



CANADIAN  
**WILDLIFE HEALTH**  
COOPERATIVE



**ANNUAL REPORT**  
2023-2024

## 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.

## MESSAGE FROM THE CEO

It is my pleasure to present the 2023/24 annual report of the Canadian Wildlife Health Cooperative (CWHC). Everyone is bombarded with information these days, so I very much thank you for taking the time to read this report on some of the amazing things we do at the CWHC. We are a collaboration of the five veterinary schools in Canada and the BC Ministry of Agriculture and Food and Ministry of Water, Land, and Resource Stewardship. As a collaboration or cooperative, everyone associated with the CWHC is here because we believe we can accomplish more working together, than we could apart. This report is evidence of that fact.

This past year has presented ongoing challenges to wildlife health in Canada. The continuing avian influenza (HPAI) epizootic continues to impact wildlife and domestic poultry across the country. This virus has not only affected wild and domestic birds but has also demonstrated capacity to cross species barriers, with infections in Canadian black bears, gray and harbour seals, skunks, and other mammals and most recently the recent discovery of the virus in dairy cattle in the United States. The recent detection of Chronic Wasting Disease (CWD) in British Columbia is another example of a challenge we face on the wildlife health front, raising concerns about the potential for impact on deer populations in the province. These aren't the only issues: there are other ongoing, lesser known wildlife health threats as well, including white-nose syndrome and wind energy and bats, the threat of introduction of *Batrachochytrium salamandrivorans* (Bsal), and others. These examples highlight the importance of surveillance and management of wildlife health in Canada.

At the heart of the Canadian Wildlife Health Cooperative (CWHC) is a commitment to collaboration and cooperation; it's literally in our name. Our cooperative model brings together wildlife expertise from across the country. This collaboration is further strengthened by our close work with Federal, Provincial, and Territorial partners. Further, we hope to strengthen our relationships with Indigenous Nations, who have lived and stewarded ecosystems in what is now Canada for millenia. It is through these partnerships that we work together to improve wildlife health in Canada. By working together, we combine the collective expertise and resources of ourselves and our partners to advance the Pan-Canadian Approach to Wildlife Health and address the complex and evolving threats facing wildlife and ecosystems across Canada.

### **DAMIEN JOLY, PhD**

CWHC Chief Executive Officer

## REGIONAL FOCUS - NATIONAL IMPACT

### OVERVIEW

The focus of the CWHC is at the human-animal-environment interface. Established in 1992, the CWHC rose out of a need for a coordinated approach to wildlife health and disease in Canada to inform management decisions in multiple domains, including wildlife conservation, environment, fisheries, public health, food safety and security and the economic activities associated with all of these. First formed as a cooperative among faculty and staff at the Western College of Veterinary Medicine (WCVM), the Ontario Veterinary College (OVC) and Faculté de médecine vétérinaire (FMV), the CWHC grew to include the Atlantic Veterinary College (AVC), the University of Calgary Faculty of Veterinary Medicine (UCVM) and the British Columbia Animal Health Centre (BCAHC).

The CWHC soon inspired the interest and trust of its government and veterinary college sponsors. Teaching and research material flowed into each veterinary college and expertise in wildlife health was added to the staff of each. The growing network anchored within the veterinary colleges paid large dividends to the sponsoring government agencies. Reliable information about wildlife health was provided when or even before it was needed. These agencies were alerted to and able to prepare for emerging issues, the number and scale of which increased through the 1990s and the early 21st Century. Examples of these issues include avian botulism, hantavirus, West Nile virus, chronic wasting disease, avian influenza, white-nose syndrome, distribution and impacts of pollution, and the growing threat of climate change. The CWHC continues to provide leadership on wildlife health and fill a critical public service gap to address an increasingly important area for which no single government agency has a clear comprehensive responsibility.

The CWHC is an internationally unique model for a national wildlife health program. It is an independent science network positioned outside of government and benefiting from the autonomy, expertise and reputations of its hosts and network partners. Governments and industry now depend on this Cooperative to address national and international obligations and expectations for wildlife health.



# BRITISH COLUMBIA

## PARTICIPATING AGENCIES

Government of British Columbia  
Office of the Chief Veterinarian and Plant and Animal Health Branch (Ministry of Agriculture)  
Wildlife Branch (Ministry of Water, Land and Resource Stewardship)

## FUNDING & STAFFING MODEL

Neither the BC node nor any of its staff are paid or employed by CWHC and that BC programs are supported by the Government of British Columbia and the Sustainable Canadian Agricultural Partnership, a federal-provincial-territorial initiative.

## CURRENT STAFF LIST

- Chelsea Himsworth : Co-Regional Director
- Caeley Thacker : Co-Regional Director
- Cait Nelson
- Kaylee Byers
- Shari Willmott
- Maeve Winchester
- Glenna McGregor
- Stephen Raverty
- Tony Redford
- Michael Pawlik
- Theresa Burns
- Tomy Joseph
- Joyce Austin



**Sustainable Canadian  
Agricultural Partnership**



## BC HIGHLIGHT

### A HUMAN OUTBREAK OF SHIGELLOSIS REVEALS THE VARIETY OF INFECTIOUS ORGANISMS CARRIED IN WILD URBAN RAT FECES

While rats have notoriously spread the Black Death across Medieval Europe, what other infectious organisms do rats carry that can make you sick?

In 2021, there was an outbreak of shigellosis, a gastrointestinal disease caused by the bacteria *Shigella flexneri*, among residents of a low-income neighbourhood in downtown Vancouver, British Columbia. Disease more often occurs in areas with poor sanitation, and residents had reported living on the streets, in shelters, or in single room occupancy hotels with minimal access to washrooms.

Public health agencies investigated the outbreak, but could not determine the source of exposure. However, residents had reported contact with wild rats on the streets. Could rats be the culprit? And what other infectious organisms do rats carry in their poop?

A team of researchers across human and animal health fields worked together to answer this question. Researchers from the CWHC BC regional centre and the Vancouver Rat Project, led by Dr. Chelsea Himsworth, trapped 22 brown rats within the outbreak area. Fecal samples were collected from each rat. Scientists at the University of British Columbia, Providence Health Care, and the British Columbia Centre for Disease Control then tested the samples for *Shigella flexneri* and other infectious organisms.

Two rats were indeed carrying a small amount of *Shigella flexneri* that was closely related to those isolated from the human outbreak. These rats were also infected with other bacteria that can cause gastrointestinal disease in people, including *Clostridioides difficile*, *Yersinia enterocolitica*, *Campylobacter* spp., as well as enteroaggressive and enteropathogenic *Escherichia coli*. Some rats were also infected with Rotavirus A, *Cryptosporidium* spp., and *Giardia duodenalis*. Strikingly, rats were most often carrying more than one potentially infectious organism in their feces.

While this study alone cannot determine if rats were the source of infection to the patients, the relatedness between *Shigella flexneri* found in the rats and people suggest that transmission was possible. The low amount of bacteria in the rats' feces may indicate that rats could have been exposed to human feces contaminated with *Shigella flexneri* in alleyways, and that they could have

had a role in spreading the bacteria.

So overall, what infectious organisms do rats carry in their poop that can make you sick? The answer is many! Our work highlights that continued rat management and surveillance is needed to minimize the risk of disease transmission to humans, especially in lower socioeconomic areas where there may be increased exposure to rats.



# ALBERTA

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### CURRENT STAFF LIST

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CALGARY



## ALBERTA HIGHLIGHT

### CARNIVOROUS CERVIDS - AKA BONE MUNCHING DEER

In July, a mule deer doe (*Odocoileus hemionus*) was euthanized by Alberta Fish and Wildlife due to poor body condition and hemorrhagic diarrhea. At the time of euthanasia, a hard swelling was noted on the right side of the face.

At necropsy, this animal was confirmed to be in poor nutritional condition with marked loss of musculing and internal fat stores. She was also observed to be actively lactating. Removal of the skin over the jaw revealed a hard tan object ~15 x 10 x 10 cm that was tightly impacted at the back of the jaw and embedded onto the molars.

Closer examination of this object identified it as a piece of cancellous bone. Removal of the mandible revealed deep grooves within the bone made by the mandibular molars. This bone was easily removed from the teeth revealing similar grooves on the other side and deep pressure ulcers within the underlying gingiva and buccal mucosa.

The larger arteries of the head were carefully examined for arterial worms which were not observed, and sectioning of the underlying maxilla and mandible did not reveal evidence of infection within the bone. Bacterial culture of the intestinal content grew *Clostridium difficile*, and an acute hemorrhagic enteritis was confirmed microscopically. This deer was negative for chronic wasting disease through testing of the obex and retropharyngeal lymph nodes. In this case, poor nutritional condition likely occurred due to impaired ability to prehend and masticate food as a result of the impaction. Clostridial enteritis likely occurred secondary to the resulting debilitation. Other causes of facial masses and feed impactions including lumpy jaw (bacterial infection of the bone with *Actinomyces bovis* or other anaerobic bacteria) or arterial worms (*Elaeophora schneideri*) were ruled out.

Bone eating, or osteophagia, has been previously reported in a variety of cervid species and is hypothesized to occur in response to deficiencies in certain minerals including

magnesium, phosphorus, sodium, potassium and proteins. Mineral deficiencies may occur more commonly during antler growth or lactation. The liver of this deer was tested for magnesium, manganese, iron, cobalt, copper, zinc, selenium, and molybdenum, which were within normal limits. Unfortunately, we were unable to test for other potential mineral deficiencies in this case. Interestingly, deer species have also been reported to occasionally eat baby birds from nests. Again, this is hypothesized to be a response to underlying mineral deficiencies.

Please see our [blog article](#) for images related to this case!



# WESTERN-NORTHERN

## WESTERN COLLEGE OF VETERINARY MEDICINE

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Shelagh Copeland : Pathologist  
Lynsey Bent : Wildlife biologist  
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UNIVERSITY OF  
SASKATCHEWAN



## WESTERN-NORTHERN HIGHLIGHT

### POSITIVE PIGEONS: DEALING WITH QUESTIONABLE RESULTS IN AVIAN INFLUENZA SURVEILLANCE

In the spring of 2022, North America's wild bird populations experienced an outbreak of highly pathogenic avian influenza (HPAI). We at CWHC Western/Northern tested hundreds of birds submitted to us during the outbreak, which allowed us to see firsthand which species were being affected by HPAI. Not all species were impacted by the outbreak, but there were many regulars – namely waterfowl and those that eat them: geese, hawks, owls, eagles, corvids, vultures, and even foxes and skunks appeared to be very susceptible to HPAI. Other species – mostly songbirds – seemed virtually unaffected by the outbreak and we saw no positive cases during the outbreak. One species stood out as a big question mark: the Rock Pigeon. Out of nearly one hundred pigeons that we tested during the 2022 outbreak, two tested positive for H5 avian influenza.

Data on highly pathogenic avian influenza in pigeons is sparse. A study looking at experimental infection in pigeons suggested that although pigeons can become infected with HPAI, they are more resistant than most species and rarely become significantly ill from the virus. Another review on the topic found that pigeons are ineffective spreaders of the virus in that they do shed small amounts of virus through their digestive system, but the amount is not enough to infect other birds. Despite these studies, or perhaps because of these studies, we felt it was important to investigate these positive pigeons. Were these birds sick from HPAI or merely carriers of the virus? Or were these results in fact false-positives caused by contamination during sample collection or the testing process?

You might wonder why we would care about pigeons and whether they can catch HPAI. Rock Pigeons don't have a great reputation as far as wild birds go. They are a non-native, invasive species that was introduced to North America from Europe during the 17th century. Many people think of them as pests as they are highly adaptable and able to colonize both urban and agricultural areas, living closely with humans in cities and on farms. For this reason, they are uniquely positioned as a bridge species between wild birds, human populations, and agriculture. If they were susceptible to HPAI they could play a major role in disease spread across urban and agricultural settings.

The two H5 positive pigeons that we received separately through our diagnostic lab were both found in the City of Saskatoon and submitted by local wildlife rehabilitators. One died after

possibly striking a window, and the other was found sick and unable to walk or fly. Necropsies were performed on both birds to determine whether they showed signs of infection and to collect tissues to examine microscopically. No signs of infection were seen in either bird and no significant lesions were seen microscopically, leading us to suspect that the birds weren't sick with the disease. We decided to run additional tests and found that we weren't able to detect HPAI in the tissues of either birds.

Interestingly, both birds had recently eaten whole kernel corn which is often used in Avitrol bait, a product commonly used in pigeon removal. Avitrol causes seizures and abnormal behavior in birds, which is supposed to scare away other members of a flock and deter groups of pigeons from nesting in an area. Because Avitrol often kills the affected bird, it seemed a likely cause of death in these two cases. We tested the stomach contents for Avitrol and both tests came back positive, confirming that these two Rock Pigeons died from a cause other than HPAI.

We may never know with 100% certainty whether the two pigeons were false positives or whether they were infected but not sick with HPAI. Either way, these two cases were a reminder that false positives (and false negatives) do occur in disease surveillance and we must continue to ask questions and take steps to pursue answers when uncertainties arise.



## ONTARIO-NUNAVUT

### ONTARIO VETERINARY COLLEGE

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Laura Dougherty : Wildlife technician  
Dan Bayley : Communications coordinator

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*of* GUELPH



## ONTARIO-NUNAVUT HIGHLIGHT

### RHDV2 SURVEILLANCE IN ONTARIO

Rabbit hemorrhagic disease is a fatal disease, caused by rabbit hemorrhagic disease virus 2 (RHDV2), that can affect both wild and domestic rabbits and hares. RHDV2 is a highly contagious virus that has been detected in both domestic and wild rabbits in the United States (see <https://www.aphis.usda.gov/aphis/maps/animal-health/rhd>).

In 2022, RHDV2 was detected in three domestic rabbits in Ontario, in two apparently unrelated incursions. In 2023, the CWHC and Ontario Ministry of Agriculture, Food, and Rural Affairs (OMAFRA) began a surveillance project, funded by the Ontario Animal Health Network, with the goal of monitoring both domestic and wild rabbit populations in Ontario for the presence of rabbit hemorrhagic disease. To date, the CWHC has submitted samples from 107 cottontail rabbits to the Animal Health Laboratory at the University of Guelph for testing. These samples were obtained with the help of our partners in the Ministry of Natural Resources and Forestry, wildlife rehabilitation centres, and animal services departments, across the province. Additionally, OMAFRA has received 5 domestic rabbits for testing. Below is a map showing the locations of both wild and domestic rabbit submissions that we have received to date – so far all have been negative. Continued vigilance for this disease is important to protect rabbit and hare health in Ontario.

If you find any sick or deceased wild rabbits in Ontario, you can contribute to this surveillance program by contacting the CWHC at 1-866-673-4781 or by submitting an online report at <https://cwhc.wildlifesubmissions.org>. If you have a domestic rabbit you wish to have tested through the project, please contact [alexandra.reid@ontario.ca](mailto:alexandra.reid@ontario.ca).



# QUÉBEC

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Ariane Guertin-Cabana : Wildlife technician  
Shannon Ferrell : Graduate student, Université de Montréal  
Benjamin Jakobek : Graduate student, Université de Montréal  
Laura Van Driessche : Graduate student, Université de Montréal



## QUÉBEC HIGHLIGHT

### SECOND BEAUFORT SEA BELUGA HEALTH ASSESSMENT

A team from CWHC Québec travelled to the Inuvialuit settlement region again in July 2023 to participate in long term studies on East Beaufort Sea beluga whale health. This beluga population is estimated at approximately 32,000 individuals, based on the last published stock assessment (Alaska Marine Mammal Stock Assessments, 2014) and is considered to be stable. This natural resource is of great importance for Inuvialuit settlement region communities which take great interest in beluga health and sustainability of this population in the face of climate change.

The CWHC, in collaboration with the Fisheries Joint Management Committee (FJMC) and Department of Fisheries and Ocean Canada (DFO) is involved in investigations supporting research priorities that were co-established. The current project is the continuation of a health assessment performed in 2015-2016 to monitor the health of belugas harvested as part of subsistence hunting from local communities. Necropsies are performed on harvested whales with samples, analyses and measurements taken. The results will allow for us to better understand body condition in belugas and their reproductive status. Additionally, we can document the presence of certain organisms like parasites that are of important for human or beluga health and for which repartition and impact can be affected by climate change.

To help answer these questions, Émilie L. Couture and Viviane Casaubon joined a field team composed of DFO scientists and Tuktoyaktuk community members on Hendrickson Island, in Kugmallit Bay. A total of 21 whales were assessed over a two-week period. Weights were obtained for 12 of these whales thanks to a weighing apparatus adapted to field conditions. It is not an easy task for carcasses that weigh between 520 and 985 kg! While further assessments and analyses are still pending, sampled whales generally appeared to be in good health.

This year, future leaders from the Tuktoyaktuk community joined the team. They were able to harvest and traditionally prepare their whales for the community and generously supported research on beluga whale health by allowing their harvest to be weighed and by learning what beluga necropsies involve. In addition, they learned about the Tarium Niryutait Marine Protected Area (TNMPA) and related monitoring and research activities and how community members, notably through their participation in hunters and trappers' committees and FJMC, are essential to lead in the conservation of this protected area.



## ATLANTIC

### ATLANTIC VETERINARY COLLEGE

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Darlene Jones : Wildlife technician  
Darrian Washinger : Atlantic bat conservation project technician  
Jordi Segers : National white-nose syndrome scientific program coordinator (National Office)  
Fiep de Bie : Wildlife technician  
Pierre-Yves Daoust : Pathologist (retired)  
Scott McBurney : Pathologist (retired)



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of Prince Edward  
ISLAND



## ATLANTIC HIGHLIGHT

### EVERY WEEK IS BAT WEEK FOR THE CWHC BAT TEAM

This summer, the Canadian Wildlife Health Cooperative (CWHC) collaborated with the Atlantic Veterinary College (AVC), PEI National Park (PEINP), and Wild Child PEI to host several presentations, bat walks, and engaging activities that highlight the importance of bats. Local bat experts—Tessa McBurney (MSc/DVM student, CWHC Atlantic), Jordi Segers (National Bat Health Coordinator, CWHC National Office), and Darrian Washinger (Atlantic Bat Conservation Project Technician, CWHC Atlantic)—presented on bat diversity, ecological services, habitat use, and survey methodologies. Field trips provided hands-on experiences in identifying suitable bat habitats and various bat survey methods, emphasizing the importance of conservation efforts.

The AVC Summer Academy—offered to high school graduates, undergraduate students, and university graduates—and AVC Junior Vet Camp—offered for grades 7-9 students— both featured comprehensive presentations as well as a field trip to PEINP in collaboration with Lindsey Burke, a Resource Management Officer with Parks Canada. Darrian led the field trip for 24 Summer Academy students and Tessa led two groups of 50 students for Junior Vet Camp. Each group went on a forest walk at the Farmlands Trail where they explored different ecosystems, identified suitable bat habitats, and observed how the environment was impacted by post-tropical storm Fiona. AVC Summer Academy students broke off into groups and deployed bat acoustic detectors in suitable bat habitats by getting creative with the limited field equipment provided (duct tape and zip ties). AVC Junior Vet Camp students played an engaging nature-themed bingo scavenger hunt. The participants enjoyed tracking down the different nature-themed items, with a leopard frog being the most exciting find, and were rewarded with wildlife stickers!

In collaboration with Wild Child PEI, Tessa and Darrian joined the Young Ecologists Camp at Strathgartney Provincial Park. This day camp was offered for 13 girls and gender-minority youth ages 11–15 to explore nature and engage in various ecological activities with regional guest scientists. They displayed mounted bats, demonstrated equipment use for various bat monitoring activities, and set up a mist net with plastic bats for the participants to practice extracting “captured bats” from the fine net. They were an engaged audience, asking many questions about bats around the world, threats to local bats, and how to become a chiropterologist.



## NATIONAL OFFICE

### WESTERN COLLEGE OF VETERINARY MEDICINE

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Damien Joly : Chief executive officer  
Patrick Zimmer : Chief operations officer  
Kevin Brown : Information services manager  
Nataliya Morgun : Research financial analyst  
Bevan Federko : Systems analyst  
Jackson Schuler : Programmer analyst  
Rachelle Lockwood : National avian influenza program coordinator  
Jordi Segers : National white-nose syndrome scientific program coordinator



## NATIONAL OFFICE HIGHLIGHT

### A HOLISTIC APPROACH TO DATA MANAGEMENT

Over the last three decades plus, the CWHC has invested significantly in the development of technological solutions to provide data management solutions which satisfy the needs of researchers, decision makers, and the needs of our staff on a day to day basis.

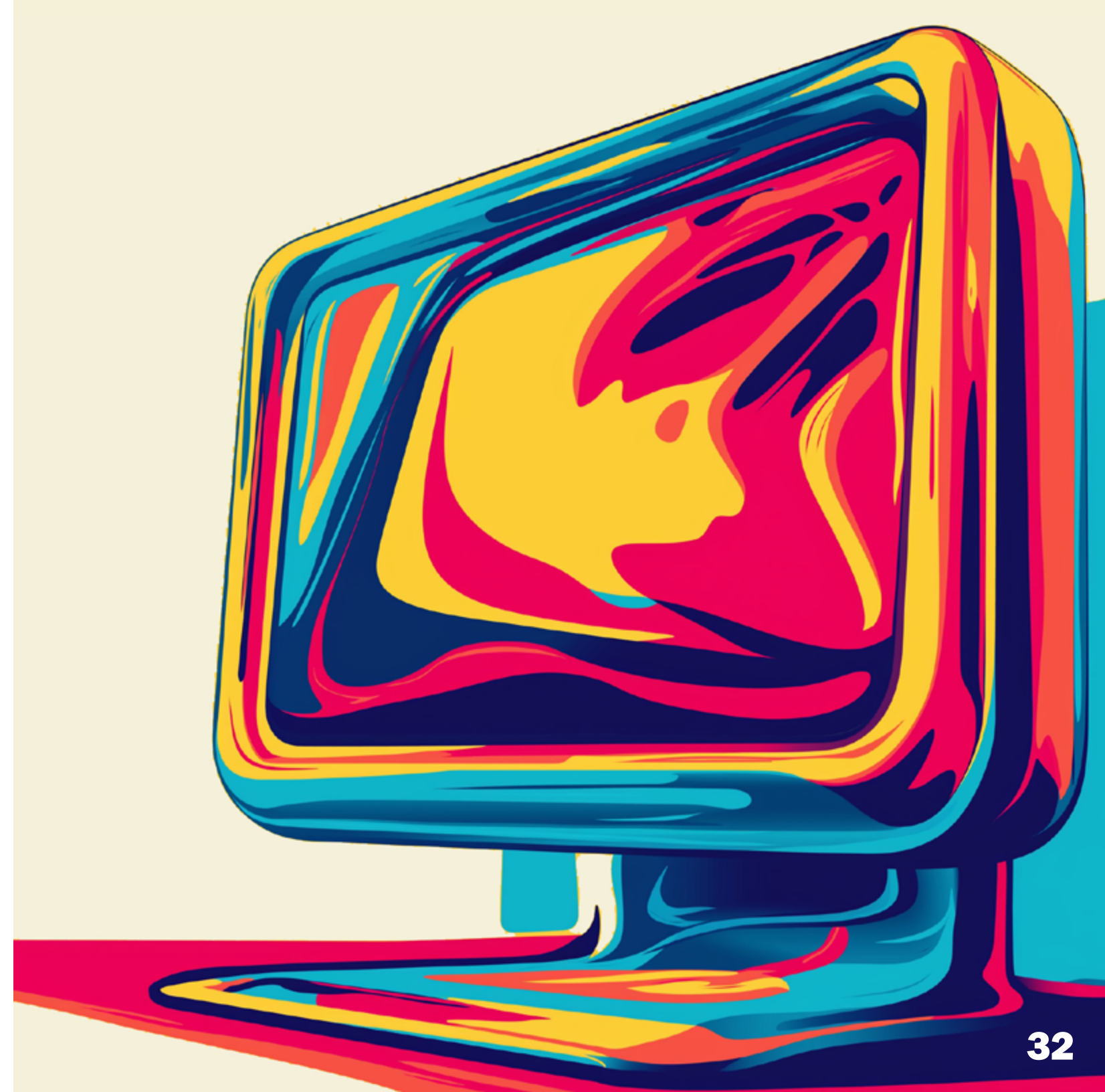
The next evolution in our data management tools was rolled out in late fall of 2023, in the form of our “Partner Portal” which is designed to be a one-stop shop for all partners to access data generated by the CWHC. Whether this is citizens accessing diagnostic reports for individual animals or mortality events, or federal and provincial partners accessing summary or line data describing ongoing disease outbreak events, such as Highly Pathogenic Avian Influenza, the Partner Portal centralizes and streamlines the provision of data and reports to a wide variety of stakeholders.

This platform is further integrated with our online reporting tools, to provide real-time information about the sightings of selected species which are monitored by our partners during disease outbreaks.

The Partner Portal is also designed to allow our partners to manage their own team’s organizational access to reports and data so that they can respond rapidly to evolving wildlife health events within their jurisdictions.

Future planned functionality includes integration with external systems, as well as visualizations such as maps, graphs, and species and disease-specific information that can be provided as an educational tool for informing the public about wildlife health and disease. The system can also serve as a moderating platform when requests for national data from our partners come in from sources where usage and citation requirements are to be enforced.

The portal can be found here: <https://portal.cwhc-rccsf.ca>



# SURVEILLANCE SUMMARY

## 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 approximately 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.

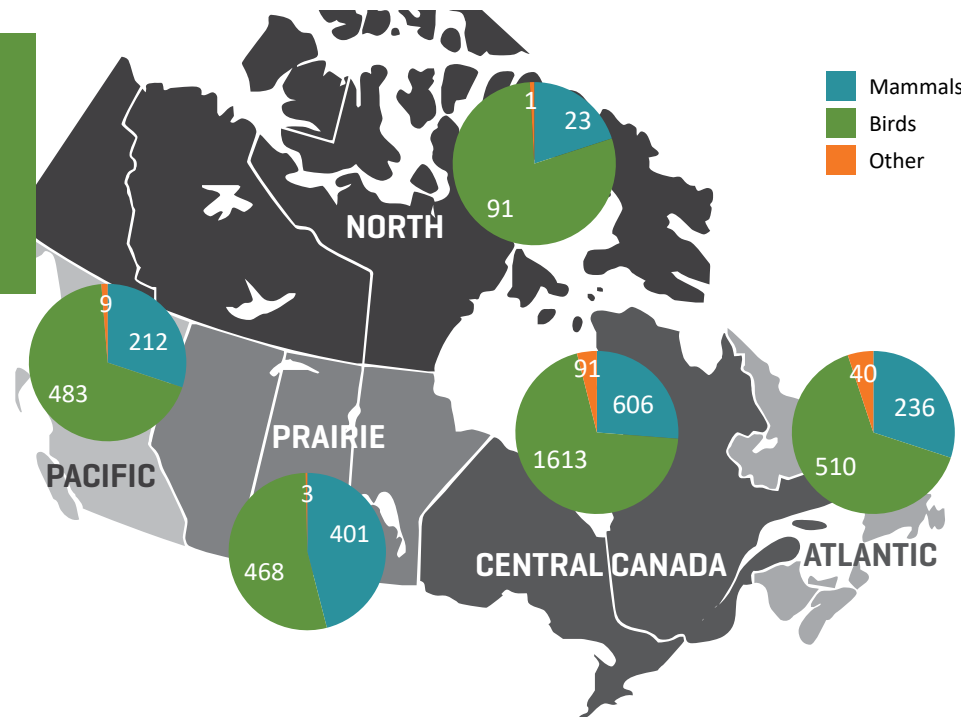
CWHC surveillance activities culminate in converting our information and assessment into useable advice and technical information and facilitating processes to turn our outputs into action. This includes spearheading national strategies, integrating information with our partners to develop national perspectives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

## ANIMALS SUBMITTED by region

4787 ANIMALS TOTAL  
2023-04-01 to 2024-03-31

### REGION TOTALS

Pacific	704
Prairie	872
Central Canada	2310
Atlantic	786
North	115



## HEALTH INTELLIGENCE

The CWHC is always looking for ways to expand 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. 2021 saw the release of the Wildlife Health Tracker mobile app, which along with our online reporting tool allows members of the public to report unusual wildlife health observations to the CWHC. These reporting tools have been significant in enhancing the collection of information during the HPAI outbreak at the start of 2022.

## SELECTED DISEASES

Project	Number of animals	
	Examined	Positive
Avian botulism	629	1
Avian cholera	629	1
Avian influenza	3042	197
Bovine tuberculosis	192	0
Canine distemper	1188	136
Chronic wasting disease	188	36
Newcastle disease	1113	1
Rabies	2520	36
Snake fungal disease	29	11
West Nile virus	2682	177
White-nose syndrome	230	3



# KNOWLEDGE MOBILIZATION

## 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.

## KNOWLEDGE MOBILIZATION IN ACTION - HPAI

The CWHC continued to play a major role in supporting the Highly Pathogenic Avian Influenza Wildlife Dashboard. Coordinated by the CFIA, the dashboard is a public interface that displays suspected and confirmed cases of Highly pathogenic Avian Influenza (HPAI) infections detected in wild birds in Canada. Suspect cases are those that tested non-negative for avian influenza at provincial laboratories (Canadian Animal Health Surveillance Network (CAHSN)) and confirmed cases are those identified as infected with a highly pathogenic strains by the Canadian Food Inspection Agency National Centre for Foreign Animal Disease (NCFAD). The dashboard is interactive and can be searched by species or group of species, province, date collected and status of the animal (dead/live) when sampled. Data for the HPAI Dashboard is now provisioned automatically through the CWHC Partner Portal.

Please see the Avian Influenza page on our website for more resources: [https://www.cwhc-rcsf.ca/avian\\_influenza.php](https://www.cwhc-rcsf.ca/avian_influenza.php)



5,645 SOCIAL MEDIA FOLLOWERS

3,963 Facebook

1,064 Twitter

618 Instagram



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



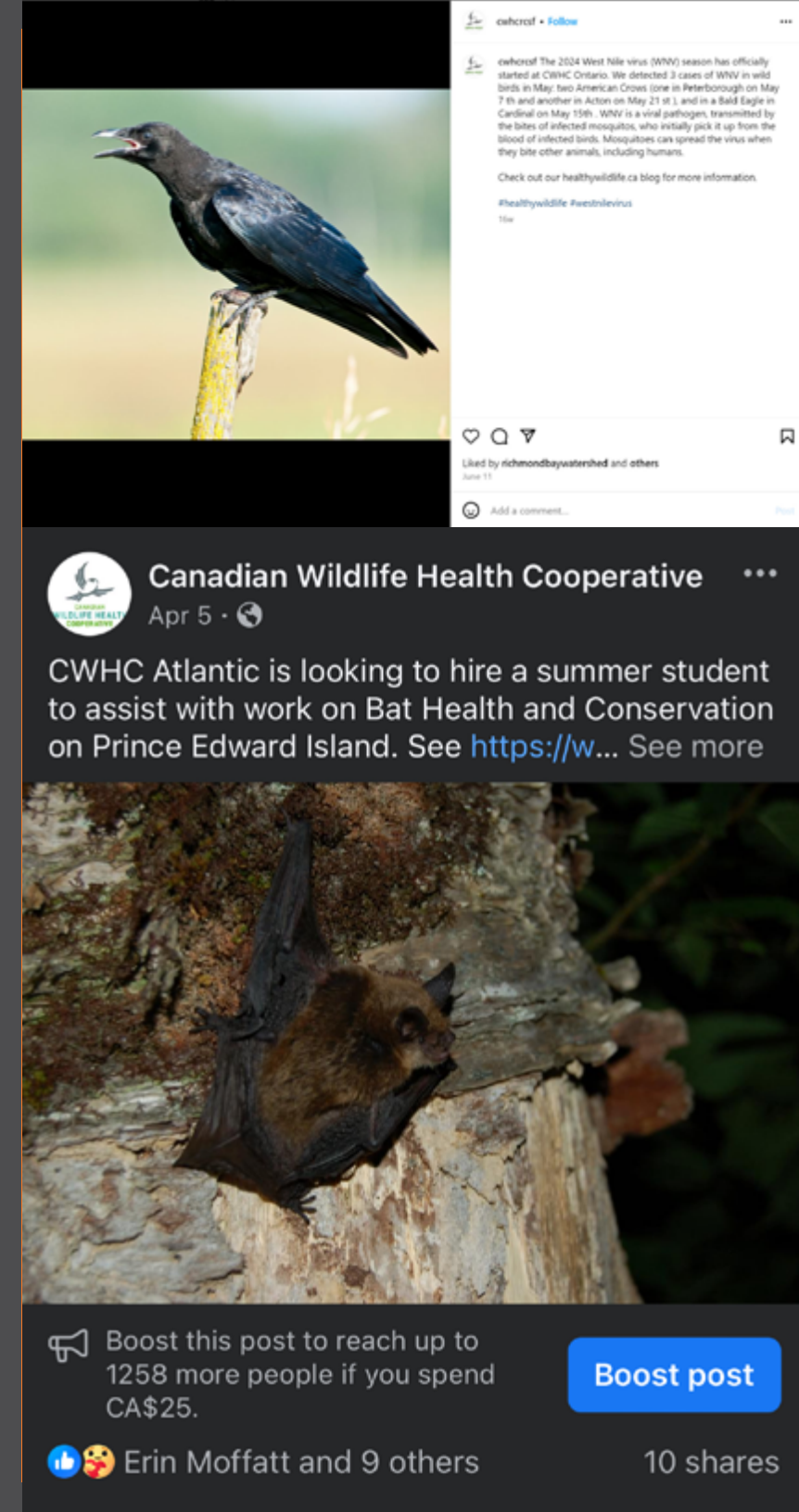
97,231  
website page views  
from over 100 different  
countries



47 MEDIA  
ENGAGEMENTS  
Including many related  
to Highly-pathogenic  
Avian Influenza



59 PUBLICATIONS  
7 technical reports  
52 peer-reviewed articles



# 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.



## REVENUES

	General	Targeted	Total
Canadian Food Inspection Agency	200,000	270,608	470,608
Environment and Climate Change Canada	359,038	793,976	1,153,014
Fisheries and Oceans Canada		214,324	214,324
Parks Canada	160,000	25,000	185,000
Public Health Agency of Canada	300,000		300,000
Public Services and Procurement Canada/Canadian Food Inspection Agency		140,000	140,000
Government of Alberta	5,000		5,000
Government of British Columbia	10,000		10,000
Government of New Brunswick	10,259		10,259
Government of Newfoundland and Labrador		5,000	5,000
Government of Northwest Territories	16,000		16,000
Government of Nova Scotia	10,000		10,000
Government of Nunavut	15,000		15,000
Government of Ontario	180,000	167,133	347,133
Government of Prince Edward Island	4,735		4,735
Gouvernement du Québec - Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs	142,000	88,051	230,051
Gouvernement du Québec - Ministère de l'Agriculture, des Pêcheries et de l'Alimentation	42,000		42,000
Gouvernement du Québec - Ministère de la Santé et des Services sociaux	21,000	10,000	31,000
Government of Saskatchewan - Ministry of Agriculture		127,200	127,200
Government of Saskatchewan - Ministry of Environment		100,000	100,000
Government of Yukon	14,000		14,000
Canadian Wildlife Federation	2,000		2,000
Western College of Veterinary Medicine	58,212		58,212
Miscellaneous Income/Fee-for-service		38,722	38,722
<b>TOTAL REVENUE</b>	<b>\$ 1,549,244</b>	<b>\$ 1,980,014</b>	<b>\$ 3,529,259</b>

## EXPENSES

	General	Targeted	Total
Salaries and Benefits	1,283,417	1,214,083	2,497,500
Equipment	17,393	0	17,393
Diagnostic Costs	197,325	334,099	531,424
Operational	56,415	73,930	130,346
Travel	33,136	53,031	86,167
Other	40,950	13,702	54,653
Overhead	198,843	219,172	418,015
<b>TOTAL EXPENSES</b>	<b>1,827,479</b>	<b>1,908,019</b>	<b>3,735,498</b>
<b>REVENUE LESS EXPENSES</b>	<b>\$ (278,235)</b>	<b>\$ 71,995</b>	<b>\$ (206,239)</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, facilitating new approaches and ensuring people are connected across the country.

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.



## 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. A nomination and review process is used to identify and recognize potential or existing partners and twenty one 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 [https://www.cwhc-rccsf.ca/about\\_us.php#associates](https://www.cwhc-rccsf.ca/about_us.php#associates)

### 28 GRADUATE STUDENTS

<b>BC</b>	5
<b>Western/Northern:</b>	2
<b>Ontario/Nunavut:</b>	8
<b>Québec:</b>	5
<b>Atlantic:</b>	8

### 21 ASSOCIATES AND AFFILIATES

<b>National Office:</b>	4
<b>British Columbia:</b>	1
<b>Alberta:</b>	4
<b>Western/Northern:</b>	1
<b>Ontario/Nunavut:</b>	1
<b>Québec:</b>	3
<b>Atlantic:</b>	7

## ACKNOWLEDGMENTS

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CANADIAN  
**WILDLIFE HEALTH**  
COOPERATIVE

