**APPLICATION**

**WILDLIFE RESEARCH PERMIT**

**1. Applicant:** Heather Sayine-Crawford, Manager, Wildlife Research and Management

**2. Address:** Environment and Natural Resources

 PO Box 1320

 Yellowknife, NT

 X1A 2L9

 Phone (867) 767-9237 Ext. 53230 Fax (867) 873-0293

**3. Sponsor(s):** ENR, Headquarters

**4. Project Leader(s):** Heather Sayine-Crawford

**5. Personnel:** Boat operator & two handlers

**6. Species:** Barren-Ground Caribou

**7. Location:** Contwoyto Lake

**8. Time Period:** Mid to Late July

**9. Project Title: Collaring of Bathurst Barren-Ground Caribou at Water Crossings**

**10. Project Description**

Population estimates obtained for the Bathurst herd indicate that the population has continued to decline by ~58% since the previous survey in 2015. The June 2018 Bathurst caribou survey estimates were 3,636 ± 1,253 (95% CI) breeding females and an overall herd estimate of 8,207 ± 3,008 (95% CI) caribou. Low rates of survival in adult female caribou, and low and variable rates of productivity (due to a combination of low fecundity and poor calf survival rates) are the main reasons for the continued decline.

A management proposal has been prepared (and shared with Indigenous governments and organizations) with 11 management recommendations. One of those recommendations is increased biological monitoring, including increasing the total number of collars to 70 (50 cows and 20 bulls). Increasing the number of collars on cows to 50 would provide more reliable annual estimates of cow survival rates, as well as increasing confidence in defining distribution of caribou throughout the year, assigning harvest to herd reliably, and monitoring of cow fidelity to calving grounds. Range use by bulls shows patterns that vary from those of cows, thus maintaining the 20 bull collars used in recent years will also be important.

ENR would like to deploy GPS collars on adult female and male caribou at traditional water crossings on Contwoyto Lake.

**10. Objective(s):**

1. To deploy up to 36 collars at water crossings and monitor caribou movement and range use by GPS collars.

**11. Method(s): Collaring of Cape-Bathurst Caribou Herd**

A maximum of 36 caribou (26 Cows and 10 Bulls) will be equipped with GPS collars. A capture crew will consist of the boat operator, and two handlers. The crew will drive up to the caribou as it is swimming. One handler will secure the caribou while the other handler samples and attaches the collar.

Collars on male caribou will be fitted loosely to allow for increases in neck size during the rut.

Each animal will be examined to assess condition (fat cover over back). The radio-collars will be fastened around the animal’s neck. Hair sample will be taken for DNA. Incisors may be photographed to assist in estimation of age from the amount of wear visible and eyes checked for besnoitiosis.

Caribou will be monitored post-capture by the GPS location data and if the collar becomes stationary efforts will be made to locate the caribou as soon as possible in order to identify the cause of any mortality. All collars will have a programmable breakaway device that allows the collar to drop to the ground after a programmed time. Thus the caribou do not need to be handled again to remove the collars.

**12. Funding:** ENR Headquarters

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**13. Additional licenses:**

NWT Wildlife Care Committee permit is required.

Nunavut Wildlife Research Permit Application

**14. Proposed Collection(s):**

Hair

# **Recommendation Form**

## **Wildlife Research Permit - Application**

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The terms Committee or Board mean a "Hunter's and Trappers' Association" as defined in the Wildlife Act.

The Committee or Board

***Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Community:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_***

**[ ]** SUPPORTS **or [ ]** DOES NOT SUPPORT (please check one)

the application of

***Name of Applicant or Group: Heather Sayine-Crawford, ENR Headquarters***

***Address of Applicant: Box 1320,Yellowknife, NT X1A 2L9***

***FAX number of Applicant: 867-873-0293***

for the issue of a Wildlife Research Permit.

**Signature: Date:**

of President, Committee or Board.

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

***Title of project:* Collaring of Bathurst Barren-Ground Caribou at Water Crossings**

**Recommended Terms and Conditions:**

**Reasons for decision:**