



West Nile virus and Other Mosquito-borne Diseases National Surveillance Report English Edition

July 9 to July 15, 2017 (Week 28)

West Nile Virus

Canada

Humans

As of surveillance week 28, ending on July 15, 2017, the Public Health Agency of Canada (PHAC) has not been officially informed of any human cases of West Nile virus by provinces and territories since the beginning of the 2017 season in Canada.

Mosquitoes

As of week 28, there have been 4 provinces (Ontario, Manitoba, Quebec and Saskatchewan) with reports of positive mosquito pools of West Nile Virus.

A total of 22 positive tests of West Nile Virus have been found: 15 from Ontario [Peel Regional (3), Toronto (2), Halton(3), Haliburton-Kawartha-Pine Ridge District(1), Simcoe Muskoka District (1), Windsor-Essex County (1)Eastern Ontario (1), and York Regional (3)]; 5 from Manitoba [(Winnipeg (2), Southern (2) and Interlake eastern (1)]; 1 from Quebec in Montérégie and 1 from Saskatchewan.

As of initial surveillance, PHAC has received 4675 mosquito pools data tested for West Nile virus in Canada: Quebec (147), Ontario (4127), Manitoba (291), and Saskatchewan (110).

Birds

The Canadian Wildlife Health Cooperative has tested 14 dead birds for West Nile virus: four in Quebec, nine in Ontario and one in Saskatchewan. Of these, 8 were positive for WNV: 3 in Quebec [St Lambert (2) and Sherbrooke (1)], and 5 in Ontario [Campbellsville (3), Trenton Lakes (1) and Guelph (1)].

Domestic Animals

The Canadian Food Inspection Agency has not reported any domestic animals tested positive for West Nile virus since the beginning of the 2017 season.

United States and U.S. territories

As of July 15, 2017, forty six (46) human cases of West Nile virus have been reported by the Centers for Disease Control and Prevention in the United States. Of these, 26 (56.52%) were classified as neuroinvasive disease and 20 (43.47%) as non-neuroinvasive disease. In addition, 8 presumptive viremic blood donors have been identified.

<https://www.cdc.gov/westnile/statsmaps/preliminarymapsdata2017/disease-cases-state.html>

Europe and Neighbouring Countries

As of July 15, 2017, one probable case of WNV has been reported in Haifa district Israel. No human cases have been reported by the European Union Member States.

http://ecdc.europa.eu/en/healthtopics/west_nile_fever/West-Nile-fever-maps/pages/index.aspx

Other Mosquito-borne Diseases

Canada

Eastern Equine Encephalitis virus:

No human cases of eastern equine encephalitis virus have been reported to the Public Health Agency of Canada since the 2017 season.

California Serogroup virus:

During surveillance week 28, no human cases/exposures of California serogroup virus were diagnosed by the National Microbiology Laboratory in the Public Health Agency of Canada.

Since January 1, 2017, 9 human cases of laboratory-confirmed cases/exposures of California serogroup virus were diagnosed by the National Microbiology Laboratory in Canada: Alberta (2), Saskatchewan (1), and Quebec (6). Of these cases, four were further classified as Jamestown Canyon virus and the rest as unknown.

FIGURE 1: Geographic distribution of West Nile virus human clinical cases in Canada, as of July 15, 2017

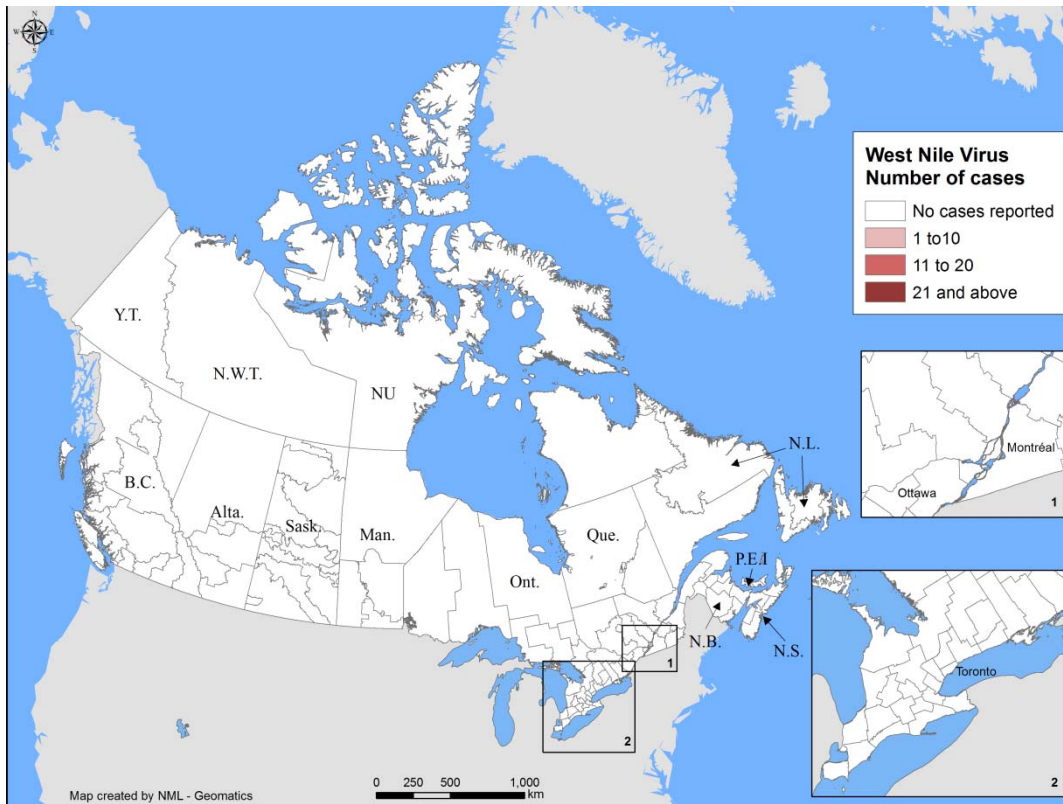


FIGURE 2: West Nile virus human clinical cases and asymptomatic infections by province/ territory and by report week, as of July 15, 2017

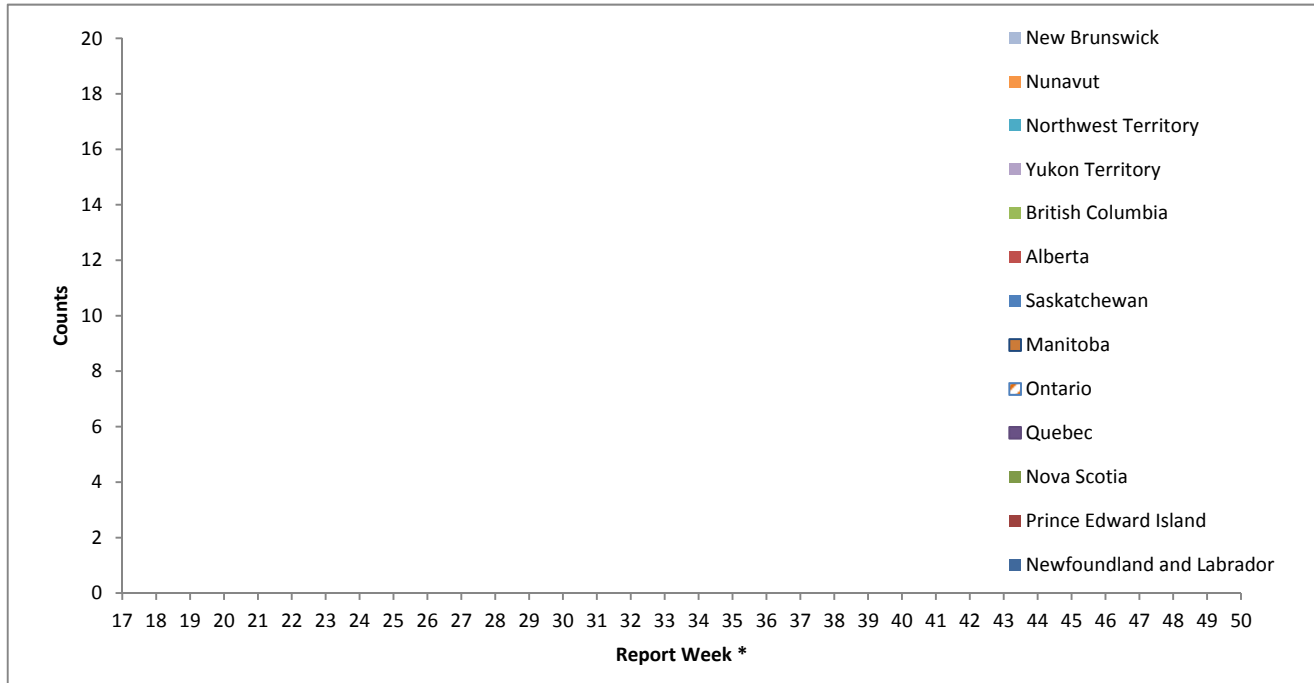
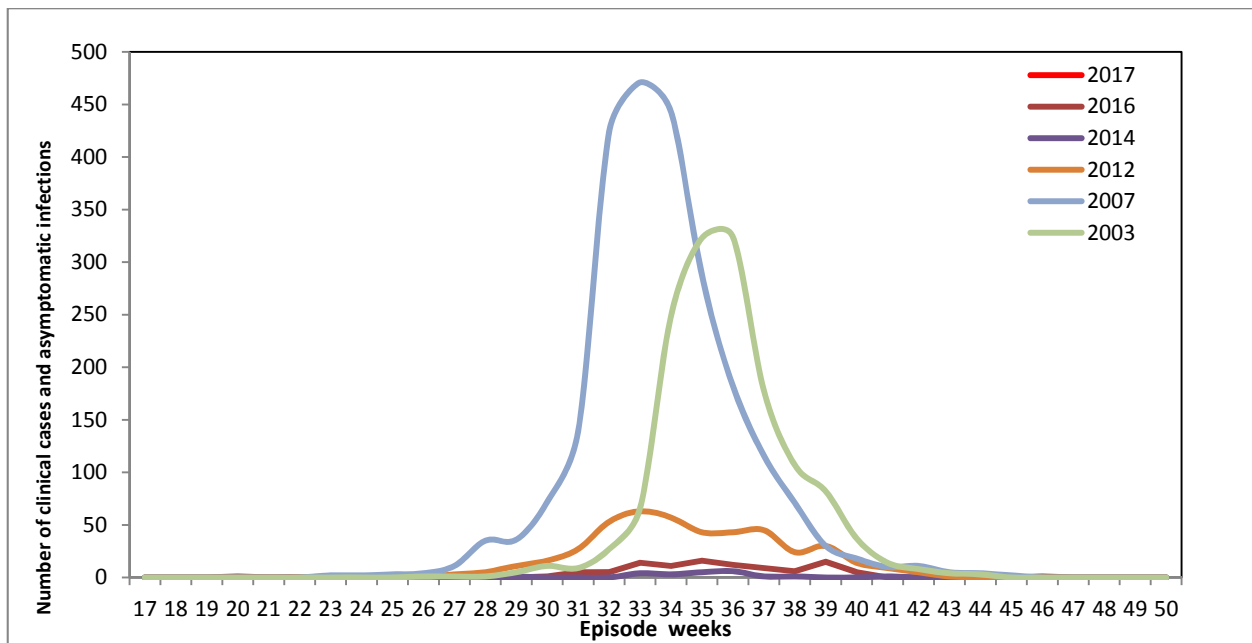


FIGURE 3: West Nile virus human clinical cases and asymptomatic infections by report week for selected years, in Canada



*West Nile virus clinical cases and asymptomatic infections are grouped by report week, based on episode date. Episode date could include one of the following: onset date, diagnosis date, lab sample date or reporting date.

TABLE 1: West Nile virus human clinical cases and asymptomatic infections by province/territory for the current report week and year to date, 2017 season

	Week 27: July 9 to July 15, 2017					
	West Nile virus neurological syndrome	West Nile virus non-neurological syndrome	Unclassified/unspecified	Total clinical cases ¹	Number of travel-related cases ²	West Nile virus asymptomatic infection ³
Newfoundland and Labrador	0	0	0	0	0	0
Prince Edward Island	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0
Quebec	0	0	0	0	0	0
Ontario	0	0	0	0	0	0
Manitoba	0	0	0	0	0	0
Saskatchewan	0	0	0	0	0	0
Alberta	0	0	0	0	0	0
British Columbia	0	0	0	0	0	0
Yukon Territory	0	0	0	0	0	0
Northwest Territory	0	0	0	0	0	0
Nunavut	0	0	0	0	0	0
Total	0	0	0	0	0	0

	Year to date: January 1 to July 15, 2017					
	West Nile virus neurological syndrome	West Nile virus non-neurological syndrome	Unclassified/unspecified	Total clinical cases ¹	Number of travel-related cases ²	West Nile virus asymptomatic infection ³
Newfoundland and Labrador	0	0	0	0	0	0
Prince Edward Island	0	0	0	0	0	0
Nova Scotia	0	0	0	0	0	0
New Brunswick	0	0	0	0	0	0
Quebec	0	0	0	0	0	0
Ontario	0	0	0	0	0	0
Manitoba	0	0	0	0	0	0
Saskatchewan	0	0	0	0	0	0
Alberta	0	0	0	0	0	0
British Columbia	0	0	0	0	0	0
Yukon Territory	0	0	0	0	0	0
Northwest Territory	0	0	0	0	0	0
Nunavut	0	0	0	0	0	0
Total	0	0	0	0	0	0

¹ Total clinical cases is the sum of both probable and confirmed: West Nile virus neurological and non-neurological syndromes, along with any unclassified or unspecified cases.

² Likely related to travel outside the Province/Territory. These cases are included in either the total clinical cases or West Nile virus asymptomatic infections.

³ Satisfies West Nile virus diagnostic test criteria in the absence of clinical criteria. This category could include asymptomatic blood donors whose blood is screened using a nucleic acid amplification test, by blood operators (i.e. Canadian Blood Services or Hema-Quebec) and is subsequently brought to the attention of public health officials. Blood operators in Canada perform a supplementary West Nile virus specific nucleic acid amplification test following any positive donor screen test result.

TABLE 2: Number of mosquito pools tested for West Nile virus and number of positive mosquito pools by province/territory, 2017 season

Province	Year to date: January 1 to July 15, 2017		
	Number of positive mosquito pools	Number of mosquito pools tested	Percentage of positive mosquito pools (%)
Quebec	1	147	0.68
Ontario	15	4127	0.36
Manitoba	5	291	1.72
Saskatchewan	1	110	0.91
Alberta	-	-	-
British Columbia	-	-	-
Newfoundland and Labrador	-	-	-
Prince Edward Island	-	-	-
Nova Scotia	-	-	-
New Brunswick	-	-	-
Yukon Territory	-	-	-
Northwest Territory	-	-	-
Nunavut	-	-	-
Total	22	4675	0.47

TABLE 3: Total number of WNV mosquito pools tested by report week and by province/ territory, 2017 season †

Province / Territory	Report week 28, 2017																					
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Newfoundland and Labrador	-	-	-	-	-	-	-	-	-	-												
Prince Edward Island	-	-	-	-	-	-	-	-	-	-												
New Brunswick	-	-	-	-	-	-	-	-	-	-												
Nova Scotia	-	-	-	-	-	-	-	-	-	-												
Quebec	0	0	0	0	0	0	0	0	147	n/a												
Ontario	13	15	43	84	194	299	718	794	964	1003												
Manitoba	0	0	0	0	15	45	48	16	74	93												
Saskatchewan	0	0	0	0	6	20	11	18	25	30												
Alberta	-	-	-	-	-	-	-	-	-	-												
British Columbia	-	-	-	-	-	-	-	-	-	-												
Yukon Territory	-	-	-	-	-	-	-	-	-	-												
Northwest Territory	-	-	-	-	-	-	-	-	-	-												
Nunavut	-	-	-	-	-	-	-	-	-	-												
Total	13	15	43	84	215	364	777	828	1210	1126												

† Detailed West Nile virus mosquito surveillance data can be accessed through Provincial/ Territorial websites

FIGURE 4: Reported number of dead birds tested positive for West Nile virus by province/ territory and by report week, 2017 season in Canada

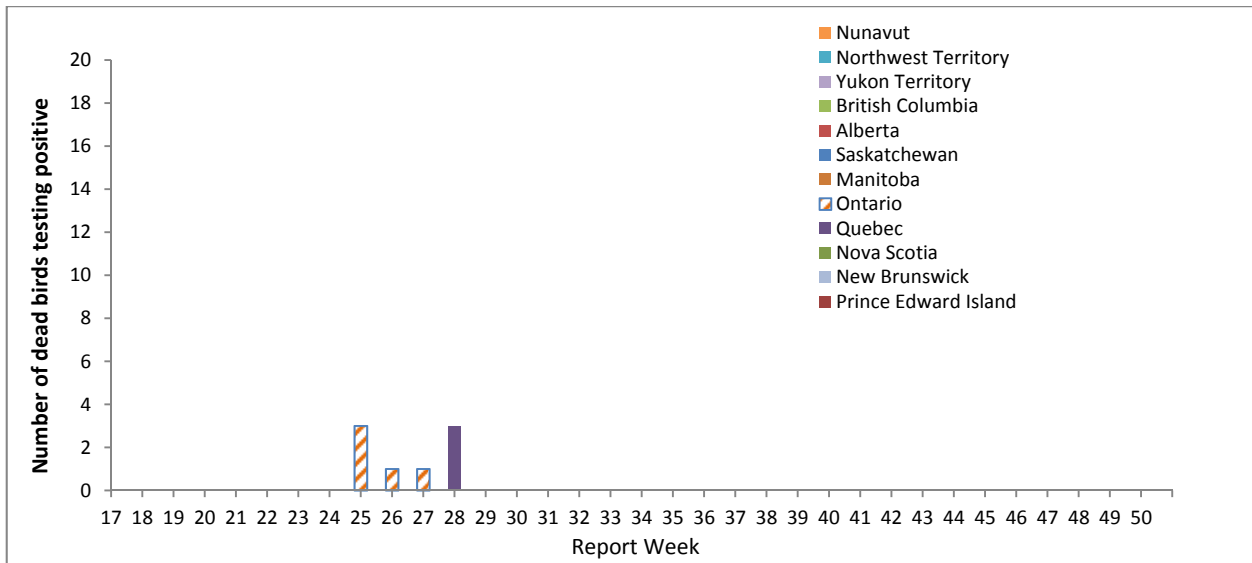
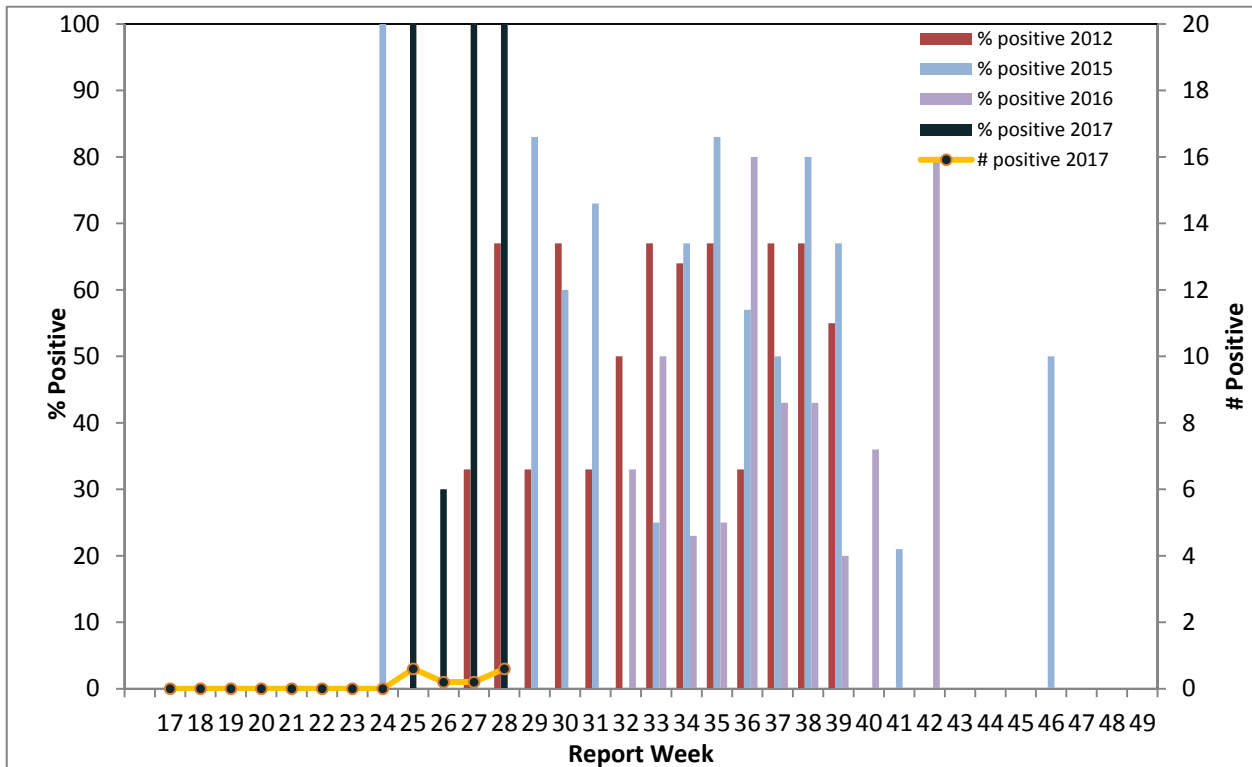


FIGURE 5: Percentage of dead birds tested positive for West Nile virus by report week in 2012, 2015, 2016, 2017 and number of dead birds tested positive, by report week, 2017, in Canada ¶



¶ Not all provinces are conducting dead bird surveillance as part of their own WNV surveillance program. However, WNV positive dead birds may be identified through the National Wildlife Disease Surveillance Program of the Canadian Wildlife Health Cooperative.