

# MOSQUITO-BORNE DISEASES SURVEILLANCE REPORT

SEPTEMBER 27 to OCTOBER 24, 2021 (WEEK 39 to 42)

## Year-to-Date Snapshot

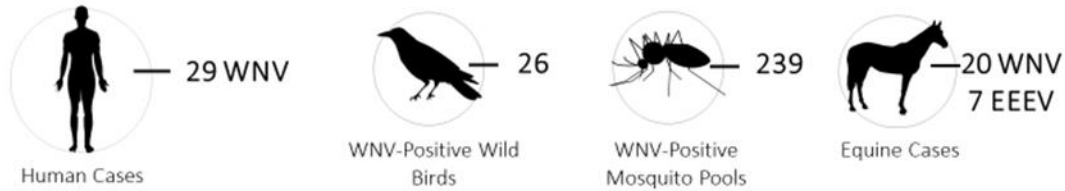
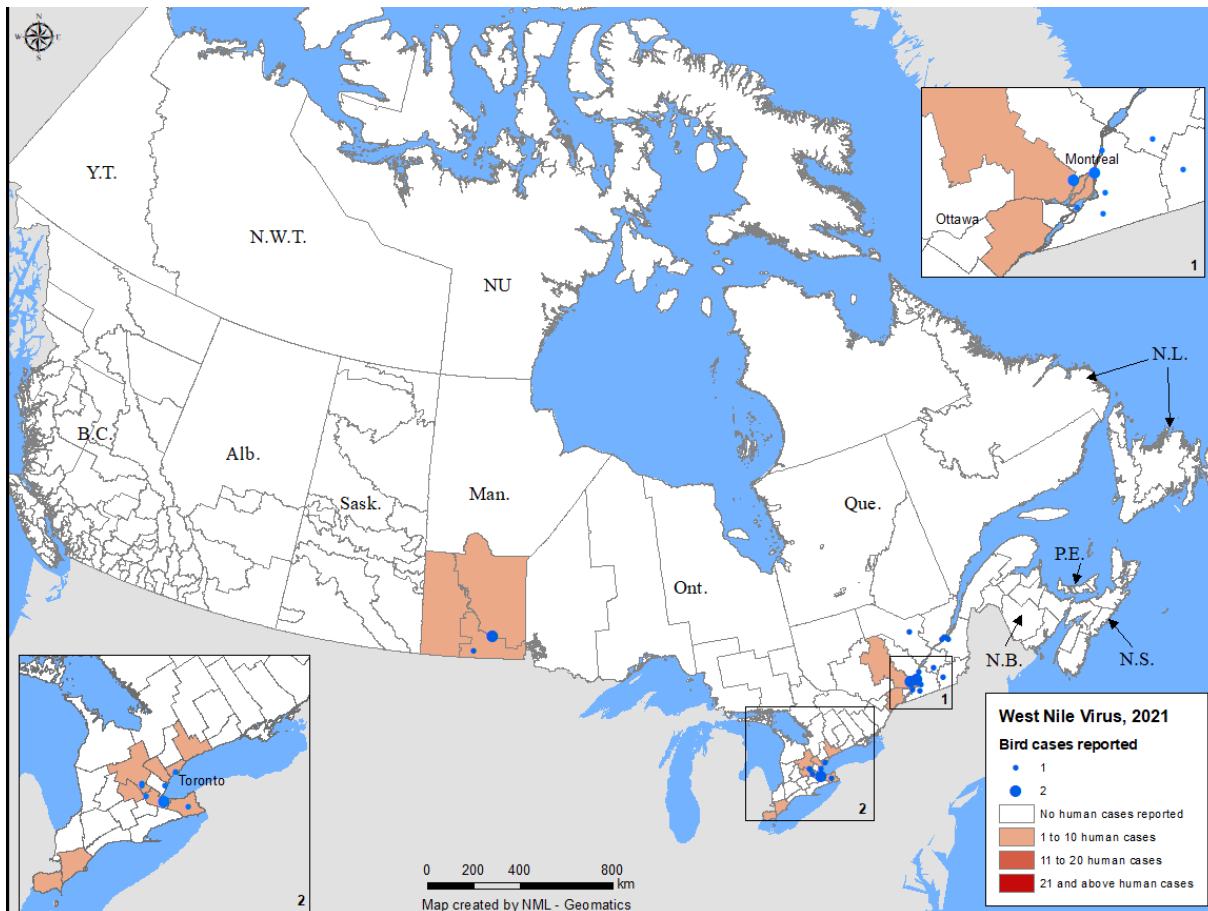


Figure 1. Geographic distribution of WNV human cases and positive birds reported in Canada, 2021



## West Nile

### Human Epidemiology

As of surveillance week 42, ending on October 24, 2021, 29 clinical human cases and five asymptomatic human case of West Nile virus (WNV) have been reported to the Public Health Agency of Canada (PHAC) (**Table 1**).

**Table 1. West Nile virus human cases, by disease classification and province (January 1- October 24, 2021)**

Province	Clinical Cases			Total Clinical Cases <sup>1</sup>	Asymptomatic Infections <sup>2</sup>	YTD Grand Total	Rate <sup>3</sup> (per 100,000)
	Neurological	Non-neurological	Unclassified				
Ontario	3	6	9	18	4	22	0.15
Manitoba	3	2	0	5	1	6	0.43
Québec	0	0	6	6	0	6	0.07
<b>Total</b>	<b>6</b>	<b>8</b>	<b>15</b>	<b>29</b>	<b>5</b>	<b>34</b>	<b>0.09</b>

<sup>1</sup>Clinical cases are the sum of confirmed and probable: WNV neurological and non-neurological syndromes, along with any unclassified. <sup>2</sup>Satisfies WNV diagnostic test criteria in the absence of clinical criteria (i.e., asymptomatic blood donors whose blood is screened by blood operators, Canadian Blood Services or Héma-Québec. <sup>3</sup> Calculated with grand total of clinical and asymptomatic cases, using Statistics Canada 2021 Q1 population estimates.

### Mosquito, Wild Bird & Equine Epidemiology

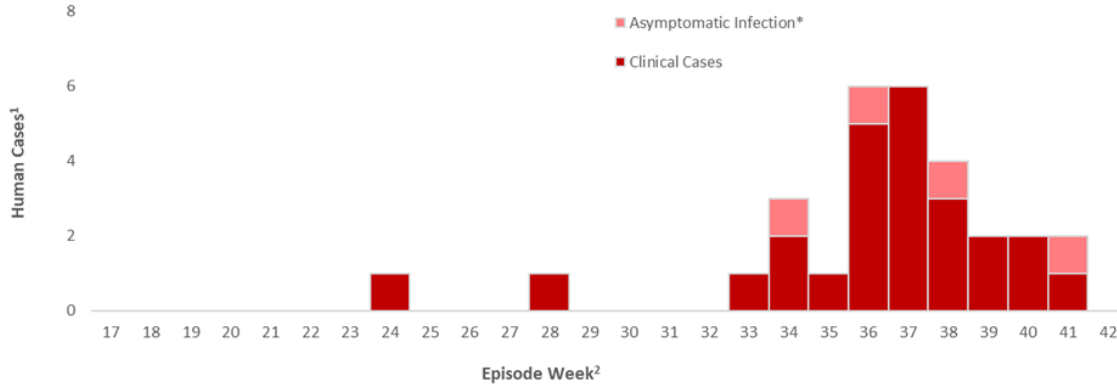
As of week 42, PHAC has been notified of 17,229 mosquito pools tested for WNV in Canada. Of these, there have been 239 WNV-positive mosquito pools identified 10 in Québec, 104 in Ontario, 116 in Manitoba and 9 in Saskatchewan (**Table 2**).

22 wild birds have tested positive for WNV by the [Canadian Wildlife Health Cooperative \(CWHC\)](#) 14 in Québec and eight in Ontario (**Table 3**). The province of Québec reported additional positive bird and the province of Manitoba reported three birds that tested positive for WNV.

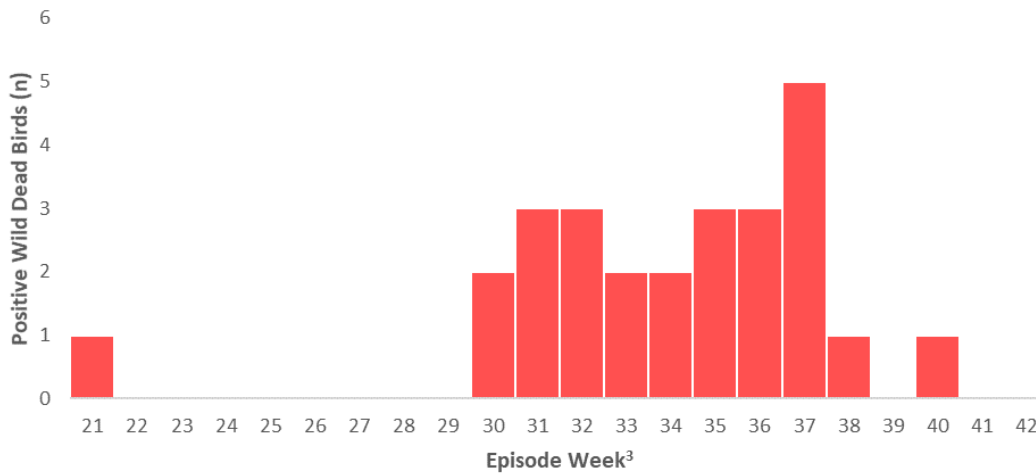
Since the start of this season, the [Canadian Food Inspection Agency \(CFIA\)](#) has identified equine cases that tested positive for WNV in Alberta (1), Saskatchewan (8), Manitoba (6) and Ontario (3). The province of Saskatchewan reported two additional horses that tested positive for WNV.

**Figure 2. (A) West Nile virus human clinical cases and asymptomatic infections, (B) positive West Nile virus birds, and (C) percent positive mosquito pools by episode/report week, 2021**

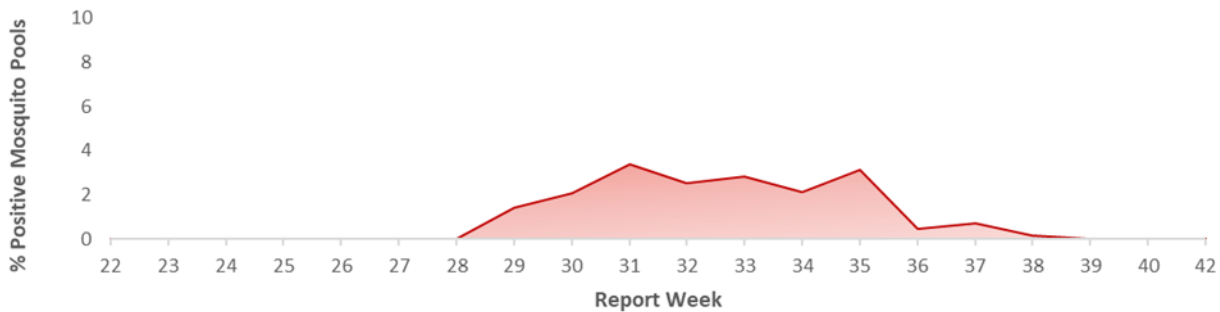
(A)



(B)



(C)



<sup>1</sup>Human cases includes clinical cases and asymptomatic infection. <sup>2</sup>Episode week is based on symptom onset or best available date including: diagnosis, lab sample or date reported. <sup>3</sup>Episode week is based off date of death or best available date including: date found, submitted, or received.

**Table 2. Year-to-Date WNV positive pools and percent positive by province and nationally (January 1- October 24, 2021)**

Province <sup>1</sup>	Positive Pools	Total Pools Tested	Percent Positive
Saskatchewan	9	360	2.50%
Manitoba	116	1,446	8.02%
Ontario	104	13,436	0.77%
Québec	10	1,987	0.50%
<b>Total</b>	<b>239</b>	<b>17, 229</b>	<b>1.39%</b>

<sup>1</sup> Mosquito surveillance data is reported by the following four provinces: Saskatchewan, Manitoba, Ontario and Québec.

**Table 3. Number of WNV positive equine and birds by province and nationally (January 1- October 24, 2021)**

Province	Wild Birds <sup>1</sup>	Equine
Ontario	8	3
Québec	15	0
Saskatchewan	0	10
Manitoba	3	6
Alberta	0	1
<b>Total</b>	<b>23</b>	<b>20</b>

<sup>1</sup> Not all provinces conduct dead wild bird surveillance as part of their respective WNV surveillance program. However, WNV positive dead wild birds may be identified through the National Wildlife Disease Surveillance Program, CWHC or by specific provinces.

## California Serogroup

As of October 24<sup>th</sup>, 2021, one human case of California serogroup virus was diagnosed by the [National Microbiology Laboratory](#) in Canada: Ontario (1). The case was further classified as Jamestown Canyon virus.

## Eastern Equine Encephalitis

No human cases of Eastern Equine Encephalitis virus (EEEV) have been reported to PHAC since the beginning of the 2021 transmission season.

The CFIA has reported seven horse cases testing positive for EEEV in Ontario.

## Provincial/Territorial & International Surveillance Links

Data reported to PHAC is subject to change and may differ from provincial webpages due to reporting timelines. To obtain the latest arbovirus surveillance data, please refer to the following jurisdictional/regional webpages:

*Provincial*

[Alberta - West Nile virus](#)

[Saskatchewan - West Nile virus](#)

[Manitoba - West Nile virus](#)

[Ontario - West Nile virus](#)

[Québec - Virus du Nil occidental](#)

*International*

[U.S. Centers for Disease Control - West Nile virus](#)

[European Centre Disease Control - Mosquito-borne disease](#)

*Thank you to all our partners for participating in the National WNV/MBD surveillance program.*

**Suggested Citation:** Public Health Agency of Canada. Mosquito-borne Disease Surveillance Report: Biweekly Edition (Week 39 to 42). Ottawa, Canada. November 9, 2021.