



CANADIAN  
WILDLIFE HEALTH  
COOPERATIVE

# ANNUAL REPORT 2020-2021



*Love and Generosity*

*e.P.P.*



## OUR MISSION

To promote and protect the health of wildlife and Canadians through leadership, partnership, investigation, and action.

## OUR VISION

A world that is safe and sustainable for wildlife and society.

*Playful and Lighthearted*

*P. Portas-James 2021*

## MESSAGE from the Executive Director

The emergence and global spread of the SARS-CoV-2 virus highlights the importance of strong cooperative links and coordination mechanisms between the public health and animal health systems. The social disruption, economic impacts, and increase burden of illness due to this virus served as an important reminder of the place for wildlife disease surveillance in recognizing and mitigating the adverse impacts of diseases on societal wellbeing. Wildlife associated zoonoses are expected to increase in frequency and importance along with globalization, climate change and ecosystem alterations which bring people and wildlife into closer contact. The growth and sustainability of the pan-Canadian stewardship, surveillance and leadership offered by the CWHC will continue to be a strategic priority of the organization to fulfill our social contract of helping Canadians feel assured when conditions are safe and prepared when threats emerge. The CWHC has been undergoing a governance reorganization to better position us to meet these increased expectations and needs.

Our partner investment supported a pan-Canadian network that allowed the CWHC to provide important, understandable wildlife health information on endemic and emerging diseases; bring assessed surveillance data and research into decision-making and assure decision makers and the public that wildlife is subject to careful watchfulness. Disease surveillance is a central aspect of CWHC activities, but not the only one, you will see in this report examples of our health intelligence activities and innovations, policy reviews, outreach, and knowledge mobilization as well as central coordination and program development among multiple jurisdictions. Similarly, as new and emerging wildlife health issues arise, so does our response, including capacity building and training for monitoring and identifying plastics in and among wildlife, such as marine entanglements and ingestion, contributing to Canada's plastics policy and an increasing focus on bat health and recovery after the ravages of White-nose syndrome caused several species in Canada to be listed as endangered. Unfortunately, trauma also continues to be a concern and significant cause of mortality among our wildlife populations and in some instances, such as collisions, a health risk to humans and economic activity.

As for most people and organizations, the SARS-CoV-2 pandemic created challenges in how we work and operate, and I would like to thank the entire CWHC and our partners for managing these challenges and continuing our operations. Our network is comprised of staff, academics, university and government partners, internationally recognized by the World Health Organization as well as the World Organization for Animal health as integral to Canada's human and animal health programs. I would also like to give special thanks to all those who contributed to this year's report, in particular to members of the CWHC National Office for writing and preparing much of it, which I have the pleasure of presenting on their and the collective CWHC's behalf.

**PATRICK ZIMMER**

CWHC Executive Director

# MONITORING

## OVERVIEW

We monitor for changes in wildlife health by providing a cross-Canada infrastructure and expertise to support the diagnostics needs of a national surveillance program. By supplementing capacity to actively track threats and investigate their meaning we link and integrate the observations to develop a national view of the wildlife health situation.

In some cases, our monitoring activities provide assurances to Canadians and trading partners that our environments, animals and products are safe. In other cases, it provides early warning signals that new threats are emerging or known threats are coming under control. Wildlife health monitoring provides a set of observations and signals that have relevance for conservation, public health, agriculture, recreation, cultural enjoyment of nature and economic development. It provides a very extensive view of the interface of people, animals and our shared environments.

## ACTIVE FUNCTIONS

- Disease & hazard detection
- Field investigation
- Harmonization



## DISEASE AND HAZARD DETECTION TULEREMIA

On April 13, the Canadian Wildlife Health Cooperative Ontario/Nunavut Region (CWHC ON/NU) was alerted to a mass mortality event involving muskrats in the Crown Marsh area of Long Point. The initial report indicated that over 35 muskrats were found either sick (weak and barely responsive when approached) or dead in the area. Samples from three affected muskrats were sent to the Public Health Agency of Canada, National Microbiology Laboratory, in Winnipeg, for further testing. PCR testing revealed that all samples from the three submitted muskrats were positive for *Francisella tularensis* (the causative agent of tularemia).

Tularemia is known to be endemic in Ontario, but mass mortality events in wildlife due to tularemia are rarely reported. During an outbreak situation, it is presumed that bacterial levels would be higher in the surrounding environment, so caution is warranted for anyone who is traversing through the area or wading into the water in the Crown Marsh area of Long Point. There is also a danger to off-leash dogs as they can become infected and develop similar symptoms to humans, especially if they consume infected meat. It is recommended that dogs are kept on leash and monitored closely while in this area.

## CASE STUDY THE PERILS AND INSIGHTS OF FALL MIGRATION

Migration presents a host of dangers as birds run the gauntlet from their Canadian breeding grounds to their wintering grounds in the south. Dangers include predation, exhaustion and starvation, adverse weather events, and building strikes.

Recently, CWHC Western-Northern received multiple birds from a building strike at a site in the Saskatoon region. Multiple species of warblers and vireos were likely forced down by poor weather conditions and collided with the building. All the birds had blunt force trauma consistent with colliding with a solid object. Usually, birds migrate at higher altitudes where human-made obstacles are not much of an issue, but poor weather can force birds to migrate at lower altitudes, and potentially collide with objects. On the night prior to discovering these birds, rain, fog, cloud cover, and moderate winds were recorded in the area.

While unfortunate, bird strikes like these sometimes offer a 'silver-lining' of sorts: the opportunity to document species that are less frequently encountered. In this case, one individual stuck out as particularly interesting and was identified as a Yellow-throated Vireo (*Vireo flavifrons*).



# MONITORING [cont]

## WEST NILE VIRUS

When West Nile Virus first emerged on the scene as a zoonotic disease, the CWHC along with our federal and provincial partners embarked on a national surveillance program. CWHC surveillance of dead wild birds examines an average of 1800 birds per year from across Canada along with other species with clinically compatible lesions, thus giving the most extensive insight into viral circulation in wildlife. CWHC collaborative research suggests that dead corvids may still provide the best early warning indicator of WNV activity in some parts of Canada, but a larger number, distribution and variety of cases can be found when clinically appropriate cases from all species are tested. As active members of the National Mosquito-Borne Disease Working Group, the CWHC shares data on a weekly basis for synthesis into the national surveillance report developed and distributed by PHAC.

## FIELD INVESTIGATIONS

### WHALES

A humpback whale has been observed since May 27 in the St. Lawrence River in the Montreal region. The Réseau québécois d'urgence des mammifères marins (RQUMM) set up a monitor program to follow the level of activity of the animal and make boaters aware of the animal's unusual presence in this area. The objective of this program was to minimize the risk of disturbances and collisions by boats. The unusual presence of this whale in the heart of the Montreal metropolitan area has attracted the attention of many city dwellers.

The unusual presence and death of this whale in an urban center was associated with unprecedented media attention; several interviews having been carried out. This clearly shows the interest of the Quebec population towards the health of wildlife. The necropsy performed by the Quebec Regional Center of the RCSF could not determine the exact cause of death of the animal due to the advanced putrefaction of the tissues. The circumstances suggest sudden mortality and the two main hypotheses are a collision with a vessel or a sudden decompensation of a multisystem imbalance secondary to prolonged exposure to fresh water (electrolyte disorders and skin infection with oomycete, probably *Saprolegnia* sp. ). The incident report is available at <http://www.cwhc-rcsf.ca/reports.php#tech-reports>

The CWHC – Quebec Region would like to thank all the partners who participated in the monitoring and necropsy of this humpback whale, especially the RQUMM team who took care of the logistics of this complex operation and the municipality of Sainte -Anne-de-Sorel.

Please [visit our blog](#) for more information on this mortality event.

## BRITISH COLUMBIA CWD PROGRAM

The British Columbia CWD Program, initiated in 2000, is focused on prevention by reducing risk through regulatory changes and increasing awareness. The Program performs targeted surveillance across British Columbia with a focus in what are considered the highest risk areas adjacent to neighbouring jurisdictions with positive cases (Alberta and Montana). The province was considered low risk for the presence of CWD until the summer of 2019 when positive cases were confirmed in northwest Montana, within Libby city limits, only 50 km from the British Columbia border.

The risk of CWD introduction continues to increase with cases in Alberta expanding towards the British Columbia border. The response by the British Columbia wildlife health program and our partners is to enhance surveillance in the highest risk areas as more is learned through surveillance and cross border coordination. The objective is to confirm CWD status and ensure detection as soon as possible if introduced.

The British Columbia government has now implemented a hunting license condition for mandatory submission of deer harvested in specific areas for testing. Testing is carried out by CWHC Western/Northern in Saskatoon.

Support from agency and first nations partners, hunting organizations, and local communities is excellent however increased awareness of the disease and the associated risks is needed to protect British Columbia



# MONITORING [cont]

## GENERAL SURVEILLANCE

Scanning surveillance activities are a foundation of CWHC programs. By investigating causes of death and disease, the CWHC tracks changes in endemic diseases, discovers emerging diseases and interprets and communicates these findings to stakeholders that cross ministries, governments and sectors. The CWHC receives and assesses over 5000 wildlife submissions per year across all regions in Canada. These cases are subject to state-of-the-art diagnostics and expertise to provide situational awareness for conservation, public health, and agriculture.

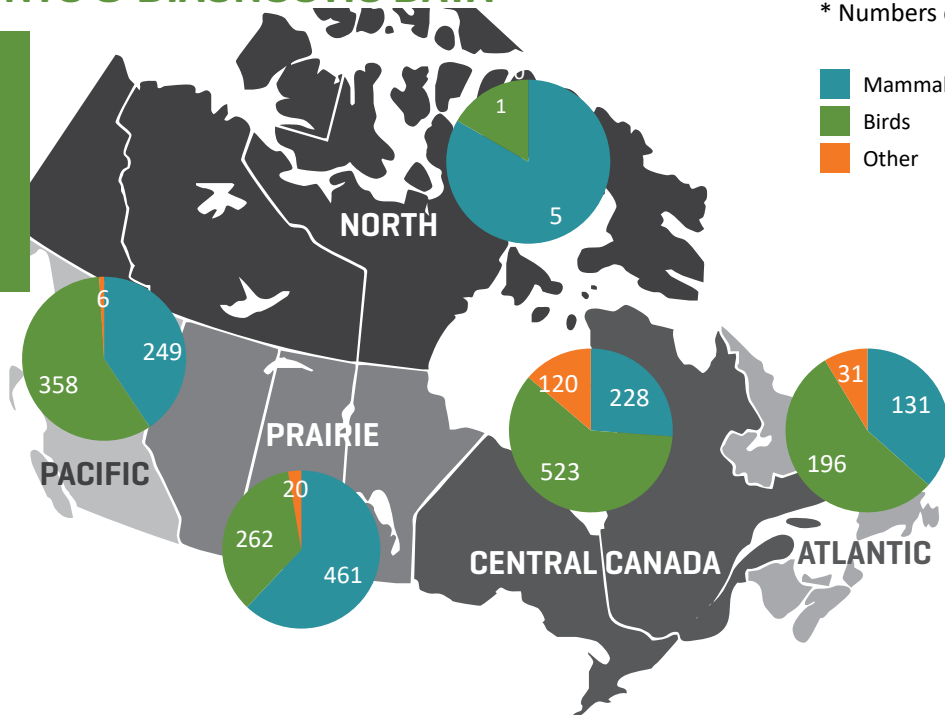


CWHC surveillance activities culminate in converting our information and assessment into useable advice and technical information and facilitating processes to turn our outputs into action. This includes spearheading national strategies, integrating information with our partners to develop national perspectives on wildlife health issues and facilitating and coordinating management and assessment plans.

## DISEASE COUNTS & DIAGNOSTIC DATA

### REGION TOTALS

Pacific	613
Prairie	743
Central Canada	871
Atlantic	358
North	6



2591 ANIMALS TOTAL  
\* Numbers correct as of Apr 26, 2021

- Mammals
- Birds
- Other

## HEALTH INTELLIGENCE

The CWHC is expanding the ways we monitor wildlife health and disease to gain a better understanding of the environment in which our wildlife populations succeed or fail. Health outcome monitoring allows us to observe changes in disease patterns via core diagnostic surveillance efforts, targeted collection of samples for specific diseases or species groups, and reviews of research regarding health indicators and sentinel species. The CWHC is currently developing new and innovative tools to assist in gathering more diverse types of mortality and morbidity information from the general public. These include online web-based reporting tools and mobile apps.

## SELECTED DISEASES

Project	Examined	Positive
Avian Botulism	136	0
Avian Cholera	136	1
Avian Influenza	1118	53
Bovine tuberculosis	255	0
Canine distemper	970	56
Chronic wasting disease	252	67
Newcastle Disease	396	2
Rabies	1835	24
Snake fungal disease	26	2
West Nile Virus	755	44
White nose syndrome	247	3



Faithful and Community

# ASSESSMENT

## OVERVIEW

CWHC members contribute to numerous working groups and committees: representing Canada at international meetings, serving as national sources of expertise, and supporting local management programs. CWHC produces risk assessments, knowledge reviews, policy assessment, and research that informs policy and practice. This includes being an OIE Collaborating Centre that builds international wildlife health capacity which subsequently reduces external risks to Canada.

## HEALTH INFORMATION MANAGEMENT

The CWHC National Office leads the organization's health information management efforts through the development and maintenance of a world-renowned database system; the Wildlife Health Intelligence Platform (WHIP). This system provides real-time data to the CWHC network and allows regional centres and the national office to perform queries on historical and current wildlife health data to look for trends and signals that could identify emerging issues. WHIP is also used by several organizations around the world, including the Dutch Wildlife Health Centre, and the Northeast Wildlife Disease Cooperative, in the United States.

## WILDLIFE CONSERVATION SOCIETY

Since 2019, the WCS has been using WHIP for data management in a project in Southeast Asia. An international effort in Laos, Cambodia, and Vietnam, the nature of both the project and the logistics of operating in a time zone very different to North American presented several challenges. Synchronizing work with an international group like the WCS and adapting WHIP to meet specific business needs was a useful exercise in reviewing our own data collection processes and evaluating how we handle things like environmental sample data. The CWHC is currently engaged in a major set of customizations for the WCS which will see the WCS instance of WHIP become integrated with a third-party application (SMART) and become more aligned with their data collection and reporting requirements.

## THAI WILDLIFE HEALTH CENTRE

In partnership with our OIE collaborating centre colleagues, the US National Wildlife Health Centre, the CWHC has been actively engaged in consulting with a group of academics in Thailand. The goal of this project is to establish a Thai Wildlife Health Centre, based on the CWHC model. The National Office has been engaged in a series of remote workshops aimed at identifying what the surveillance priorities of the Thai network would be, who should be involved in it, and how they can manage and share data from a health intelligence perspective.

## ONLINE SUBMISSIONS

The CWHC has, for many years, received calls and emails regarding sick and dead wildlife without necessarily receiving carcasses or samples. Over the past twelve months, we have developed online reporting tools to enable us to receive this data in a more consistent manner that can then be stored in WHIP and used for signal detection and health and disease trends. This type of online reporting can also be used to target specific types of syndromic surveillance, such as the presence of invasive pigs in the environment, plastics involved in entanglement or ingestion by wildlife, and a collaborative project involving Fin Fish and the Canadian Animal Health Surveillance System (CAHSS). It is our goal to be able to cast our surveillance net further than we have traditionally been able to by gaining access to observational and anecdotal information that can be evaluated and added to our health intelligence efforts.

## REGULATORY REPORTING

The CWHC uses WHIP to aggregate data into summary reporting on select diseases such as West Nile virus, Bat white-nose syndrome, and Avian Influenza. We also perform official disease status reporting for CFIA and OIE in the same way. For over five years now, we have generated quarterly reports that combine both summary numbers of select diseases, case numbers, and categories of diagnosis, with qualitative reporting on outbreaks, unusual diagnostic events, ongoing research, and program coordination efforts. These reports are published to the CWHC website and are distributed to our partners quarterly. To see the quarterly reports for 2020, please visit our website.

[www.cwhc-rcsf.ca/quarterly\\_report.php](http://www.cwhc-rcsf.ca/quarterly_report.php)

## CASE STUDY

### BAT GENOMICS

This joint project between Simon Fraser University, the Ministries of Environment and Agriculture, and the CWHC and British Columbia Centre for Disease Control aims to describe the diets of insectivorous bats in British Columbia. Bats provide significant ecosystem services, such as through their consumption of insect pests. In order to determine the diets of BC bats and the ecosystem services that they provide, we are collecting and analyzing environmental DNA. Environmental DNA (or eDNA) is the collection of genetic material of the organisms of interest from environmental samples rather than directly from the organisms. With the advent of high-throughput sequencing, eDNA can be used to rapidly identify multiple organisms in the environment simultaneously using a "metabarcoding" approach. The use of metabarcoding to study bat diets will allow us to identify the prey without morphological evidence, permitting a greater resolution of prey identity. There are various PCR primers used to identify bat species and insect species. In this study, we are testing various primer sets for insects and also for bats. The outcomes of this project will help environmental stewards more effectively communicate the value of bats to agriculturists. Empowering producers with this information is especially important as we face changes in the timing and occurrence of climate-related insect outbreaks.



# KNOWLEDGE mobilization

## OVERVIEW

CWHC surveillance activities culminate in converting our information and assessment into usable advice, technical information, and facilitating processes to turn our outputs into action. These include our quarterly and annual reports, fact sheets and other technical documents as well as our social media presence.

## COMMUNICATIONS

The CWHC actively engages in ongoing efforts to provide information to stakeholders ranging from funding Federal, Provincial, and Territorial government agencies to the wildlife health expert community at large. We also provide a wealth of important information to the public at large, including fact sheets, blog articles and social media posts, to educate and inform Canadians about what signals we are observing in the environment.



*Observant and Unassuming*



4,582 SOCIAL MEDIA FOLLOWERS

3,328 Facebook

896 Twitter

358 Instagram



62 blog posts  
on [blog.healthywildlife.ca](http://blog.healthywildlife.ca)



49,697  
website page views  
from over 100 different  
countries



51 MEDIA  
ENGAGEMENTS  
Including 9 related to  
the Atlantic bat hotline



65 PUBLICATIONS  
18 technical reports  
47 peer-reviewed articles

## CASE STUDY BIRD FEEDERS

For most of us, 2020 meant staying indoors and learning new hobbies like baking banana bread. We also spent a lot of time outside enjoying our backyards and watching wildlife including birds at feeders. During this time, the CWHC launched a new tool to report sick and/or dead wildlife through our website. We received several accounts of sick and or dead birds at feeders. Without an actual specimen being submitted for examination it is very difficult to diagnose the disease. However, from the pictures submitted, the pathologists at the different regional centres were able to assess the images and assist the public in how to respond. There were several cases of suspect trichomonosis, mycoplasmosis, and even reports of beak overgrowth in some species. This information is extremely useful, and the timely reports allow us to engage with the broader public on bird and feeder health.

[ARTICLE 1](#) - [ARTICLE 2](#) - [ARTICLE 3](#)



## KNOWLEDGE mobilization (cont)

### FACILITATE & COORDINATE INVASIVE PIGS

Invasive wild pigs are recognized as an emerging issue in Canada. In the fall of 2019, the CWHC National office received funding through a Grants and Contribution agreement with Environment and Climate Change Canada to tackle the invasive wild pig issue.

The overarching purpose of the project is to facilitate an action agenda to prevent and mitigate social and ecological harm of invasive boar and pigs in Canada. The CWHC has assembled and Chairs two national working groups. Participants include Federal, Provincial and Territorial Environment and Agriculture departments, and stakeholder groups. The Strategic Invasive Pig Working Group focuses on policies and processes to encourage a consistent and coordinate Pan-Canadian approach. This includes the development of a national communications strategy and a national sampling protocol. The Operational Invasive Pig Working Group focuses on “on-the-ground” tools and techniques to meet management goals including development of a best management practices document.

### PUBLIC OUTREACH & ENGAGEMENT BAT MONITORING WORKSHOPS

Throughout the month of February, Tessa McBurney (CWHC Atlantic) and Jordi Segers (CWHC National Office) delivered workshops in a webinar format on monitoring bats in Atlantic Canada. The goal of the webinar was to establish a bat monitoring network across Atlantic Canada by training individuals in consistent bat monitoring techniques following the international North American Bat Monitoring Program (NABat) guidelines. This initiative was achieved through the project Stewardship for Protection and Monitoring of Atlantic Canada’s Endangered Bat Species.

Two full-day workshops were offered for each Atlantic province, resulting in a total of eight workshops. A total of 128 participants learned about bat ecology, bat monitoring techniques, establishing a NABat monitoring site, how to deploy acoustic bat detectors, and how to use acoustic files to identify bat species. These workshops also provided an opportunity for provincial and federal biologists, wildlife technicians, watershed group managers, Indigenous groups, conservation societies, researchers, nuisance wildlife control operators, and citizen scientists to come together and establish a regional network of individuals trained in bat monitoring and conservation. The webinars are recorded and are publicly available in conjunction with instructional videos on managing acoustic data and a step-by-step guide on bat monitoring in Atlantic Canada.



### PIG WEBINAR

In October, the CWHC hosted a webinar with Travis Black, Colorado Parks and Wildlife, on identification of feral and wild pigs. Over 40 participants from various organizations including federal, provincial and territorial governments from across Canada attended. The webinar was intended to provide these jurisdictions with the tools to enhance their preparedness in order to better respond and deal with this invasive species.

Travis gives this talk to his new staff every year to ensure they can identify the differences between wild and feral pigs and their domestic cousins. He also goes through recognizing their tracks, wallows, rubs and the other types of damage they can cause.

Travis has been working on feral pigs for over 20 years and Colorado recently reported they had successfully eradicated them. Their work is not done though, they will continue to monitor and be vigilant for any incursion of this invasive species.

The webinar is available to watch on our YouTube channel: <https://youtu.be/YtlZjK2OgX0>

### CASE STUDY IMPACTS OF PLASTICS ON CANADIAN WILDLIFE

The CWHC has begun an exciting collaboration with Environment and Climate Change Canada which will result in the systematic documentation of the presence and impacts of plastic across Canada. The first stage of this collaboration is already complete and several CWHC personnel have undergone training in the standard operating procedures that are accepted by the international community for documenting plastics in wildlife. Initially this work will take the form of a proof-of-concept pilot study where we focus our efforts on species (such as gulls and fulmars) which are known to interact with plastics more commonly. Once we have perfected our skills on these species, we will expand our testing to a greater variety of species which, hopefully, will result in a long-term pan-Canadian database documenting the impacts of plastics in wildlife.





# PROGRAM management

## OVERVIEW

CWHC is uniquely suited to address wildlife issues that cross departmental mandates and capacity. It addresses federal objectives of transparent, accountable, and responsive government by (1) filling jurisdiction gaps in wildlife management to create a single comprehensive national wildlife health program; (2) strengthening interactions between governments and citizens; and (3) providing independence that facilitates public trust. It helps track progress on Federal Sustainable Development Strategy by providing an integrated whole-of-government picture of actions and results associated with the wildlife-society interface.

## CAPACITY DEVELOPMENT PLASTICS & WILDLIFE

The Canadian Wildlife Health Cooperative (CWHC) launched a project aimed at increasing its capacity to identify and characterize plastic pollution found in wildlife across Canada, thanks in part to support from Environment and Climate Change Canada. This project increased the capacity for national monitoring and surveillance of plastics that entangle or are ingested by wildlife among CWHC's regional centres.

As part of the project, CWHC carried out targeted outreach, training and development of educational materials as well as created monitoring protocols to ensure consistency in analysis and reporting across Canada. It also developed new technologies to store, share, and utilize monitoring and observational data to provide a better understanding of the effects that plastic pollution has on wildlife. Among these, CWHC developed a website, a mobile phone app, and a module on its wildlife health intelligence platform (WHIP). The module allowed for enhanced monitoring and tracking of plastic pollution in wildlife through partnerships with other agencies and citizen science.

“The Government of Canada is committed to reducing plastic pollution and protecting our ecosystems and the wildlife that depend on them. Projects like this one carried out by the Canadian Wildlife Health Cooperative are key in making sure our federal decisions are informed by the latest science. I look forward to seeing a holistic view of the impacts of plastic pollution on the Canadian environment.”

– **The Honourable Jonathan Wilkinson, Minister of Environment and Climate Change**



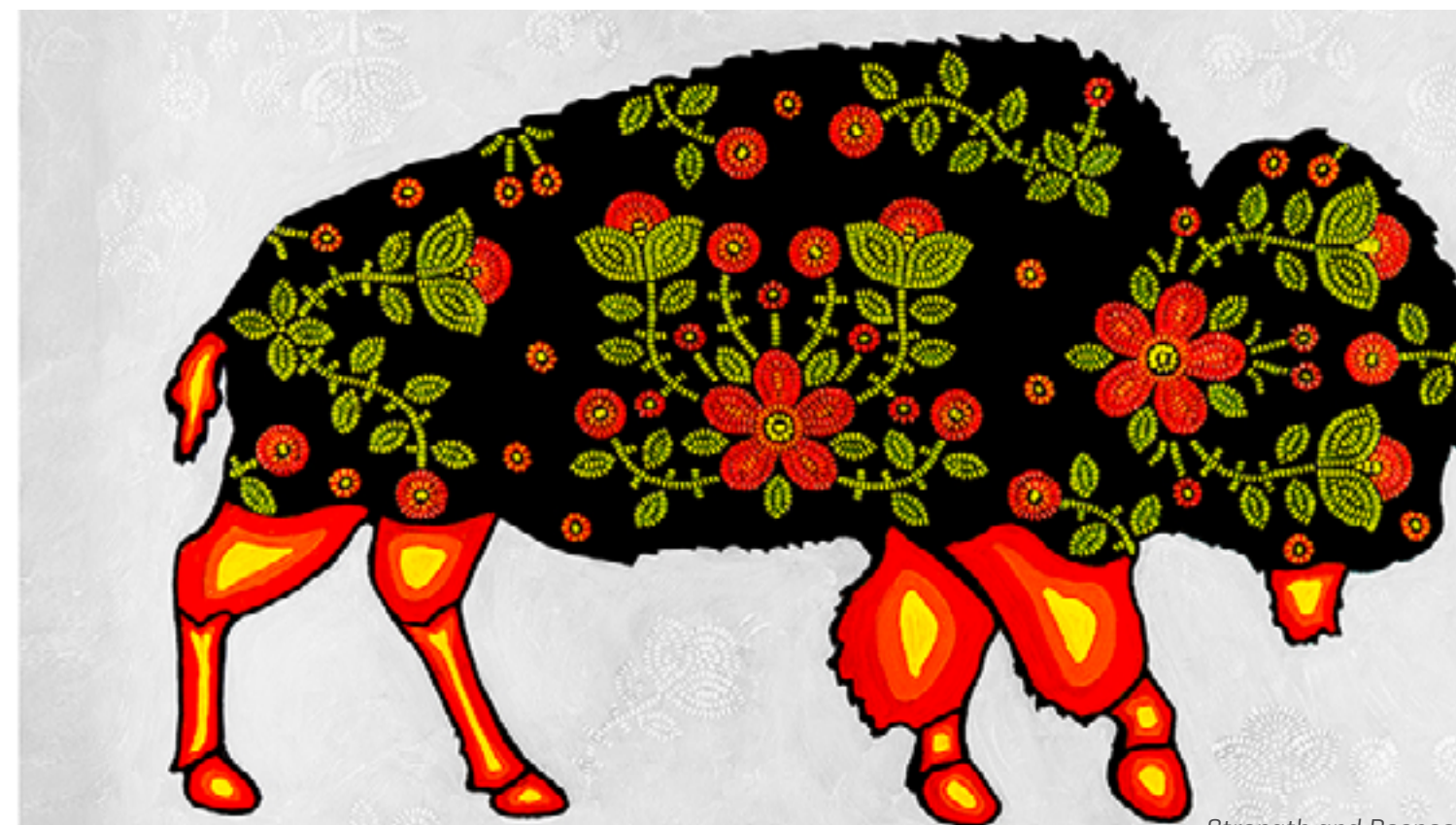
# PROGRAM management (cont)

## REVENUES

	General	Targeted	Total
Canadian Agricultural Partnership	196,920		196,920
Canadian Food Inspection Agency	150,000	255,000	405,000
Environment and Climate Change Canada	440,000	554,138	994,138
First Nations and Inuit Health Branch	4,972		4,972
Fisheries and Oceans		15,000	15,000
Parks Canada	150,000	33,283	183,283
Public Health Agency of Canada	240,000		240,000
BC Environment	10,000		10,000
BC Forests, Lands & Natural Resource Operations	10,000		10,000
New Brunswick	10,259		10,259
Northwest Territories	16,000		16,000
Nova Scotia	9,500		9,500
Nunavut	15,000		15,000
Ontario - Agriculture, Food and Rural Affairs		50,000	50,000
Ontario - Health and Long Term Care	100,000		100,000
Ontario - Natural Resources	80,000	42,500	122,500
PEI - Environment	4,735		4,735
Québec - Ministère des Forêts, de la Faune et des Parcs	135,000	76,396	211,396
Québec - Ministère de l'Agriculture, des Pêcheries et de l'Alimentation	40,000		40,000
Québec - Ministère de la Santé et des Services sociaux	20,000	10,000	30,000
Saskatchewan Agriculture and Food		75,058	75,058
Saskatchewan Environment	41,309	1,500	42,809
Yukon	14,000		14,000
Canadian Wildlife Federation	2,500		2,500
Western College of Veterinary Medicine	11,000		11,000
Miscellaneous Income/Fee-for-service		45,047	45,047
<b>TOTAL REVENUE</b>	<b>\$ 1,701,195</b>	<b>\$ 1,157,922</b>	<b>\$ 2,859,117</b>

## EXPENSES

	General	Targeted	Total
Salaries and Benefits	1,082,501	821,593	1,904,095
Equipment	9,603	33,328	42,931
Diagnostic Costs	126,539	106,202	232,740
Operations	67,478	20,842	88,320
Travel	23,514	-1,709	21,805
Other	132,549	71,696	204,245
Overhead	198,299	135,645	333,944
<b>TOTAL EXPENSES</b>	<b>1,640,483</b>	<b>1,187,596</b>	<b>2,828,080</b>
<b>REVENUE LESS EXPENSES</b>	<b>\$ 60,712</b>	<b>\$ (29,674)</b>	<b>\$ 31,038</b>



# COMMUNITY

## OUR COMMUNITY OF PRACTICE

The CWHC is a community – we are a group of people who share a concern for wildlife health and learn how to protect it better by regularly interacting. Our regional and national offices form the core of the community, but our strength comes from our diverse network of individuals and organizations. The partnership among provincial, territorial, and federal government departments, non-government organizations, the private sector and individual researchers and academics allows the CWHC to continue functioning at a high capacity. Fostering this community and **functioning as a “super-connector” among varying mandates and jurisdictions is a key activity of the CWHC and a valued service.** CWHC has played a major role in coordinating national teams (such as for avian influenza and white-nose syndrome), facilitating new approaches (as with our climate change meeting) and ensuring people are connected across the country (as with our new associates policy).

The heart of the CWHC network is individuals whose expertise and dedication contribute to the understanding and improvement of wild animal health in Canada. In addition to staff and CWHC directors are those individuals who work closely with the CWHC and whose activities and expertise align and complement CWHC programs and values; examples include government partners, academics and former staff and directors. We would like to take the opportunity to acknowledge our many partners.



# ASSOCIATES

The CWHC is evolving to meet the unprecedented changes in the environment and wild animal interactions with people. A key element in meeting these challenges is broadening and diversifying our network of partners, associates and collaborators. New policies and processes have been put in place over the past year to ensure that the CWHC develops, acknowledges, and supports ongoing relationships with members of the wildlife health community. A nomination and review process to identify and recognize potential or existing partners is now in effect. Eleven individuals have already been appointed as CWHC Associates. A complete list of these individuals along with their biographies can be found on the CWHC website at [www.cwhc-rcsf.ca/associates](http://www.cwhc-rcsf.ca/associates).



# STAFFING & NETWORK

## CWHC NATIONAL OFFICE

**Patrick Zimmer** - Executive Director  
**Kevin Brown** - Information Services Manager  
**Marnie Zimmer** - Knowledge Mobilization Officer  
**Bevan Federko** - Programmer/Analyst  
**Robyn Frank** - Programmer/Analyst  
**Nataliya Morgun** - Accountant  
**Jordi Segers** - National White-Nose Syndrome Coordinator (Charlottetown)

## CWHC BRITISH COLUMBIA

**Chelsea Himsworth** - Regional Director  
**Caeley Thacker** - Regional Director  
**Cait Nelson** - Assistant Regional Director  
**Kaylee Byers** - Assistant Regional Director  
**Harveen Kaur Atwal** - Cooperative Student

## CWHC ALBERTA

**Jamie Rothenburger** - Regional Director  
**Dayna Goldsmith** - Regional Director (Acting)

## CWHC WESTERN/NORTHERN

**Trent Bollinger** - Regional Director  
**Lorraine Bryan** - Veterinary Pathologist  
**Erin Moffatt** - Wildlife Biologist  
**Katelyn Luff** - Wildlife Biologist

## 34 GRADUATE STUDENTS

**British Columbia:** 10  
**Western/Northern:** 4  
**Ontario/Nunavut:** 14  
**Québec:** 3  
**Atlantic:** 3

## CWHC ONTARIO/NUNAVUT

**Claire Jardine** - Regional Director  
**Brian Stevens** - Veterinary Pathologist  
**Jane Parmley** - Epidemiologist  
**Lenny Shirose** - Biologist  
**Laura Dougherty** - Wildlife Technician  
**Maria Alexandrou** - Communications Coordinator

## CWHC QUÉBEC

**Stéphane Lair** - Regional Director  
**Kathleen Brown** - Lab Manager  
**Judith Viau** - Wildlife Technician  
**Viviane Casaubon** - Wildlife Technician  
**Marion Jalenques** - Veterinary Resident  
**Benjamin Lamglait** - Veterinary Resident  
**Judith Farley** - Veterinary Resident  
**Marianne Parlange** - Summer Student

## CWHC ATLANTIC

**Megan Jones** - Regional Director  
**Laura Bourque** - Veterinary Pathologist  
**Darlene Jones** - Wildlife Technician  
**Fiep de Bie** - Wildlife Technician  
**Tessa McBurney** - Atlantic bat conservation project technician  
**Scott McBurney** - Veterinary Pathologist (retired)

## 19 ASSOCIATES / AFFILIATES

**National Office:** 4  
**British Columbia:** 1  
**Alberta:** 4  
**Western/Northern:** 1  
**Ontario/Nunavut:** 1  
**Québec:** 1  
**Atlantic:** 7

# ACKNOWLEDGMENTS

The CWHC would like to thank all our sponsors, partners, and collaborators for their continued support. Without this crucial network of funding and collaboration, we would not be able to offer the comprehensive national programs that we do.

The CWHC would like to thank artist Phyllis Poitras-Jarrett for generously allowing the use of her artwork throughout this report. To learn more about Phyllis, please visit her website: [www.metisspiritart.ca](http://www.metisspiritart.ca)

*“Indigenous uses of plants and animals vary amongst Nations. However, there are also many similarities, due to cross-culture sharing and living in the same locations. Artwork will always bring people together to celebrate our unique cultures and create a better understanding of our past and present realities. My art embraces nature and hopefully encourages us to be mindful of the importance of keeping it healthy and clean for all living things and future generations.”*

- Phyllis Poitras-Jarrett





CANADIAN  
**WILDLIFE HEALTH**  
COOPERATIVE

