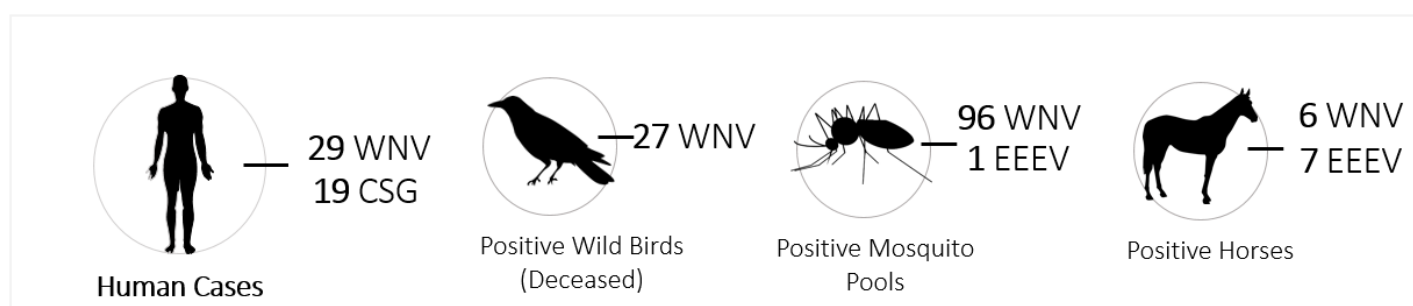


MOSQUITO-BORNE DISEASE SURVEILLANCE REPORT

SEPTEMBER 29 to OCTOBER 12, 2019 (WEEKS 40 & 41)

Year-to-Date Snapshot



West Nile

Human Epidemiology

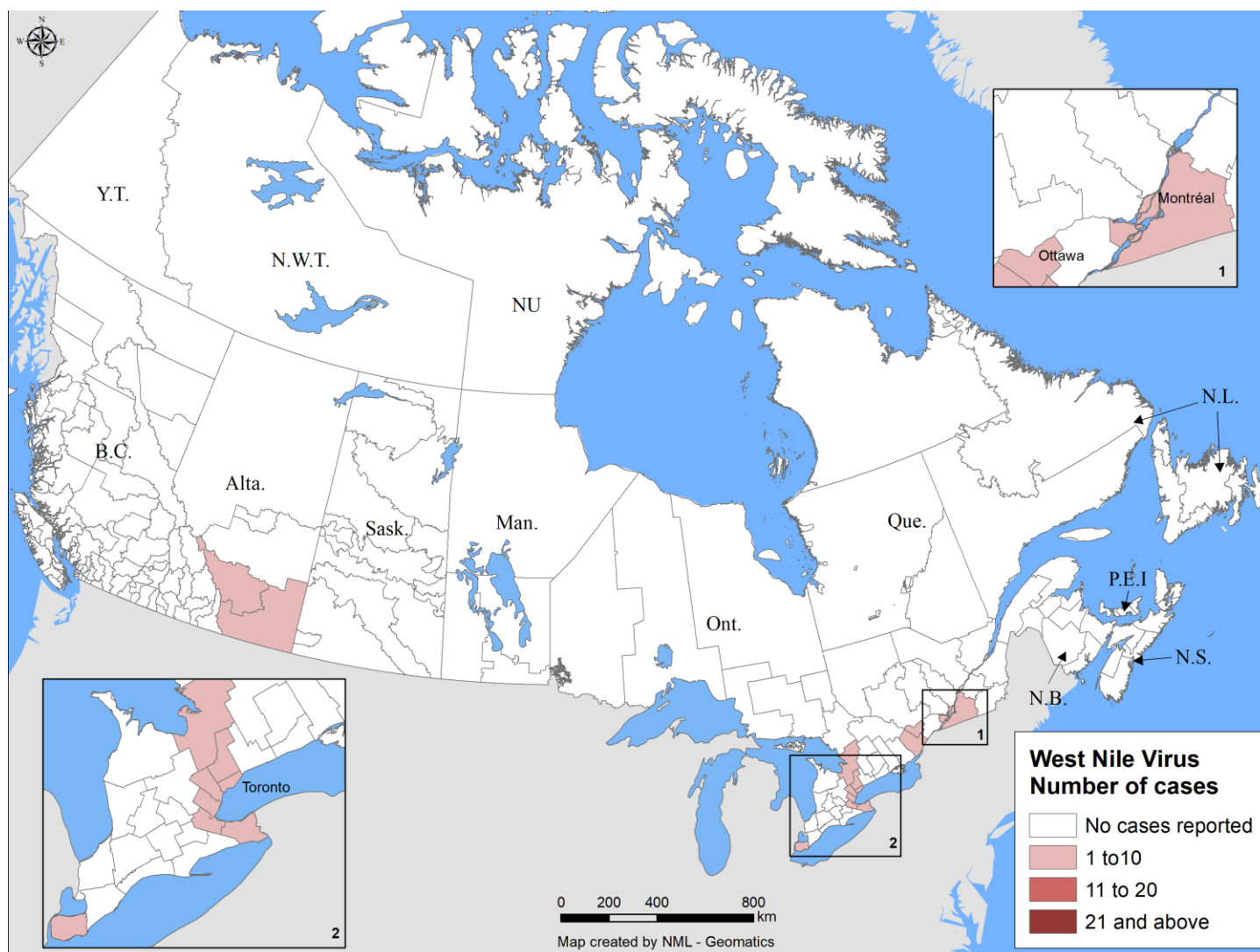
As of surveillance week 41, ending October 12, 2019, 29 human cases of West Nile virus (WNV) have been reported to the Public Health Agency of Canada (PHAC) (**Table 1**). Of these, four cases reported travel outside of Canada: British Columbia (1), Alberta (2) and Ontario (1).

Table 1. Year-to-Date (YTD) WNV human cases, by disease classification and province (January 1-October 12, 2019)

Province	Clinical Cases			Total Clinical Cases ¹	Asymptomatic Infections ²	YTD Grand Total	Rate ³ (per 100,000)
	Neurological	Non-neurological	Unclassified				
British Columbia	0	1	0	1	0	1	0.02
Alberta	2	2	0	4	0	4	0.09
Saskatchewan	0	-	-	0	0	0	0.00
Manitoba	0	0	0	0	0	0	0.00
Ontario	7	3	3	13	1	14	0.10
Québec	4	1	5	10	0	10	0.12
Maritime Provinces	0	0	0	0	0	0	0.00
Territories	0	0	0	0	0	0	0.00
Total	13	7	8	28	1	29	0.08

¹ Clinical cases are the sum of confirmed and probable: WNV neurological and non-neurological syndromes, along with any unclassified. ² 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. ³ Calculated with grand total of clinical and asymptomatic cases, using Statistics Canada 2018 population estimates.

Figure 1. Geographic distribution of WNV human clinical cases and asymptomatic infections in Canada, 2019



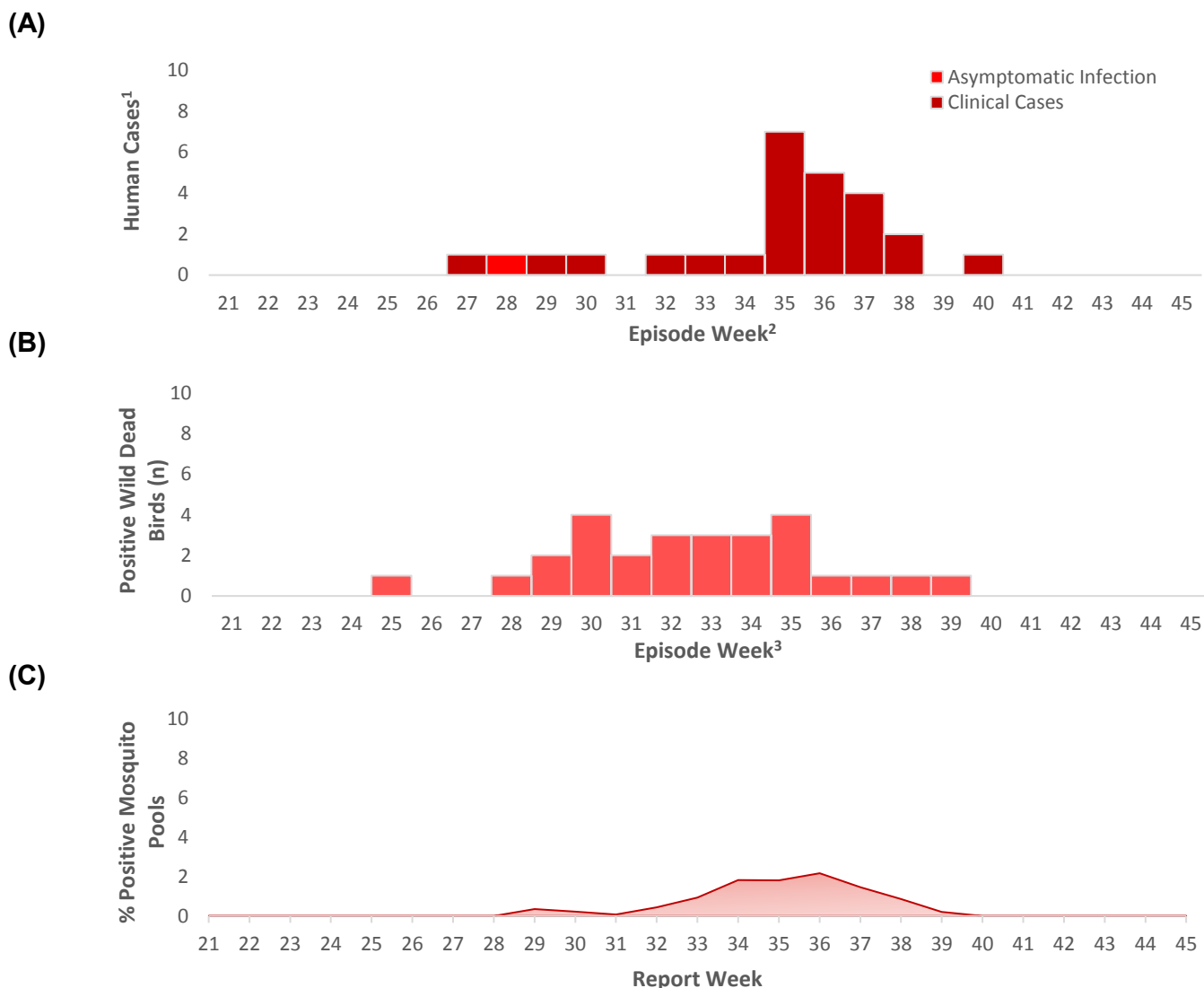
Mosquito, Wild Bird & Equine Epidemiology

As of week 41, PHAC has been notified of 11, 504 mosquito pools tested for WNV. Of these, 96 (0.83%) were positive in Quebec (19), Ontario (71) and Manitoba (6) (**Table 2**).

Twenty-seven of 58 dead wild birds have tested positive for WNV, by the [Canadian Wildlife Health Cooperative \(CWHC\)](#) in Saskatchewan (1), Ontario (18) and Quebec (8) (**Table 3**).

Since the start of this season, the [Canadian Food Inspection Agency \(CFIA\)](#) has reported six horses that tested positive for WNV in British Columbia (1), Saskatchewan (1), Alberta (2), Ontario (1) and Quebec (1) (**Table 3**).

Figure 2. (A) WNV human clinical cases and asymptomatic infections, (B) positive WNV birds, and (C) percent positive mosquito pools by episode or report week, in Canada, 2019



¹Human cases includes clinical cases and asymptomatic infection.²Episode week is based on symptom onset or best available date including: diagnosis, lab sample or date reported. ³Episode 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 12, 2019)

Province ¹	Positive Pools	Total Pools Tested	Percent Positive
Saskatchewan	0	200	0.00 %
Manitoba	6	1,166	0.51 %
Ontario	71	8,400	0.85 %
Québec	19	1,738	1.09 %
Total	96	11, 504	0.83 %

¹ Mosquito surveillance data is reported by the following four provinces: Saskatchewan, Manitoba Ontario and Quebec.

Table 3. Number of WNV positive animal cases for current week and Year-to-Date (YTD) (January 1- October 12, 2019)

Province	Wild Birds ¹		Equine	
	Week 40 & 41	YTD Total	Week 40 & 41	YTD Total
British Columbia	0	0	0	1
Alberta	0	0	0	2
Saskatchewan	0	1	0	1
Manitoba	0	0	0	0
Ontario	0	18	0	1
Québec	0	8	0	1
Maritime Provinces	0	0	0	0
Territories	0	0	0	0
Total	0	27	0	6

¹ 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 September 30, 2019, 19 human cases/past exposures of California serogroup virus have been reported by the [National Microbiology Laboratory](#) across nine provinces in Canada. Of these, 14 were Jamestown Canyon, one was snowshoe hare virus and four were undetermined.

Eastern Equine Encephalitis

The CFIA has reported seven horses that tested positive for Eastern Equine Encephalitis virus (EEEV) in Ontario. In addition one mosquito pool tested positive for EEEV in Ontario (Windsor-Essex Health Unit). No human cases of EEEV have been reported to PHAC since the beginning of the 2019 transmission season.

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: Weekly Edition (Week 40 & 41), 2019. Ottawa, Canada. October 25, 2019.