



West Nile virus and Other Mosquito-borne Diseases National Surveillance Report August 13 to August 19, 2017 (Week 33)

West Nile Virus

Canada

Humans

During week 33, August 13 to August 19, 2017, Ontario reported one additional clinical case of West Nile virus (WNV). Ontario also reported an additional five cases with episode dates dating back to week 28.

As of week 33, fifteen cases (ON=14, BC=1) have been reported to the Public Health Agency of Canada (PHAC). Of the fourteen cases in Ontario, there are twelve clinical cases (confirmed or probable) and two asymptomatic infections. Four cases in Ontario are travel-related. The one case in British Columbia was reported as an asymptomatic infection.

Mosquitoes

As of initial surveillance, 11,470 mosquito pools have been tested for WNV in Canada: Québec (735), Ontario (9,516), Manitoba (872), and Saskatchewan (347).

A total of 322 positive pools of WNV have been found in the following four provinces: 264 in Ontario [Brant County (2), Chatham-Kent (3), Durham Region (7), Eastern Ontario (3), Halton Region (24), Hamilton (19), Haliburton-Kawartha-Pine Ridge District (1), Hastings and Prince Edward Counties (9), Huron County (2), Kingston-Frontenac and Lennox and Addington (2), Lambton (1), Middlesex-London (4), Niagara Region (8), Northwestern (1), Ottawa (15), Oxford County (1), Peel (62), Perth District (5), Peterborough County-City (1), Renfrew County and District (2), Simcoe Muskoka District (1), Toronto (48), Waterloo (3), Wellington-Dufferin-Guelph (2), Windsor-Essex County (25), and York Regional (13)]; Thirty-seven in Manitoba [(Winnipeg (12), Southern (4), Interlake Eastern (7), and Prairie Mountain (14)]; Thirteen in Québec [Capitale-Nationale (1), Montérégie (7), Montréal (3), and Outaouais (2)]; and Eight in Saskatchewan.

Birds

As of week 33, the Canadian Wildlife Health Cooperative has tested eighty-four dead birds for WNV [Quebec (49), Ontario (26), Saskatchewan (5), Manitoba (2) and British Columbia (2)]. Of these, fifty-eight were positive: thirty-eight in Quebec [Chambly (1), Drummondville (1), Lachine (1), Lac-Supérieur (1), Laval (1), L'Avenir (1), Mascouche (2), Montréal (3), Mont Royal (1), Pointe-Claire (1), Repentigny (1), Rigaud (1), Rivière-Rouge (2), Rosemère (1), Saint-Ambroise (1), Saint-Colomban (1), Saint-Côme (2), Sainte-Madeleine (1), Sainte-Mélanie (1), Saint-Félix-de-Valois (1), Saint-Hippolyte (1), Saint-Hyacinthe (1), Saint-Jean-de-Martha (1), Saint-Jean-des-Piles (1), Saint-Jérôme (1), Saint-Lambert (2), Saint-Ours (1), Sherbrooke (1), Terrebonne (1), Trois-Rivières (1), Victoriaville (1), Unknown (1)]; two in Manitoba [Winnipeg (2)]; fifteen in Ontario [Campbellville (6), Dryden (1), Guelph (1), Kingston (1), Oro-Medonte (1), Pickering (1), Sarnia (1), Sudbury (1), Thunder Bay (2)]; and three in Saskatchewan [Saskatoon (3)].

Domestic Animals

As of week 33, two horses with WNV infection were reported to the Canadian Food Inspection Agency (CFIA): one in Alberta and the other in Saskatchewan. Also one pheasant with WNV infection located in Québec was reported to the CFIA.

United States and U.S. territories

As of August 22, 2017, 314 human cases of WNV have been reported by the Centers for Disease Control and Prevention (CDC). Of these, 190 (61%) were classified as neuroinvasive disease and 124 (39%) as non-neuroinvasive disease. In addition, seventy-one presumptive viremic blood donors have been identified.

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

Europe and Neighbouring Countries

As of August 24, 2017, the European Centre for Disease Prevention and Control (ECDC) reported a total of sixty (confirmed and probable) cases of West Nile fever [Austria (4), Greece (37), Hungary (2), Israel (4), Italy (3), Romania (6), and Serbia (4)].

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 in 2017.

California Serogroup virus

Since January 1, 2017, fifteen human cases of laboratory-confirmed cases/exposures of California serogroup virus were diagnosed by the National Microbiology Laboratory in Canada: Alberta (2), Saskatchewan (2), Manitoba (1), Ontario (1), Quebec (8), and Nova Scotia (1). Of these cases, eleven cases were further classified as Jamestown Canyon virus and one Snowshoe hare virus.

FIGURE 1: Geographic distribution of WNV human cases in Canada, as of August 19, 2017

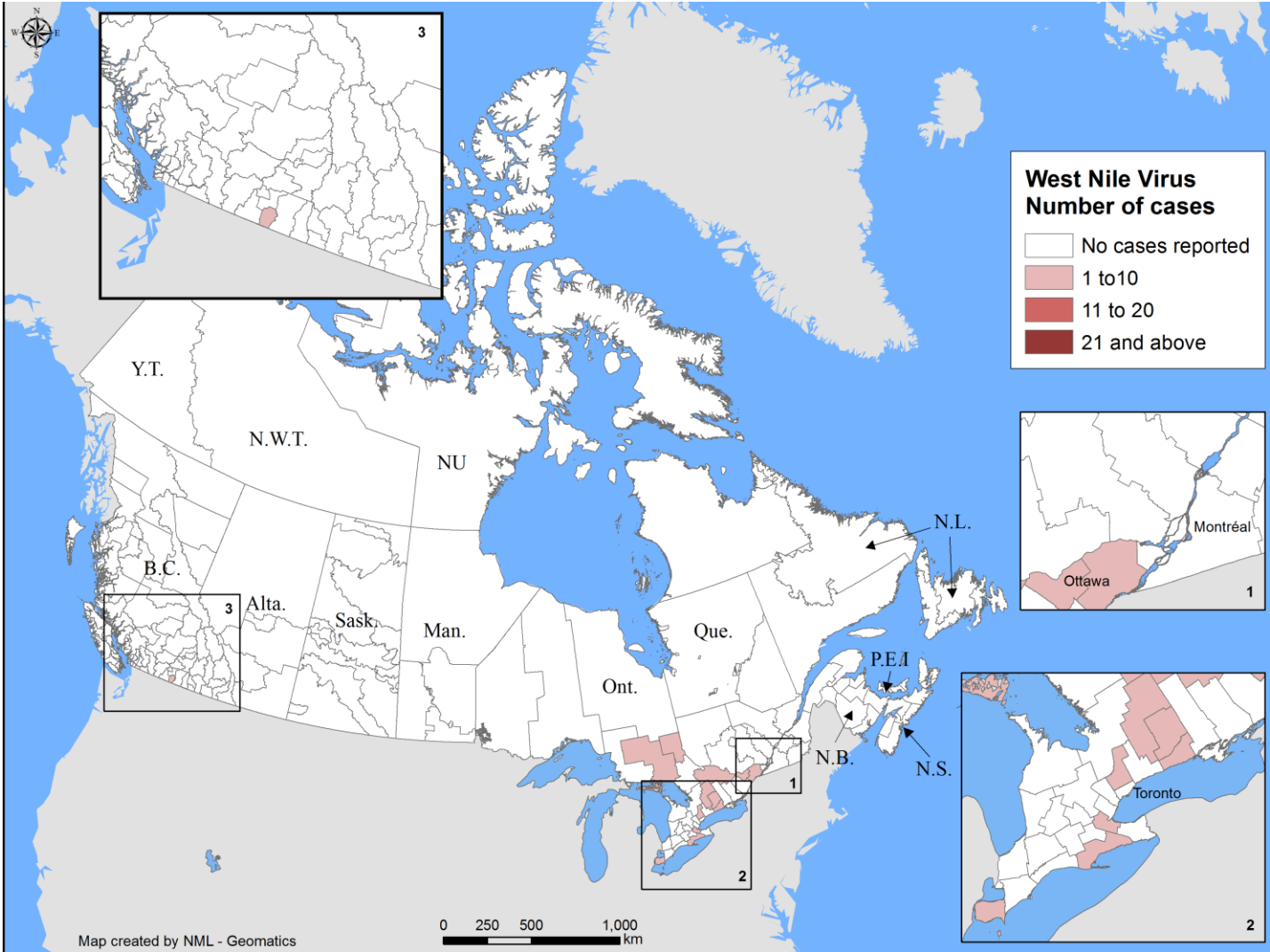
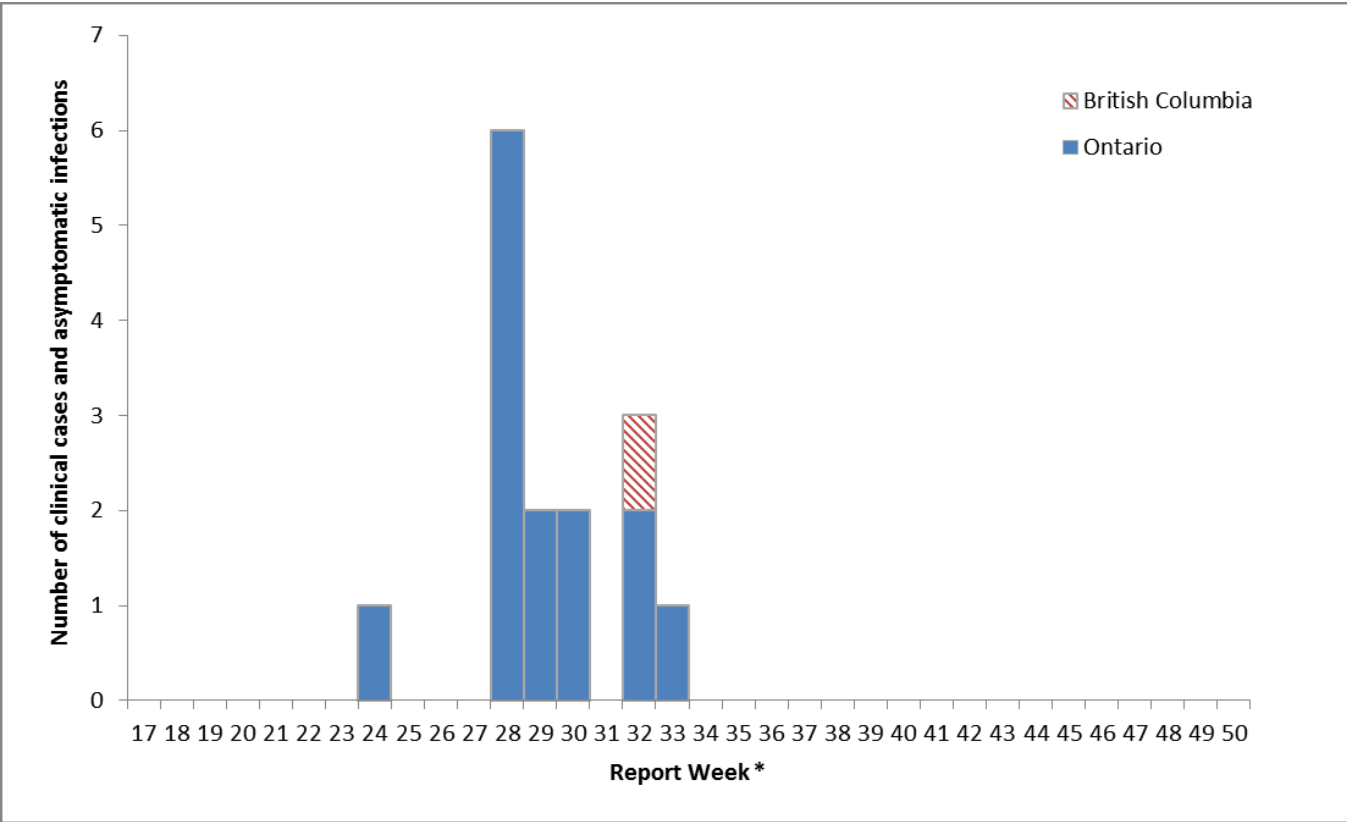
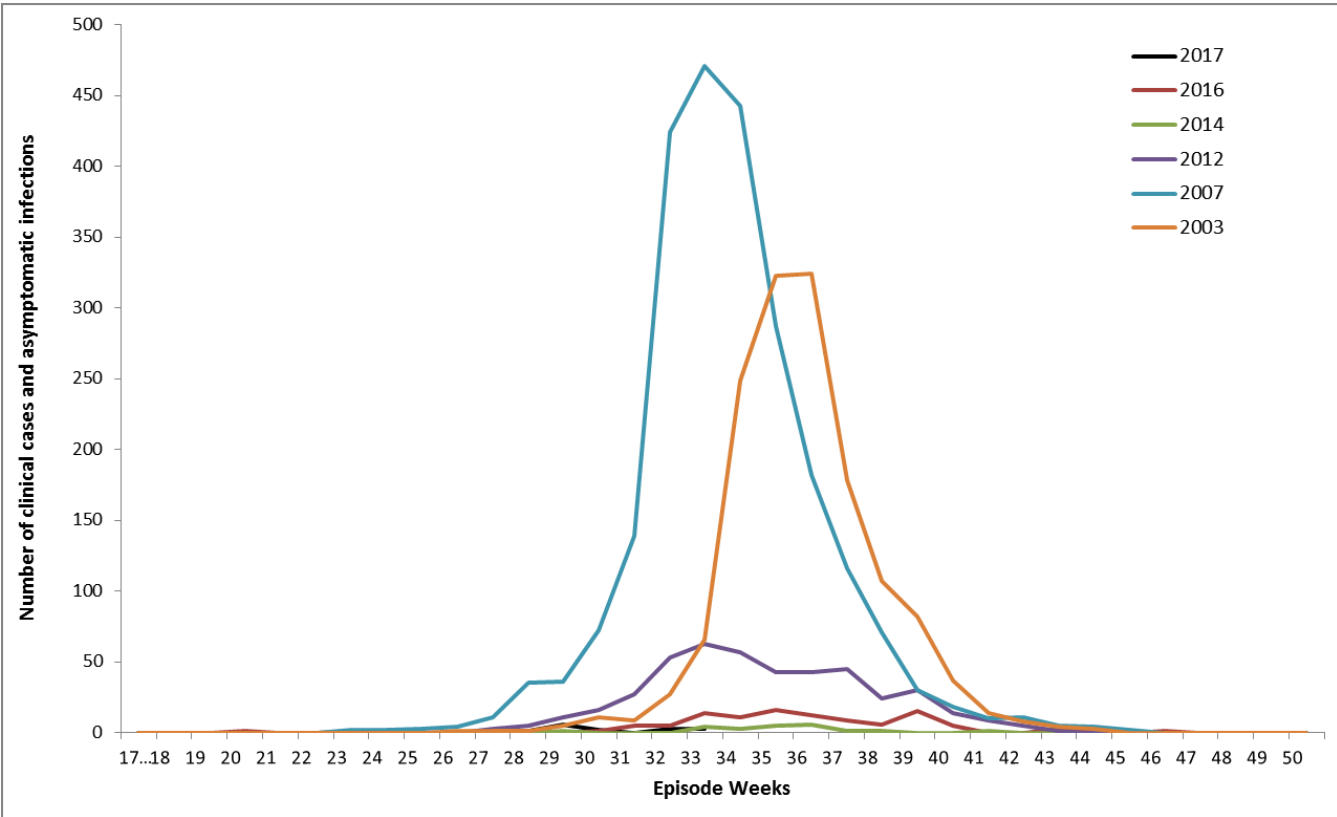


FIGURE 2: West Nile virus human clinical cases and asymptomatic infections by province/territory and by report week, as of August 19, 2017



*WNV 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.

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



*WNV 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

Province/Territory	Week 33: August 13 to August 19, 2017					
	Neurological syndrome	WNV clinical cases Non-neurological syndrome	Unclassified/ unspecified	Total clinical cases ¹	Number of travel-related WNV cases ²	Number of asymptomatic WNV 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
Québec	0	0	0	0	0	0
Ontario	0	0	1	1	0	0
Manitoba	0	0	0	0	0	0
Saskatchewan ⁴	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	1	1	0	0

Province/Territory	Year to date: January 1 to August 19, 2017					
	Neurological syndrome	WNV Clinical Cases Non-Neurological syndrome	Unclassified / Unspecified	Total clinical cases ¹	# of travel related WNV cases ²	# of asymptomatic WNV infections 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
Québec	0	0	0	0	0	0
Ontario	5	2	5	12	4	2
Manitoba	0	0	0	0	0	0
Saskatchewan ⁴	0	-	-	-	-	-
Alberta	0	0	0	0	0	0
British Columbia	0	0	0	0	0	1
Yukon Territory	0	0	0	0	0	0
Northwest Territory	0	0	0	0	0	0
Nunavut	0	0	0	0	0	0
Total	5	2	5	12	4	3

¹ Total clinical cases are the sum of confirmed and probable: WNV 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 WNV asymptomatic infections.

³ Satisfies WNV 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.

⁴ Saskatchewan provides counts of WNV neurological syndrome cases only.

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

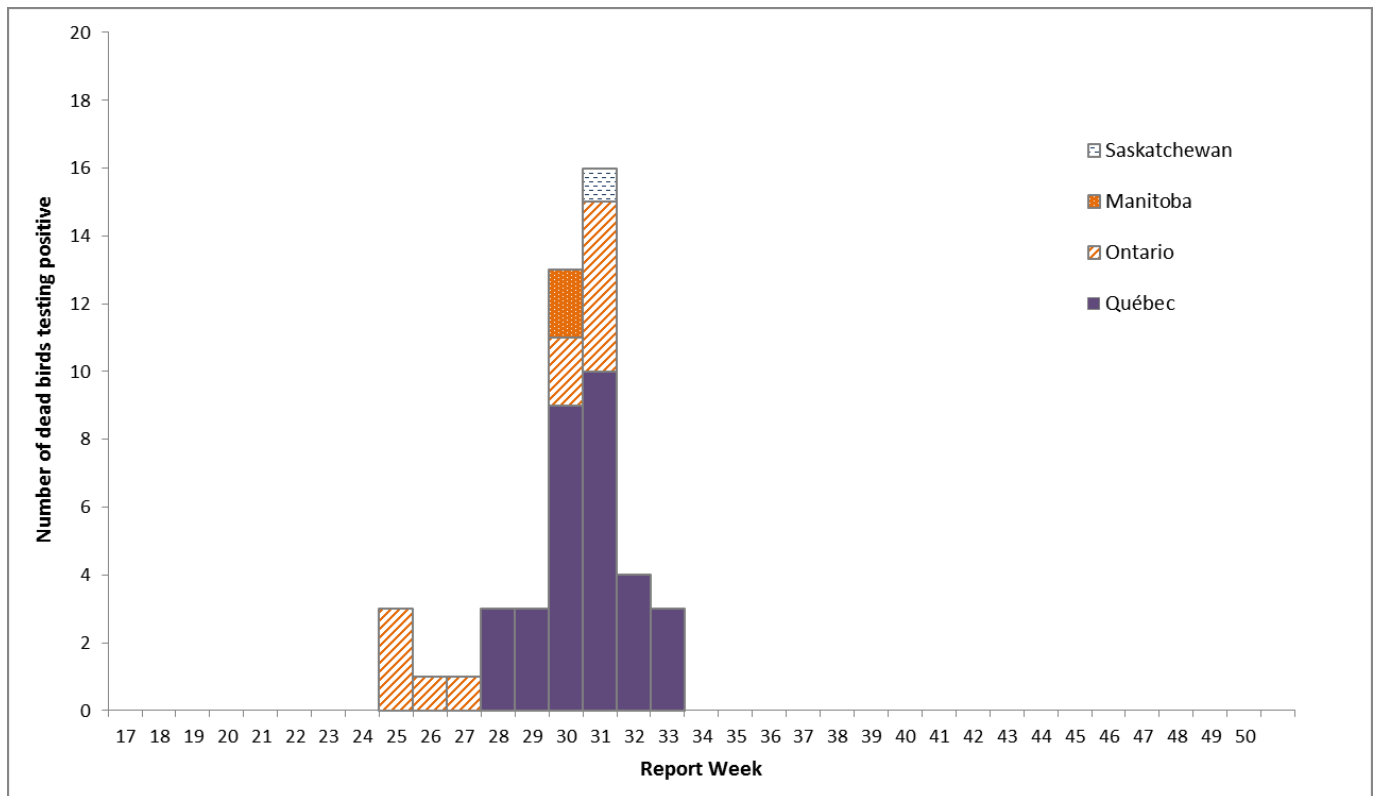
Province / Territory	Year to date: January 1 to August 18, 2017		
	Number of positive mosquito pools	Number of mosquito pools tested	Percentage of positive mosquito pools (%)
Québec	13	735	1.77
Ontario	264	9,516	2.77
Manitoba	37	872	4.24
Saskatchewan	8	347	2.31
Alberta	-	-	-
British Columbia	-	-	-
Newfoundland and Labrador	-	-	-
Prince Edward Island	-	-	-
Nova Scotia	-	-	-
New Brunswick	-	-	-
Yukon Territory	-	-	-
Northwest Territories	-	-	-
Nunavut	-	-	-
Total	322	11,470	2.81

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

Province / Territory	Report Week																						Total
	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
Québec	-	-	-	-	-	-	-	-	147	147	147	147	0	147	0								735
Ontario	13	15	43	84	194	299	718	794	964	1,003	1,037	1,053	1,168	1,015	1,116								7,356
Manitoba	-	-	-	-	15	45	48	16	60	93	96	113	178	122	86								748
Saskatchewan	-	-	-	-	6	20	11	18	25	31	38	46	61	52	39								292
Alberta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
British Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
Newfoundland and Labrador	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
Prince Edward Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
Nova Scotia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
New Brunswick	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
Yukon Territory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
Northwest Territories	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
Nunavut	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								0
Total	13	15	43	84	215	364	777	828	1,196	1,274	1,318	1,359	1,407	1,336	1,241	0	0	0	0	0	0	0	9,131

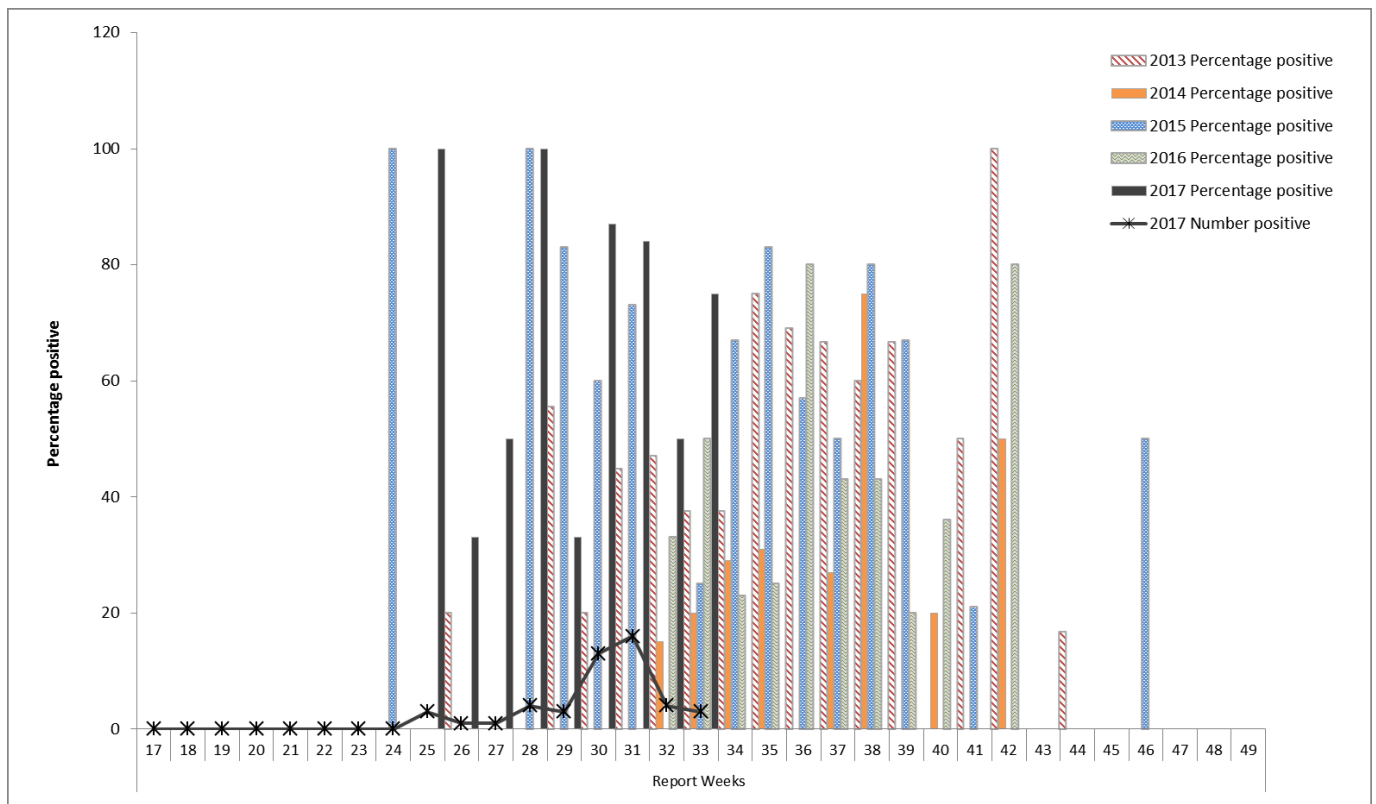
[†] Detailed West Nile virus mosquito surveillance data can be accessed through provincial/territorial websites

FIGURE 4: Reported number of dead birds tested positive for WNV by province/territory and by report week, 2017 season 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.

FIGURE 5: Percentage of dead birds tested positive for WNV 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.