Northern Boreal Cumulative Effects Post-Doctoral Fellow

**Title:** Northern Boreal Cumulative Effects Post-Doctoral Fellow  
**Position Type:** Full time, Two Years (second year contingent on satisfactory performance in first year)  
**Affiliations:** Wildlife Conservation Society Canada (WCS Canada) & University of Saskatchewan  
**Position Location:** Whitehorse, Yukon (negotiable)  
**Supervised by:** Dr. Chrystal Mantyka-Pringle  
**Application closing date:** Open  
**Position start date:** 1\(^{st}\) May 2020 (negotiable)  
**Salary range:** $55,000/year plus health benefits, travel and research expenses to be determined

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**Position Summary:**

The WCS Canada Northern Boreal Mountains program and the University of Saskatchewan aims to investigate the cumulative impacts of land-use change and climate change, particularly placer mining, quartz (hard rock) mining, oil and gas exploration and development, road and trail disturbances, forestry, climate warming and permafrost melting on terrestrial land birds, grizzly bears, and chinook and chum salmon as key focal species. The highly qualified candidate will be funded through a Mitacs Elevate Post Doctoral Fellowship ([https://www.mitacs.ca/en/programs/elevate](https://www.mitacs.ca/en/programs/elevate)) with Dr. Chrystal Mantyka-Pringle at the University of Saskatchewan as the academic supervisor and Dr. Hilary Cooke of Wildlife Conservation Society Canada as the partner organization. In addition, the research will be informed and partnered with Dr. Megan Hornseth from the Government of Yukon (Fish and Wildlife Branch), and Dr. Lisa Mahon from the Canadian Wildlife Service (Environment and Climate Change Canada). The Fellow will lead two projects, with an opportunity to engage on several others.

The primary research project will be to investigate the cumulative effects of multiple stressors on terrestrial land birds using a large avian monitoring dataset that incorporates standardized survey data (point counts) and acoustic data collected using automated recording units (ARUs) in Yukon’s boreal biome. The fellow will work with all partners to design and implement a field program to survey breeding birds at selected sites of moderate to high anthropogenic disturbance in Yukon to supplement the existing dataset. The fellow will be responsible for processing acoustic data and all modelling. Previous experience conducting standardized surveys and ability to identify northwest boreal birds is not required, but will be considered beneficial.

The second project will be in collaboration with the First Nation of Na-cho Nyäk Dun and Tr’ondëk Hwëch’ìin First Nation to assess the cumulative impacts of mining, road development, and permafrost melting on sediment loading, changes in sediment loading, erosion and runoff on water quality, salmon spawning habitat and other species (e.g., grizzly bears). The approach will use baseline inventory data provided by Department of Fisheries and Oceans (DFO) and...
other existing datasets to compare Yukon sites with and without disturbance. The fellow will make comparisons among years and look for trends in water quality and the coverage of salmon spawning in relation to the intensity and extent of permafrost melting.

The successful candidate must have a strong background in some combination of the following essential skills: advanced knowledge of boreal systems and/or aquatic ecosystems; cumulative effects modelling; spatial analyses using GIS and other tools such as Google Earth Engine for data management and analysis; statistical analyses of large datasets; bioacoustic analyses of ARU data. The majority of time will be spent compiling and analyzing data, but will also include up to an estimated 8 weeks of field work annually. The successful candidate must have experience working in remote areas in challenging conditions (due to climate, biting insects, terrain, thick bush, presence of grizzly and black bears). The following experience will also be considered an asset: relationship building and working with Indigenous communities; working with Government partners; ability to communicate research to a wide array of stakeholders through meetings, speaking engagements, and writing for both scientific and lay audiences.

**Required Qualifications:**

- Ph.D. with a strong computational/analytical background transferable to processing large datasets.
- Ability to apply computational skills to acoustics, terrestrial and aquatic ecology, conservation biology.
- Demonstrated strong working experience with conservation issues.
- Excellent oral and written communication skills for diverse audiences, including the ability to write manuscripts, articulate, synthesize, and present information.
- Strong interpersonal skills and demonstrated ability to work effectively in a cross-cultural and interdisciplinary work environment.
- Self-motivated, but capable of working remotely.
- Positive, flexible, and team-oriented approach, with the willingness and desire to work as a part of a multi-disciplinary team.
- Ability and desire to undertake field-related research, including bird monitoring and aquatic assessment surveys.

The successful candidate must hold a PhD by the start date of this fellowship, and should have a strong record of scholarly publications. Interested candidates should submit a cover letter, full CV (including contact information for two references, and two relevant examples of their written work). This application will remain open until the right candidate is found.

We thank all candidates for their interest, however, only those selected for interview will be contacted. If necessary, suitable candidates may be considered for a 1-year position on one of the research projects.
About WCS Canada

WCS Canada was established as a Canadian conservation organization in July 2004. Our mission is to conserve wildlife and wildlands by improving our understanding of and seeking solutions to critical problems that threaten key species and large wild ecosystems throughout Canada. We implement and support comprehensive field studies that gather information on wildlife needs and then seek to resolve key conservation problems by working with a broad array of stakeholders. We also provide technical assistance and biological expertise to local groups and agencies that lack the resources to tackle conservation concerns. WCS Canada is independently registered and managed, while retaining a strong collaborative working relationship with sister WCS programs in more than 55 nations, including an integrated North America Program. The Wildlife Conservation Society (www.wcs.org) is a recognized global leader in conservation and for more than a century has worked in North America promoting actions such as bison reintroduction, pioneering field studies, parks creation, and legislation to protect endangered wildlife.