

Historic Information on West Nile Virus Infection in British Columbia

For current information on equine cases of WNV see:

- [B.C. Equine Disease Report](#)

In the years since its initial North American detection in New York in 1999, West Nile Virus (WNV) has been reported throughout the United States and in most Canadian provinces. WNV is transmitted primarily to wild birds by infected mosquitoes. Mosquitoes can also transmit WNV to humans, horses and occasionally to other animals. The first evidence of WNV infections acquired in British Columbia (B.C.) was reported in 2009. The table below reports the number of WNV cases and the number tested in B.C. based on WNV surveillance since 2009.

Summary of Annual Number of WNV Positive Indicators (& Number Tested¹) in B.C. by Species

Year	Humans	Mosquito Pools ²	Birds	Horses
2016	0 (219)	Not applicable	2(37)	10
2015	0 (300)	Not applicable	0(29)	0
2014	0 (836)	0 (236)	0 (0)	0
2013	1 (862)	1 (290)	1 (5)	1
2012	0 (438)	0 (1,912)	0 (22)	0
2011	0 (415)	0 (2,282)	0 (40)	1
2010	1 (325)	0 (2,092)	5 (233)	0
2009	3 (379)	10 (2,482)	0 (144)	3
TOTAL	5 (3,744)	11 (9,294)	8 (510)	15

¹A mosquito pool can contain up to 50 mosquitoes that are tested at one time. The number of horses tested is unknown.

² In 2015, surveillance of mosquitoes for WNV was discontinued.

2016 was the first year positive WNV indicators were detected in the Kootenays (specifically the south Kootenays), with nine equine WNV cases and two WNV infected crows. The other 2016 equine case occurred in the Fraser Valley. A Kootenays equine case and the Fraser Valley case had arrived from Alberta and the US, respectively so WNV infection of these horses outside of BC cannot be ruled out. Prior to 2016, all positive results in all species had been located in the Okanagan, with the exception of one horse located in the Fraser Valley. Although variable across the province and from year to year, typically June to September is the risk period for WNV infection. Positive indicators have been detected in B.C. in the months of August and September.

Detection of WNV in crows and other corvids (ravens, crows, magpies, jays), which are very sensitive to the infection, is often used as an early warning of its presence in mosquitoes. Since April 2003, the Animal Health Centre has worked in close cooperation with the Canadian Wildlife Service of Environment Canada, the B.C. Ministry of Forests, Lands and Natural Resource Operations, the B.C.

Ministry of Environment, the BCCDC and the Regional Health Authorities to monitor for the presence of the WNV in dead corvid species. Information on dead bird reporting in B.C., including online reporting by members of the public, is available at the [Ministry of Environment](#) website. In certain situations and areas, dead birds may also be tested.

Horses with WNV can exhibit a range of signs such as stumbling, confusion, listlessness, head pressing, lack of appetite, inability to stand, seizures and weakness. In severe cases (about 30%), horses that develop clinical signs will die or be euthanized. Although there is no specific treatment for the diseases, there are vaccines to prevent WNV in horses. Horse owners should consult with their veterinarian about WNV vaccination including timing of vaccination, routinely drain standing water around homes and barns to reduce mosquito breeding sites, and use insecticides according to the label when needed.

WNV is a B.C. provincially notifiable disease. The Public Health Veterinarian at the Animal Health Centre, on behalf of the province's Chief Veterinarian, collects information on horses with WNV and shares this information with the BCCDC. As a federal immediately notifiable disease, laboratories suspecting or diagnosing a horse with WNV are required to contact the Canadian Food Inspection Agency (CFIA). Please see the [CFIA WNV case definition for horses](#). The federal and provincial governments' roles with notifiable diseases is limited to information collection for surveillance purposes, a regulatory response is not elicited.

Other Resources

- [BC Centre for Disease Control - West Nile Virus information](#)
- [The British Columbia Interagency Wild Bird Mortality Investigation Protocol & the 2016 Avian Influenza Surveillance Program](#)
- [HealthLinkBC West Nile Virus information](#)
- [Canadian Food Inspection Agency West Nile Virus information](#)
- [Canadian Cooperative Wildlife Health Centre West Nile Virus information](#)
- [Health Canada West Nile Virus information](#)
- [Public Health Agency of Canada - Canadian West Nile Virus Surveillance information](#)
- [US Centre for Disease Control and Prevention, West Nile Virus information](#)