



CANADIAN
WILDLIFE HEALTH
COOPERATIVE

A National Plan to Coordinate the Management of Bat Health in Canada

CREATING A WORLD
THAT IS SAFE AND SUSTAINABLE
FOR WILDLIFE AND SOCIETY



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October 2021

Prepared by J. Segers, S. McBurney, M. Jones, and P. Zimmer

On behalf of CWHC National Office

Reporting to Environment and Climate Change Canada's Inter-agency Bat Health Committee

Contact persons

Jordi Segers, Canadian National Bat Health Program Coordinator, jsegers@cwbc-rccsf.ca

Patrick Zimmer, Chief Executive Officer Canadian Wildlife Health Cooperative, pzimmer@cwbc-rccsf.ca



PREFACE

This document outlines the objectives, strategies, and actions for the Canadian Wildlife Health Cooperative's (CWHC) **national bat health program**. Our national bat health program uses a holistic approach to consider the interaction of biological, social, and environmental factors that may impact at-risk bat populations because bat health, like all wildlife health, is influenced by the cumulative effects of multiple stressors or threats. The core functions of this program are to provide effective facilitation and coordination of activities contributing to bat species conservation and recovery across partner agencies. To effectively respond and adapt to the evolving needs of bat management and conservation in Canada, this program builds on and replaces "**A national plan to manage white nose syndrome in bats in Canada**", revised February 2015. Our program maintains strong international coordination through connectivity and collaboration with **the United States Fish and Wildlife Service's national white-nose syndrome response program**, but has expanded to include coordination and support for national bat management and conservation activities through a holistic bat health model. The primary objective of the national bat health program is to promote healthy, resilient, diverse, and self-sustaining bat populations in Canada. Bat health knows no borders and thus its management crosses departmental and regional mandates. The CWHC collaborates with key partners to implement the national plan to manage bat health in Canada. We identified four core functions required for the implementation of a bat health program: 1) program management; 2) monitoring; 3) assessment; and 4) knowledge mobilization. The core functions, strategies, and key activities were identified and developed through consultation with government, academic, and non-profit stakeholders across Canada.

BAT HEALTH PROGRAM CORE FUNCTIONS

The overall goal of the national bat health program is to sustain healthy bat populations and the positive ecological contributions bats make to Canada by: 1) establishing and engaging a network of expert partners to create an effective program framework facilitated by the national bat health program coordinator that guides the program and ensures the necessary collaboration for delivery of its higher level objectives; 2) involving and coordinating an inter-agency, multi-disciplinary network of individuals essential for and influential in Canadian bat health, including those responsible for the mandate of bat health in Canada as well as those contributing in a meaningful way to the advancement of bat health in the North American context, ensuring access to stakeholders with the expertise and up to date evidence-based knowledge required to review and monitor the strategic direction and to inform and deliver a high quality national bat health program; and 3) forming strategic working groups based on the program's four core functions (see below) with meaningful and contributory membership following terms of reference for working group membership. A national coordinator remains central to the success in attaining priorities and goals. New initiatives will be driven and delivered on by task-oriented teams created by selecting individuals with the appropriate expertise and energy to meet the program needs and achieve the goals.

The CWHC will work with partners, in particular those with a bat health mandate, to develop an inclusive and robust framework, ensuring the successful attainment of the goals and priorities highlighted in this plan.

PROGRAM MANAGEMENT

Program management includes coordination and facilitation, capacity development, network management, and program evaluation, as well as promoting effective threat mitigation approaches.

Strategy: Position the national program coordinator to bring together all core functions of the bat health program. Provide effective coordination to engage a multi-disciplinary network of inter-agency partners to identify threats to bats, link research to policy, and promote threat reduction strategies (e.g., Beneficial Management Practices) that mitigate, manage, or eliminate these threats.



Activities:

- Develop an inclusive, action oriented, and robust framework for the national bat health program to ensure the successful delivery of goals and priorities
- Work with Canadian and international groups (e.g., North American Bat Conservation Alliance), including Indigenous peoples, to identify threats to bat populations, particularly those that are endangered, and take a proactive approach to managing bat health
- Collaborate with the US WNS Response Team to ensure a continental approach to bat health through meaningful Canadian participation on various international committees and working groups, facilitation of knowledge mobilization and sharing of financial and human resources
- Prioritize proactive research and management activities that contribute to understanding and mitigating cumulative effects on bat health related to anthropogenic activities (e.g., impacts of climate change such as forest fires, industry-related activities such as maternity colony exclusions by the pest control industry, wind energy development, habitat alteration associated with forestry, mining, agriculture, and other large scale commercial activities, etc.)
- Promote the development of best or beneficial management practices and strategies that mitigate, manage, or eliminate threats (i.e., climate change, wind energy development, agriculture, forestry, mining, pest control, etc.)
- Use scientific data, risk assessments, and threat reduction strategies to help mitigate, manage, or eliminate bat health threats, advising F/P/T and Indigenous peoples responsible for bat conservation and management of policy actions recommended to reduce threats
- Promote research and management activities that enhance habitat quality and improve habitat protection
- Continue to manage, build, and strengthen the CWHC network to ensure ongoing collaboration in support of bat health
- Encourage coordination between F/P/T government agencies and departments to facilitate the attainment of mutual goals and priorities.
- Encourage multi-taxa research and management activities to improve resource efficiency and ensure overarching conservation measures are achieved
- Promote research and other activities with measurable outcomes by linking knowledge to policy development and implementation
- Evaluate the national bat health program regularly to identify needs and improve national response to bat health threats by establishing appropriate priorities, goals, and targets for the program
- Support and assist the CWHC as a national leader in bat health and secure continued funding for program delivery

MONITORING

Bat population monitoring aids in identifying species and population trends and promotes a better understanding of natural habitat quality and use, including critical habitat and important concentration areas, as well as changes in habitat suitability over time.

Strategy: Promote consistent monitoring methods through the use of national and continental monitoring programs.

Activities:

- Increase the capacity for Canadian participation in the North American Bat Monitoring Program (NABat)
- Work with NABat to ensure ease of Canadian data entry and retrieval and that monitoring needs and requirements specific to the Canadian context are considered and met
- Facilitate expansion of the Neighbourhood Bat Watch or integration with NABat
- Promote establishment of a network of regional community bat programs for efficient and comprehensive



regional bat monitoring (i.e., promote the British Columbia and Alberta community bat programs across Canada and aid in resource development that equips other Canadian regions to build similar regional monitoring programs)

- Develop and promote monitoring strategies (NABat and other) that ensure monitoring activities lead to accumulation of meaningful data on all bat species to eliminate knowledge gaps and facilitate management of their health by the responsible F/P/T agencies and departments
- Encourage and facilitate publication of resources to support, promote, and expand population monitoring
- Incorporate population monitoring data in a regular national analysis of the state of bat health

ASSESSMENT

Assessment of bat health involves health surveillance and diagnostics, health information management, analysis and assessment of data for trends and risk reporting, including reporting on the state of bat health.

Strategy: Ensure the availability of high-quality diagnostic services in Canada, allow for early detection of threats, and promote a preventative approach to managing bat health.

Activities:

- Identify laboratory diagnostic needs and facilitate provision of required resources to meet service demands
- Work with Canadian and US partners to continue delivering harmonized or standardized analytical diagnostic services
- Develop standardized or harmonized bat health case definitions and diagnostic protocols for accurate and consistent diagnosis of known and emerging threats (e.g., WNS, rabies, SARS-CoV-2, pollution and toxins, windfarm trauma, etc.) to assess the impact of population stressors
- Lead a national bat health surveillance program that includes targeted and scanning surveillance as well as communication of situational awareness of threats based on analysis of surveillance data and knowledge mobilization including conducting bat health diagnostics and promoting bat health scanning surveillance activities
- Manage an up-to-date, national diagnostic database on bat health
- Facilitate data sharing with partners and pursue data integration when possible
- Regularly review, analyse, and synthesise diagnostic results and provide reports on the bat health surveillance program through an assessment of threats

KNOWLEDGE MOBILIZATION

Knowledge mobilization is a central core function of the national bat health program which provides critical information to guide and deliver the program, keeps program partners and stakeholders up to date, and ensures evidence based decision making.

Strategy: Mobilize knowledge and provide situational awareness to aid decision makers and wildlife managers by shortening the time from knowledge generation to direct actions that contribute to bat health and conservation.

Activities:

- Organize relevant topical webinars
- Produce a monthly newsletter
- Provide regular surveillance updates
- Promote regional bat working groups as information sharing networks
- Share direction on proper monitoring and assessment techniques in consideration of the threat of these activities to bat health (i.e., update bat handling and winter colony monitoring recommendations)



- Facilitate cross-agency meetings and other communication strategies to increase collaborations, cross-agency transparency, and information sharing
- Ensure data holders recognize the importance of publishing or sharing their data with other organizations or jurisdictions that have significant roles and responsibilities related to maintaining or promoting bat health at the national and continental scales (e.g., collected NABat and similar data, including acoustic monitoring data, colony count data, health surveillance data, etc.)
- Deliver public outreach programs to increase the awareness of bat health, particularly highlighting threat reduction opportunities
- Participate in and promote national and international public outreach initiatives, including Bat Week (October 24 – 31) and Bat Appreciation Day (April 17)



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CONTACT US

Toll-free: 1.800.567.2033
Fax: 1.306.966.7387
Email: info@cwhc-rcsf.ca

www.cwhc-rcsf.ca

