae Strait, and Queen Maud Gulf. A helicopter will be used to search for bears in areas determined by combining information on sea ice conditions with data from previous studies to reduce sampling bias due to differing habitat use. Upon location of a bear, a tissue sample will be retrieved using a biopsy dart. These tissue samples, providing genetic information, will be used to determine the sex of the bear and to "mark" the bear by its unique genetic identity. These will be combined with tissue samples taken during previous mark-recapture studies to estimate survival rates, preliminary estimates of abundance, and population growth rate.

Although funding has only been requested for a single-year, the application indicated that this project is intended to continue for three years (2014 to 2017) to produce final abundance estimates.

## Application of results:

Project results will be documented in a Government of Nunavut file report as well as peer reviewed publications and status assessments for the Polar Bear Technical Committee and Polar Bear Specialist Group. Abundance estimates will inform total allowable harvest considerations as well as development of management plans. Information on polar bear distribution will provide insight into habitat use (including sensitive habitat such as dens and feeding areas) which, in turn, may be used to inform environmental impact assessment processes and to mitigate risks to public safety through human-bear conflicts.

## Community involvement / consultation:

The Project Leader received letters of support from the Ekaluktutiak Hunters and Trappers Organization of Cambridge Bay and the Gjoa Haven Hunters and Trappers Organization in January 2014. No evidence of support from or a request for support to the Talayoak Hunters and Trappers Organization was included in the application. Incommunity consultations will be conducted in the spring during field work and progress reports will be sent to the Hunters and Trappers Organizations and the Kitikmeot Regional Wildlife Board in the winter after field work is completed. A summary report and oral presentation will also be provided to communities upon the completion of the study (winter 2016/2017).

As per the NWRT policy, if the project is funded by the NWRT the project is required to: (1) provide a letter of support from all affected communities by June  $30^{th}$ , 2014; **OR** (2) provide a letter of support from a majority of the affected communities by June  $30^{th}$ , 2014 and provide evidence that the research has done a "conscientious" job of consulting; **OR** (3) provide the required information to demonstrate that "conscientious" consultation has been conducted by June  $30^{th}$ , 2014.

**Recommendations:** If this project is funded, the following conditions should apply:

- 1. Funding should be conditional on other funding, as identified in the proposal, being approved. This should be confirmed in writing; and
- 2. Funding should be conditional on meeting the consultation requirements identified as per the NWRT policy.

Prepared By: Danica Crystal, Wildlife Management Biologist, NWMB

**Consultations**: Peter Kydd, Wildlife Management Biologist, NWMB Karla Letto, Wildlife Management Biologist, NWMB