Public Health Agency of Canada | Agence de la santé publique du Canada

Canada

West Nile virus and Other Mosquito-borne Diseases National Surveillance Report
August 6 to August 12, 2017 (Week 32)

West Nile Virus

Canada

Humans

During week 32, August 6 to August 12, 2017, the province of British Columbia reported one asymptomatic infection and Ontario reported one additional clinical case of West Nile virus (WNv).

As of week 32, eight clinical cases (confirmed or probable) in Ontario and one asymptomatic infection in British Columbia have been reported to the Public Health Agency of Canada (PHAC). All eight cases from ON are currently unclassified and two were travel-related.

Mosquitoes

As of initial surveillance, 10,082 mosquito pools have been tested for WNv in Canada: Québec (588), Ontario (8,400), Manitoba (788), and Saskatchewan (306).

A total of 224 positive pools of WNv have been found in the following four provinces: 172 in Ontario [Brant County (2), Chatham-Kent (3), Durham Region (4), Eastern Ontario (3), Halton Region (15), Hamilton (4), Haliburton-Kwartha-Pine Ridge District (1), Hastings and Prince Edward Countries (7), Kingston-Frontenac and Lennox and Addington (2), Lambton (1), Middlesex-London (3), Niagara Region (7), Ottawa (11), Oxford County (1), Peel (40), Perth District (2), Peterborough County-City (1), Renfrew County and District (2), Simcoe Muskoka District (1), Toronto (31), Waterloo (2), Wellington-Dufferin-Guelph (2), Windsor-Essex County (21), and York Regional (6)]; Thirty-five in Manitoba [(Winnipeg (12), Southern (4), Interlake Eastern (5), and Prairie Mountain (12)]; Nine in Québec [Montérégie (6), Laval (1), and Mauricie-centre-du-Québec(2)]; and Eight in Saskatchewan.

Birds

As of week 32, the Canadian Wildlife Health Cooperative has tested seventy-two dead birds for WNv [Quebec (42), Ontario (23), Saskatchewan (3), Manitoba (2) and British Columbia (2)]. Of these, forty-eight were positive: thirty-two in Quebec [Chambly (1), Drummondville (1), Lachine (1), Lac-Supérieur (1), Laval (1), Mascouche (2), Montréal (1), Mont Royal (1), Pointe-Claire (1), Repentigny (1), Rivière-Rouge (2), Rosemère (1), Saint-Ambroise (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), Unknown (1)]; two in Manitoba [Winnipeg (2)]; thirteen in Ontario [Campbellsville (6), Dryden (1), Guelph (1), Pickerel (1), Sarnia (1), Sudbury (1), Thunder Bay (2)]; and one in Saskatchewan [Saskatoon (1)].

Domestic Animals

As of week 32, two horses with WNV infection were reported to the Canadian Food Inspection Agency (CFIA): one in Hanna 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 15, 2017, 209 human cases of WNv have been reported by the Centers for Disease Control and Prevention (CDC). Of these, 126 (60%) were classified as neuroinvasive disease and eighty-three (40%) as non-neuroinvasive disease. In addition, fifty-two 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 10, 2017, the European Centre for Disease Prevention and Control (ECDC) reported a total of twenty-eight (confirmed and probable) cases of West Nile fever [Greece (20), Israel (4), Italy (1), Romania (1), and Serbia (2)].
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, nine 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 cases were further classified as Jamestown Canyon virus.

FIGURE 1: Geographic distribution of West Nile virus human cases in Canada, as of August 12, 2017

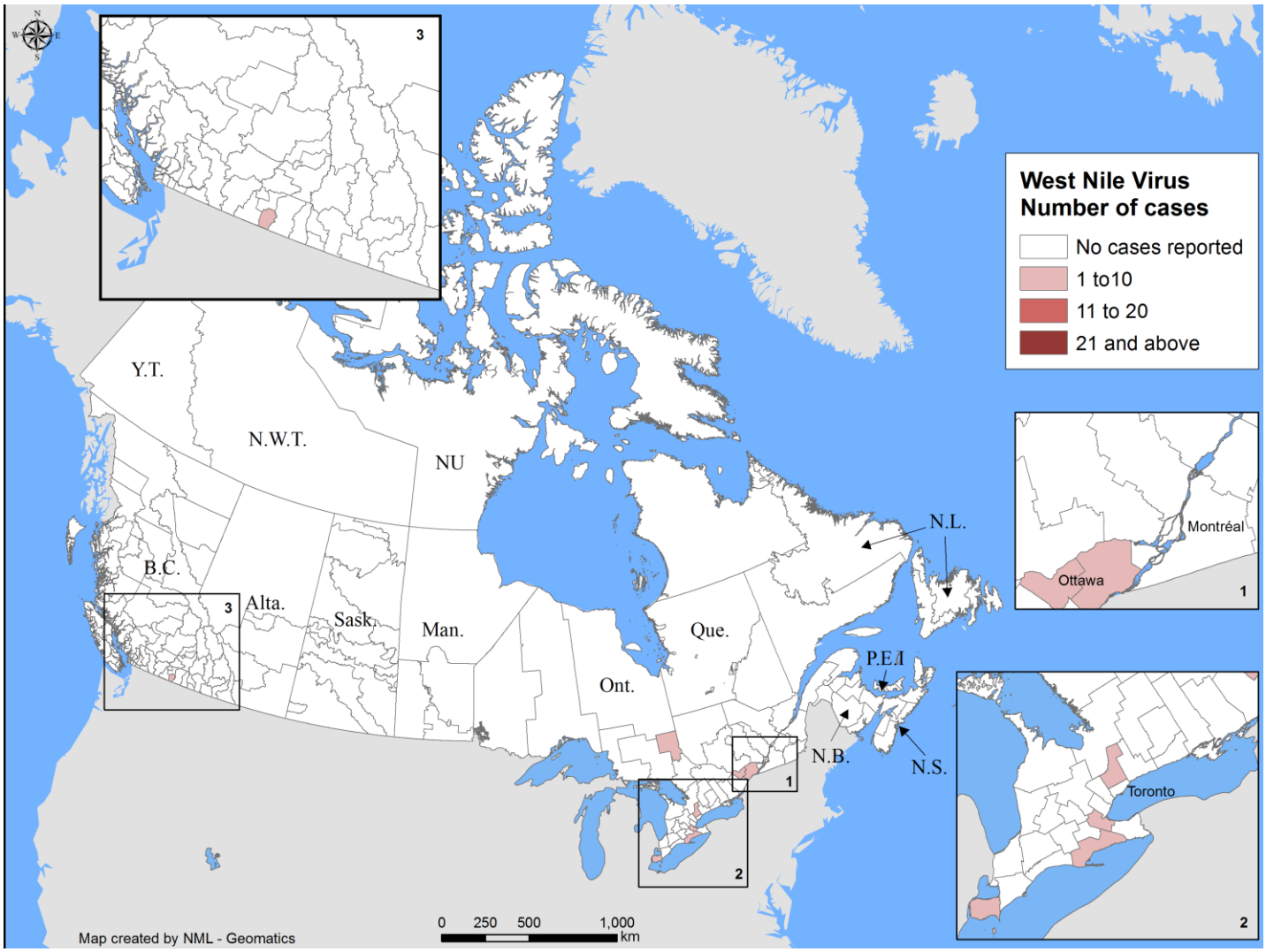
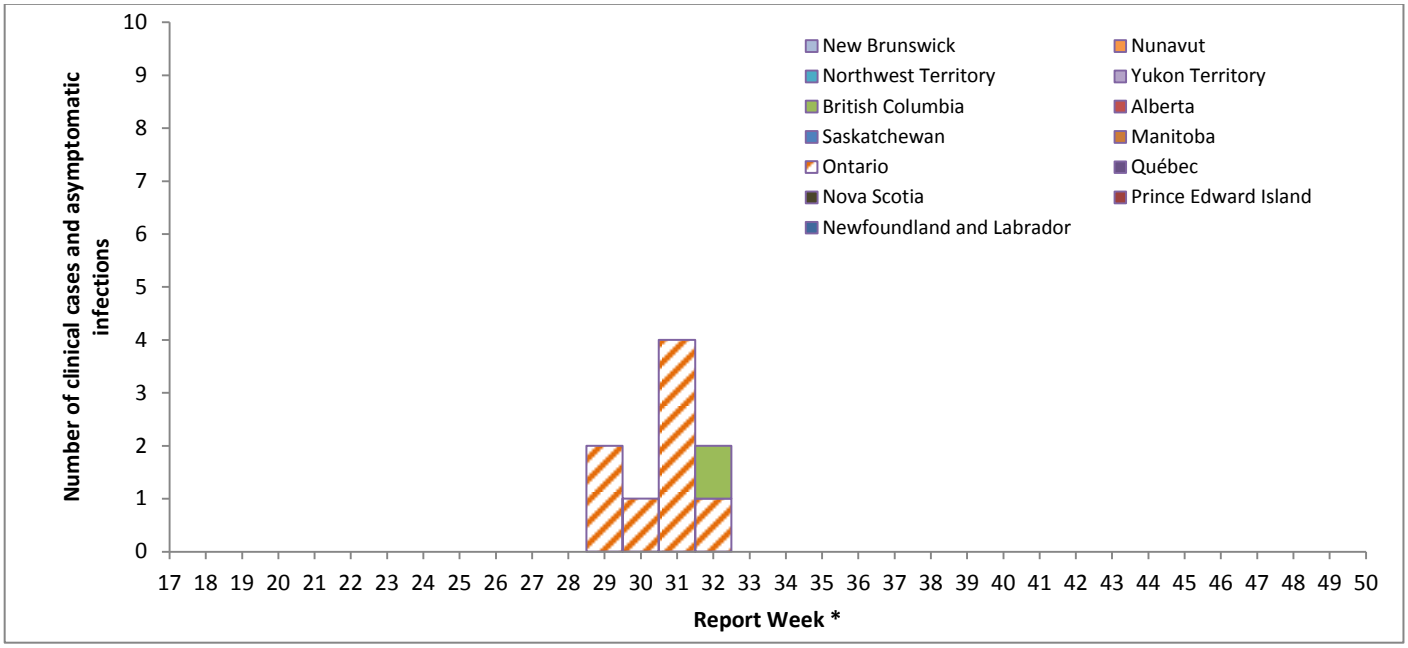
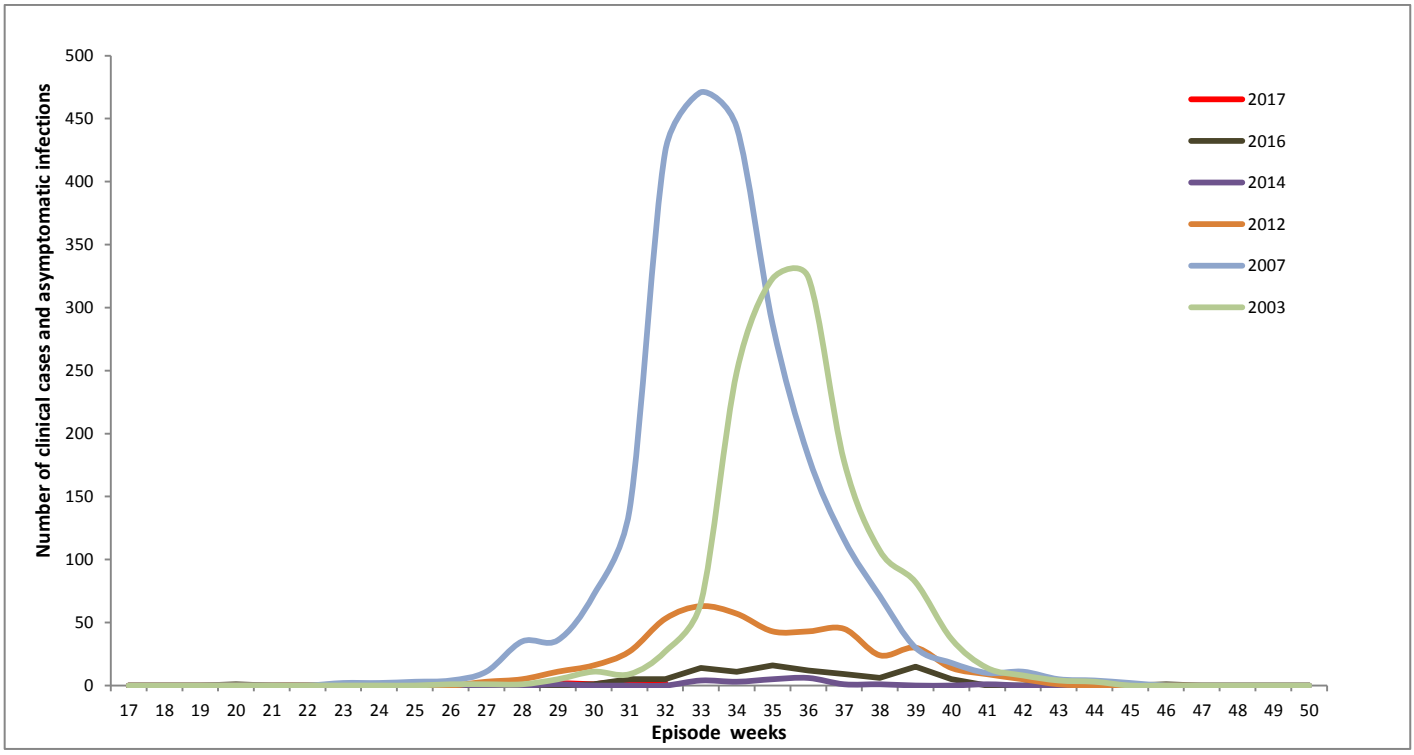


FIGURE 2: West Nile virus human clinical cases and asymptomatic infections by province/territory and by report week, as of August 12, 2017



*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.

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

Province/Territory	Week 32: August 6 to August 12, 2017					
	WNv clinical cases			Total clinical cases[1]	Number of travel-related WNv cases[2]	Number of asymptomatic WNv infection[3]
	Neurological syndrome	Non-neurological syndrome	Unclassified/ unspecified			
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	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	**0**	**0**	**1**	**1**	**0**	**1**

Province/Territory	Year to date: January 1 to August 12, 2017					
	WNv Clinical Cases			Total clinical cases[1]	# of travel related WNv cases[2]	# of asymptomatic WNv infections[3]
	Neurological syndrome	Non-Neurological syndrome	Unclassified / Unspecified			
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	8	**8**	2	0
Manitoba	0	0	0	**0**	0	0
Saskatchewan	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	**0**	**0**	**8**	**8**	**2**	**1**

[1] Total clinical cases are the sum of confirmed and probable: 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

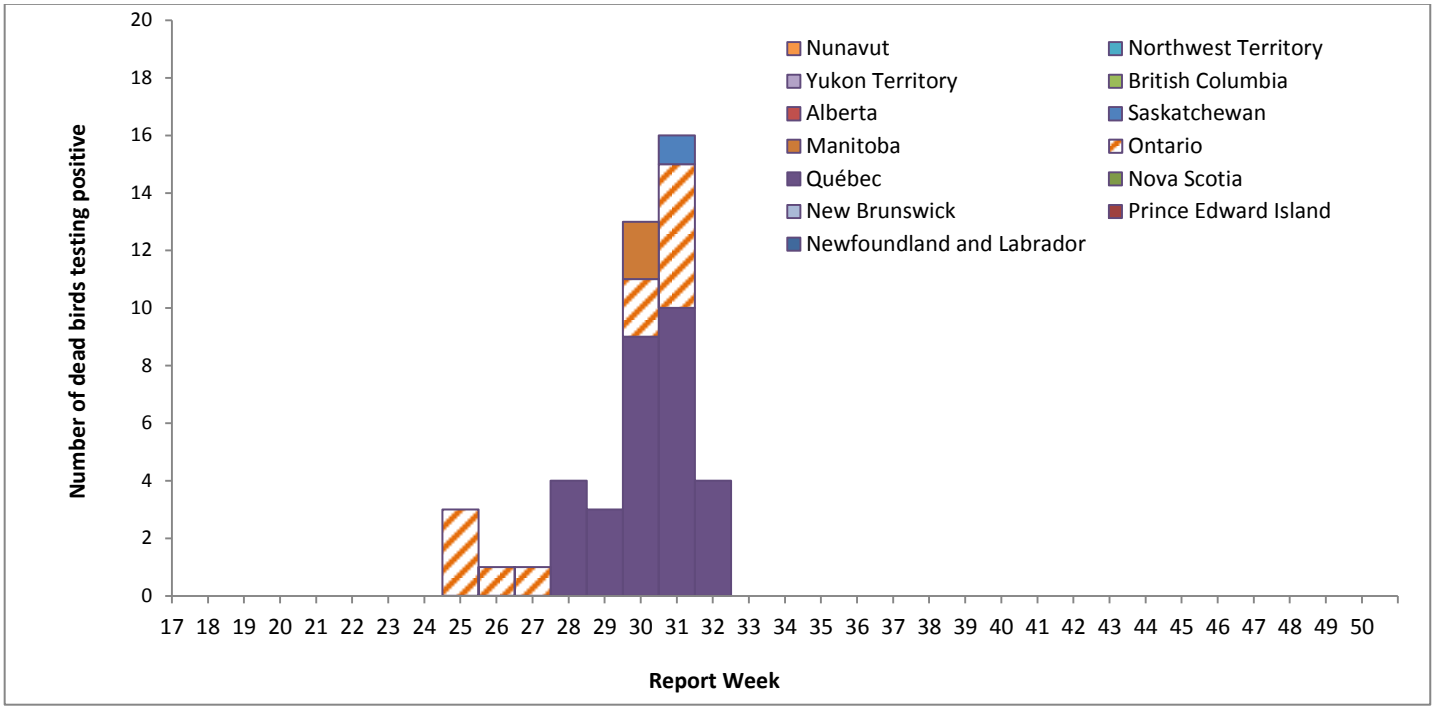
Province/Territory	Year to date: January 1 to August 12, 2017		
	Number of positive mosquito pools	Number of mosquito pools tested	Percentage of positive mosquito pools (%)
Québec	9	588	1.53
Ontario	172	8,400	2.05
Manitoba	35	788	4.44
Saskatchewan	8	306	2.61
Alberta	-	-	-
British Columbia	-	-	-
Newfoundland and Labrador	-	-	-
Prince Edward Island	-	-	-
Nova Scotia	-	-	-
New Brunswick	-	-	-
Yukon Territory	-	-	-
Northwest Territory	-	-	-
Nunavut	-	-	-
Total	**224**	**10,082**	**2.22**

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

Province/Territory	Report week of 2017																								Total
	17	18	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	-	-	-	-	-	-	-	-	-	-	147	147	147	147	-	-									588
Ontario	-	-	13	15	43	84	194	299	718	794	964	1003	1037	1053	1168	1015									8400
Manitoba	-	-	-	-	-	-	15	45	48	16	60	93	96	113	178	124									788
Saskatchewan	-	-	-	-	-	-	6	20	11	18	25	31	38	46	61	50									306
Alberta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									-
British Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									-
Yukon Territory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									-
Northwest Territory	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									-
Nunavut	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									-
Total	-	-	**13**	**15**	**43**	**84**	**215**	**364**	**777**	**828**	**1196**	**1274**	**1318**	**1359**	**1407**	**1189**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**10082**

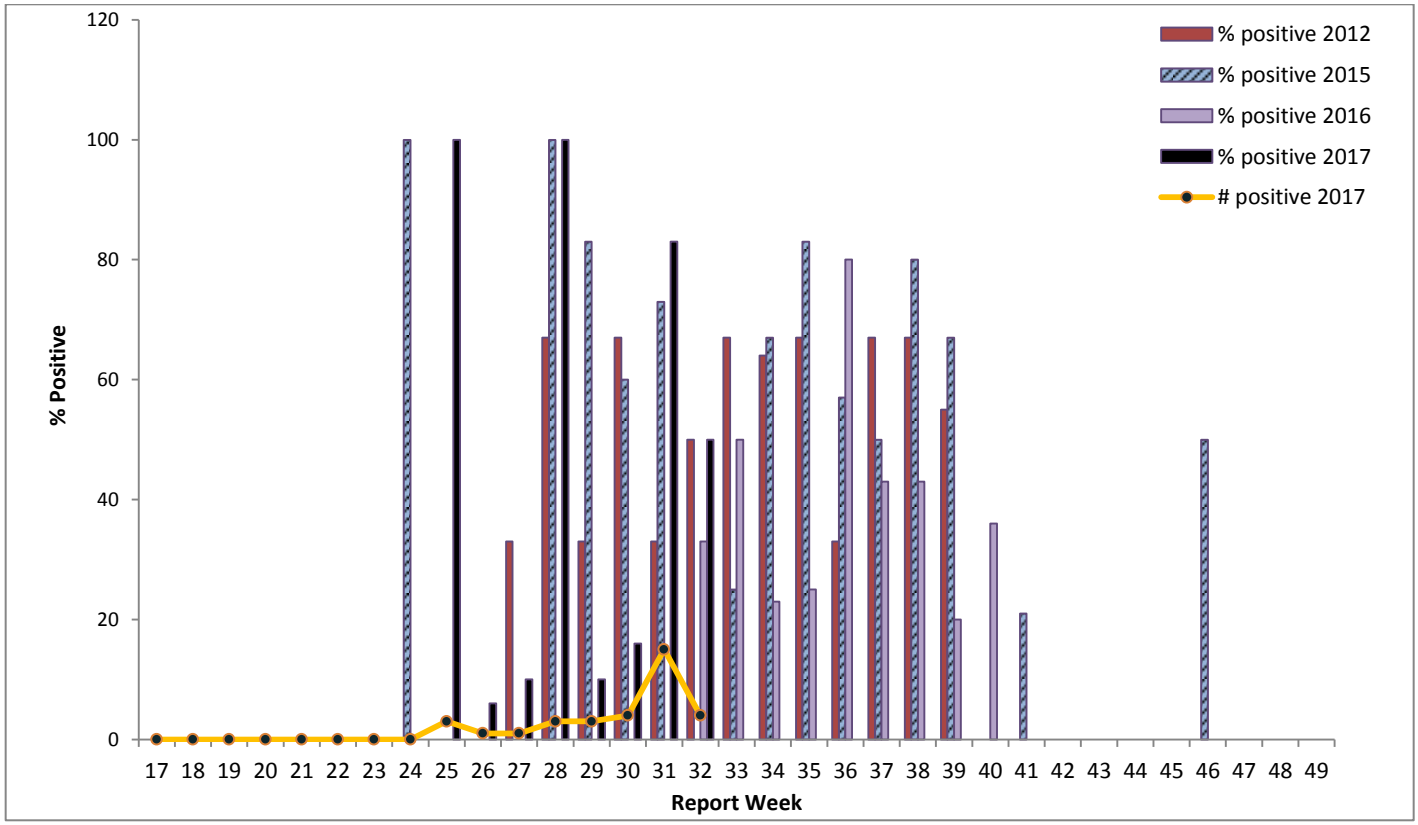
[‡] Detailed West Nile virus mosquito surveillance data can be accessed through provincial/territorial websites

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



[¶] 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 West Nile virus by report week in 2012, 2015, 2016, 2017 and number of dead birds tested positive, by report week, 2017, in Canada[¶]



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