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CANADIAN WILDLIFE SERVICE – NORTHERN REGION

APPLICATION FOR A MIGRATORY BIRD SCIENTIFIC PERMIT

Personal information collected as part of the permitting process is protected under the Privacy Act.

IMPORTANT: Incomplete, illegible, or unsigned application forms will be returned and will result in a delay in the review of a permit application. If a section is not applicable, please write or select N/A. Attach additional pages if necessary.

Your project proposal may require additional review and/or screening by territorial/federal/Indigenous review boards/groups before Canadian Wildlife Service (CWS) can issue a scientific permit. In some cases, additional review processes and/or environmental assessments may take up to several months to complete. Please contact your regional CWS office for more information.

Permit Application Deadlines:

Nunavut:

The deadline to apply for a scientific permit for a research project that **will be conducted within a NWA or MBS** and that will **begin between June 1 and October 31 is February 1**. For all other times of the year, or for locations not within a NWA or MBS, a permit application must be submitted a minimum of 4 months in advance of the proposed project start date.

Northwest Territories and Yukon:

No annual deadline; however, review processes external to the CWS process can take several months to complete. It is advisable to submit your application a minimum of 4 months in advance of the proposed project start date.

Once a complete application, including external approvals, has been received by CWS, the applicant will be notified of the decision to issue, or not issue, the permit within 40 days. If the application includes species that are federally listed as a threatened or endangered species under Schedule 1 of the Species at Risk Act, a decision will be made within 90 days of receiving a completed application.

| PART 1: APPLICANT INFORMATION | | |
|---|---|-------------------------|
| Section 1.1: Type of request | | |
| 1.1.1 Type of request <input type="checkbox"/> New project <input checked="" type="checkbox"/> Continuing project for which a permit has expired Expired Scientific Permit number: NUN-MBS-16-02, NUN-SCI-16-04 <input type="checkbox"/> Amendment to an existing permit Existing Scientific Permit number(s): <input type="checkbox"/> Extension (contact CWS office prior to filling out application) Existing Scientific Permit number(s): | | |
| 1.1.2 Territory <input type="checkbox"/> Northwest Territories <input checked="" type="checkbox"/> Nunavut <input type="checkbox"/> Yukon | 1.1.3 Period of Permit Requested <input type="checkbox"/> 1 year <input type="checkbox"/> 2 year <input checked="" type="checkbox"/> 3 year <input type="checkbox"/> N/A (amendment) | |
| 1.2: Applicant contact information | | |
| Applicant surname: Gilchrist | Applicant given name: Grant | |
| Position/title: Research Scientist | | |
| Name of the organization that the applicant is from: Environment and Climate Change Canada | | |
| Mandate/statement of purpose of organization: Conserving and restoring Canada's natural environment through science-based research | | |
| Authorized secondary contact: Holly Hennin | | |
| Mailing address of applicant | | |
| Street or P.O. Box: 1125 Colonel By Dr. | | |
| City: Ottawa | Province/Territory, Country: ON | Postal Code: K1S 5B6 |
| Telephone: 613-998-7364 | Email: grant.gilchrist@canada.ca | Fax: |
| Mailing address of organization (if different from above) | | |
| Street or P.O. Box: | | |
| City: | Province/Territory, Country: | Postal Code: |
| PART 2: RESEARCH ACTIVITIES | | |
| SECTION 2.1: Project Information | | |
| 2.1.1 Project title Marine habitat use of Thick Billed Murres nesting at Cape Graham Moore, Nunavut | | |
| 2.1.2 Project duration (anticipated): Start (yyyy/mm/dd) : | | End (yyyy/mm/dd): |

| | |
|--|------------|
| 2020/07/05 | 2022/08/05 |
| 2.1.3 Project summary Provide a "Plain Language Summary" of the project including the project objectives, and how the project will contribute to society's understanding of migratory birds, ecosystem health or human well-being. Also indicate whether the question in this study has been answered before, and if so, why you are re-addressing it. If your scientific research occurs in a NWA or MBS, include this section in your Plain Language Project Summary as a part of your NWA/MBS permit application. (Plain Language Summary is attached) | |
| 2.1.4 Applicant qualifications relevant to the project (or CV attached <input checked="" type="checkbox"/>) Please describe your experience/qualifications in relation to the activities outlined in your project summary (include technical and/or academic qualifications, publication history, etc.). | |
| 2.1.5 Animal Use Protocol (AUP)/Animal Care Committee approval documents Are being submitted with the application: <input type="checkbox"/> Yes – documents attached <input checked="" type="checkbox"/> To follow – I have applied and will submit documents by (yyyy/mm/dd): 2020/04/01 <input type="checkbox"/> Not required | |
| SECTION 2.2: Species | |
| Species at risk: If any of the target and/or non-target species that are the subject of this application are federally listed as a threatened or endangered species under Schedule 1 of the <i>Species at Risk Act</i> , Annex 1 of this Application must also be completed. | |
| 2.2.1 Target species (indicate the species, age groups, sex and numbers of migratory birds that will be targeted) Thick Billed Murres (<i>Uria lomvia</i>), adults, male and female, 50, released Thick Billed Murres (<i>Uria lomvia</i>), adults, male and female, 30 collected | |
| 2.2.2 Non-target species (indicate the species, age groups, sex and numbers of migratory birds) <input checked="" type="checkbox"/> N/A Describe any effects (direct or indirect) on non-target species and how these effects will be mitigated. Since we have targeted capturing methods (noose pole) we do not capture non-target species, nor any non-target individuals. However we try to minimize the number of people at the colony and the level of human activity on the colony to minimize the disturbance to both target and non-target species. | |
| SECTION 2.3: Activities/Methods | |
| 2.3.1 Activity Description Describe in detail the activities that will be undertaken (e.g. working in a colony, blood sampling, capture, banding, nest collection, handling of eggs, etc.): Using climbing equipment, we will work on the Thick Billed Murres nesting on the colony at Cape Graham Moore. No capture activities will occur during poor (rainy, high winds) weather for both bird and researcher safety. | |

Capture and Banding

Up to 50 Thick Billed Murres will be captured on their breeding ledges via noose-pole. This technique is commonly used for capturing cliff nesting murres and allows quick capture of targeted individuals, minimizing stress to the captured individual and other individuals in the vicinity. We will place a metal US Fish and Wildlife Service (USFWS) band on the right tarsus. We will also take standard morphological measurements of the individual at the time of capture, including weight, wing chord length, bill length and depth, and tarsus length.

Sampling

A small blood sample (0.5 ml) will be taken from the brachial vein using a needle and capillary tubes. This blood will be used for DNA sexing of individuals and physiological analyses. We will also sample 4 covert feathers for stable isotope analysis, to determine diet composition during the previous post-breeding season. We also plan to collect fecal samples from focal birds in an attempt to test whether DNA isolation techniques can determine diet composition and relative abundance of digested prey.

We plan to collect 20 thick-billed murre eggs for contaminants analysis, contributing to our long-term monitoring program of contaminants in the North.

We plan to collect 30 adult murres. This will be done in an area of the colony away from any long-term population monitoring plots or egg collection plots. Birds will be either captured by noosing and then euthanized using ACC-approved methods by experienced personnel. These birds will later be dissected to enable a detailed quantification of all ingested plastic pollution.

Tracking devices

We will also use small GPS devices (18 grams; less than 2% of body weight) and temperature depth recorders (TDR; 3 grams; less than 1% of body weight) to track movements and diving behaviour of individuals during the breeding season. GPS units will be affixed to the back of the bird using TESA tape and deployed for 2-7 days. TDR's will be affixed to a plastic leg band and deployed for 2-7 days. Individuals will be re-captured after this period to retrieve the units.

2.3.2 Banding (☐ N/A)

☒ Migratory birds will be banded by the **applicant** under banding permit number: 10650

☐ The applicant has **applied** or will be **applying** to the Bird Banding Office (BBO) for a Scientific Permit to Capture and Band (email: ec.bbo.ec@canada.ca or call: 613-998-0524).

☐ **Nominee(s)** will be banding. Name(s) and banding permit number(s) will be provided in Section 7 of this application.

☐ Migratory birds will be captured and released at the capture site but not banded or marked. The **rationale** for this is:

SECTION 2.4: Justification/Mitigation

2.4.1 Justification

Provide justification for the need to use migratory birds (i.e. why migratory birds must be used instead of other species) and a rationale for the species chosen, the sample size, and the sex and age classes proposed.

Thick-billed murres were selected because they are a harvested species, especially their eggs, by local Inuit communities. They are also a diving species of seabird which eat fish and are likely to be directly impacted by increased shipping activities in the North through disturbance from ships. Ships may also indirectly affect murres by altering the distribution of fish species that the murres rely on, and therefore affecting the ability of murres to forage and feed their offspring during their reproductive period. By using these methods we will be able to assess whether these impacts are having a significant negative effect on murres and help inform how shipping activities can reduce their impact on marine bird populations. We target adults because they are foraging rigorously during this period of the breeding season and are the age class most likely to be directly impacted by shipping activities.

Number of animals used:

We request 50 murres be banded, feather collected, blood sampled and tracked using GPS transmitters and time-depth records to ensure that adequate sample sizes are available for rigorous statistical comparisons to our research conducted last in 2016. We request that up to 40 fecal samples be collected keeping in mind the same rigorous statistical needs, while realizing it is unlikely to collect more than 40 opportunistic samples. During GPS deployments in thick-billed murres and common eiders from 2014 to 2017, we determined that the GPS tracking technology available to us works effectively with no observed effects on the well-being of individuals.

We request that 20 thick-billed murre eggs be collected to keep collection sample sizes consistent across our other long-term monitoring sites and to achieve the amount required for appropriate statistical analyses.

We request 30 thick-billed murre adults to ensure that we have the needed statistical sample sizes for analyses, but also a comparable number of birds to what will be collected at other sites under other permits.

2.4.2 Consideration of alternatives

Do alternative methods exist to replace the use of migratory birds, or refine or reduce the numbers needed? If so, provide a rationale for NOT adopting alternative methods.

No, there are currently no alternative methods that can be used. There are no other data that currently exists to conduct this kind of analysis, making this a novel study which will be useful in informing future management related to shipping and other industry in the North, as well as informing the management of the Bylot Island Migratory Bird Sanctuary. There is also no other way to assess ingestion of plastics without collecting the birds and performing a dissection.

2.4.3 Mitigation measures and risk management

Please describe the measures that will be used to reduce/minimize the disturbance to the migratory birds, reduce the potential for injury, etc.

The following procedures are used to avoid any undue stress or injury to birds during the capture and handling process:

1. Murres are caught using noose poles which are safe for the birds and quick to capture target individuals. This makes trips to the colonies to depoly or retrieve GPS units and bands quick and reduces colony disturbance.
2. Birds are not captured during rainy conditions, thereby avoiding additional thermal stress to individuals or affecting their eggs.

3. We only ever have one bird being handled at a time which keeps the time it takes to band and release a bird to a minimum.
4. We use recommended leg band sizes and specialized banding pliers to ensure proper fit and conformation of bands.
5. Our bander is proficient at handling and banding birds and deploying GPS transmitters. The handling routine is efficient (less than 5 minutes per band, less than 10 minutes to deploy transmitters), thus minimizing the direct holding and processing time.
6. Collections of thick-billed murres will occur away from the core of the colony where we will be depolying GPS units and away from where egg collections will occur.

SECTION 2.5: Location

2.5.1 Address, geographic coordinates.

Please provide the location(s) where the activities will be conducted. Please include a map with the listed geographic coordinates as an attachment to your application:

Coordinates of Cape Graham Moore Colony: 72°56'10.39N, 76°07'15.63"W

Map included in the Plain Language Summary.

If birds are to be released in a location other than at the point of capture, also provide the location of release:

n/a

2.5.2 Protected areas

Is the area(s) where your project is to be conducted in a Migratory Bird Sanctuary and/or National Wildlife Area? ☒ Yes ☐ No

If yes, provide the name(s) of the protected areas:

Bylot Island Migratory Bird Sanctuary

If yes, you must also apply for a National Wildlife Area Permit and/or Migratory Bird Sanctuary Permit. Contact the applicable CWS regional office to obtain a permit application.

SECTION 2.6: Disposal/Disposition

Final disposition/disposal and location of any migratory bird samples collected in the study: Samples are brought to the National Wildlife Research Centre and sent to collaborators at the University of Windsor, Queen's University, and McGill University. Samples for plastics analyses will remain at the National Wildlife Research Centre.

If possible, any birds that are euthanized due to injury or extreme discomfort (according to our ECCC Animal Care Protocol; previously approved and currently under review) or found already dead on the colony, are frozen and sent to a lab for contaminant analysis. If we must euthanize a bird, we will include it in the plastics analysis.

SECTION 2.7: Nominees

| List individuals covered by the application to be included as permit nominees (individuals who will carry out the activities authorized under the permit). Please attach a separate sheet if more space is required. | | | |
|--|-----------------------|---|-----------------------------------|
| Name | Organization | Position/Title | If banding, provide permit number |
| Grant Gilchrist | ECCC | Research Scientist | 10650 |
| Alyssa Eby | Univeristy of Windsor | Field technician | |
| Brian Malloure | ECCC | Field technician | |
| 3 TBD field technicians | ECCC | Field technician | |
| SECTION 2.8: Qualified Ornithologists Recommending the Permit | | | |
| Important: letters <u>must</u> be included with the application | | | |
| 1) Name: Dr. Oliver Love | | Telephone Number: 519-253-3000 x2711 | |
| Title/Position and Organization: Associate Professor, University of Widnsor, Department of Integrative Biology | | | |
| Email: olove@uwindsor.ca | | | |
| 2) Name: Dr. Paul Smith | | Telephone Number: 613-998-7362 | |
| Title/Position and Organization: Research Scientist, Environment and Climate Change Canada | | | |
| Email: paulallen.smith@canada.ca | | | |
| SECTION 9: Documents | | | |
| <input checked="" type="checkbox"/> Two letters: <u>All</u> applicants must submit two letters of recommendation from qualified ornithologists (or equivalent experts) with the application, otherwise it will be considered <u>incomplete</u> (CVs may also be required). <input checked="" type="checkbox"/> AUP/ACC approval documents: <u>If</u> the activities involve live migratory birds or eggs an Animal Use Protocol and Animal Care Committee approval must also be submitted. <input checked="" type="checkbox"/> Bird Banding Permit: If the activities involve capture and banding of migratory birds your BBO permit must also be submitted. | | | |

PART 3: CONSULTATION AND COMMUNITY INVOLVEMENT

List local community representatives, Inuit, Indigenous Peoples, Boards, Committees or Councils, who have been contacted about your proposed research activities. State how they are participating in your project, if at all (e.g. providing advice, supplying goods, hired to assist you, etc.). Describe all communication with listed parties including dates of phone calls, emails, and any materials that were provided as mail outs, as well as the response received from each group. Attach a separate sheet if more space is required to outline all points of contact.

Representative name: Phepelie Ootook

Name of group represented: Mittimatalik HTO manager

Address: PO Box 198, Pond Inlet, NU, X0A 0S0

Phone/Fax: 1-867-899-8095/1-867-899-8095

How contacted, and date: Pending in late February

Response received? ☐ Yes ☒ No (If yes, attach response letter or email)

Participating? ☒ Yes ☐ No

If yes, how?

In late February there are Terrestrial Working Group and Marine Working Group meetings scheduled with Baffinland to consult on upcoming research and work for this summer. Grant will meet with the Manager and chairperson of the Mittimatalik HTO at this meeting for consultation and discuss this project among others.

List relevant attachments (please include all mailed out consultation packages and responses):

Representative name: Asungasungat ACMC

Name of group represented: Asungasungat ACMC

Address:

Phone/Fax:

How contacted, and date: Submission of application

Response received? ☐ Yes ☒ No (If yes, attach response letter or email)

Participating? ☒ Yes ☐ No

If yes, how?

The ACMC will provide feedback and consultation through the application process of this permit.

List relevant attachments (please include all mailed out consultation packages and responses):

Representative name:

Name of group represented:

Address:

Phone/Fax:

How contacted, and date:

Response received? ☐ Yes ☐ No (If yes, attach response letter or email)

Participating? ☐ Yes ☐ No

If yes, how?

List relevant attachments (please include all mailed out consultation packages and responses):

Representative name:

Name of group represented:

Address:

Phone/Fax:

How contacted, and date:

Response received? ☐ Yes ☐ No (If yes, attach response letter or email)

Participating? ☐ Yes ☐ No

If yes, how?

List relevant attachments (please include all mailed out consultation packages and responses):

IMPORTATION NOTE

Incomplete applications will not be considered. Attach with the duly completed form any documents deemed relevant to the application (screening decision reports from territorial review boards, site maps, photographs, copy of other relevant permits issued by another authority, consultation records and materials, detailed description of the project methods, etc.).

Environment and Climate Change Canada may request additional information or seek clarification before issuing or denying a permit.

PART 4: ATTESTATION AND SIGNATURE

I, Grant Gilchrist (print name) attest that I have the ability and knowledge to accurately identify the species and conduct the permitted activities and certify that:

- I am 18 years of age or older;

- All information submitted in this application is accurate and has been completed to the best of my knowledge;
- I will abide by any Canadian Council on Animal Care guidelines relevant to my activities;
- I may not commence any activities that are the subject matter of this application before a valid permit is in my possession;
- I, and the nominees, have the ability and knowledge to safely conduct the permitted activities and agree to abide by the terms and conditions of the permit;
- (if applicable) I am familiar with accepted methods of euthanasia for birds and have sufficient training to perform euthanasia if a bird is accidentally injured during permitted activities and cannot be released or rehabilitated;
- (if applicable) The facility where migratory birds will be kept meets the requirements as set out in the AUP/ACC documents.
- I understand that, in order to legally conduct the activities, I may need to obtain additional federal, provincial, territorial and/or municipal permits or authorizations; and
- (if applicable) I agree that any information necessary to meet the requirements of the *Species at Risk Act* may be posted on the Public Registry.

SIGNATURE OF APPLICANT:



(sign with dark ink)

DATE: 2020/02/19

(yyyy/mm/dd)

Submit complete application form to:

Nunavut:

Canadian Wildlife Service – Iqaluit office

Email: ec.nupermisscf-cwspermitnu.ec@canada.ca

Northwest Territories:

Canadian Wildlife Service – Yellowknife office

Email: ec.tnopermisscf-cwspermitnwt.ec@canada.ca

Yukon:

Canadian Wildlife Service – Whitehorse Office

Email: ec.scfpacpermits-cwspacpermits.ec@canada.ca

| For internal use only | | | |
|---------------------------|-----------------------------------|---------------------------------|-------|
| Date Received: | Date Approved: | | |
| Permits Officer: | Approved <input type="checkbox"/> | Denied <input type="checkbox"/> | Date: |
| Biological reviewer: | Approved <input type="checkbox"/> | Denied <input type="checkbox"/> | Date: |
| Species at risk reviewer: | Approved <input type="checkbox"/> | Denied <input type="checkbox"/> | Date: |

| | | | |
|---|-----------------------------------|---------------------------------|------------------------------|
| Environmental Assessment: | Approved <input type="checkbox"/> | Denied <input type="checkbox"/> | N/A <input type="checkbox"/> |
| Previous report on file | Yes <input type="checkbox"/> | No <input type="checkbox"/> | NA <input type="checkbox"/> |
| Documentation missing | Yes <input type="checkbox"/> | No <input type="checkbox"/> | |
| Comments: | | | |
| ANNEX 1: SPECIES AT RISK | | | |
| <p>Under the <i>Species at Risk Act</i> (SARA), permits are required by persons conducting activities that affect a species listed on Schedule 1, any part of its critical habitat or the residences of its individuals. If your application is for activities that will affect a migratory bird species that is also listed on Schedule 1 of SARA, information must be provided for the categories below.</p> <p>Note: In accordance with regulatory requirements, certain information will be posted on the SAR Public Registry (https://www.registrelep-sararegistry.gc.ca/).</p> | | | |
| 1. Species: | | | |
| 2. Purpose of the activities: | | | |
| <input type="checkbox"/> Scientific research relating to the conservation of the species. <input type="checkbox"/> The activity benefits the species or is required to enhance its chance of survival in the wild. <input type="checkbox"/> Affecting the species is incidental to the carrying out of the activity. | | | |
| 3. Qualified persons | | | |
| Demonstrate that the activities will be undertaken by qualified persons: | | | |
| 4. Alternatives | | | |
| <p>Paragraph 73(3)(a) of SARA requires that all reasonable alternatives to the activity that would reduce the impact on the species be considered and that the best solution be adopted.</p> <p>Please demonstrate that all reasonable alternatives to the proposed activity that would reduce the impact on the species have been considered:</p> <p>Explain why you believe that your proposed approach is the best solution:</p> | | | |
| 5. Mitigation measures | | | |
| Please demonstrate that all feasible measures will be taken to minimize the impact of the activity on the species or its critical habitat or the residences of its individuals (as per paragraph 73(3)(b) of SARA): | | | |
| 6. Effect on survival or recovery | | | |
| Please explain why you believe that your proposed activities will not jeopardize the survival or recovery of the species (as per paragraph 73(3)(c) of SARA): | | | |

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