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

Canada

West Nile Virus and Other Mosquito-borne Diseases National Surveillance Report

English Edition

August 21 to August 27, 2016 (Week 34)

Canada

Humans:

During surveillance week 34, ending on August 27, 2016, six (6) human clinical cases of West Nile virus (WNV) have been reported to the Public Health Agency of Canada (PHAC). Of these, four cases have been reported in Manitoba and two cases in Ontario.

As of surveillance week 34, a total of 16 human clinical cases have been reported to PHAC: Manitoba (11) [Interlake-Eastern (2), Prairie Mountain (2), Southern (3) and Winnipeg (4)], Ontario (3) [Toronto (2), Niagara (1)], Quebec (1) [Capitale-Nationale], and Saskatchewan (1) [Mixed-Grass Prairie*]. Of these, five cases (31%) were classified as West Nile virus Neurological Syndrome, three cases (19%) as West Nile virus Non-Neurological Syndrome, and eight cases (50%) were unclassified. In addition, one case of West Nile virus asymptomatic infection has been reported in Toronto (Ontario).

Mosquitoes:

As of surveillance week 34, 230 (2.12 %) out of 10,865 mosquito pools have tested positive for WNV in Canada: Manitoba (38), Ontario (136), Quebec (16), and Saskatchewan (40).

Birds:

As of August 27, 2016, the Canadian Wildlife Health Cooperative, the Québec Ministry of Agriculture, Fisheries and Food, and the Québec Centre for Wildlife Health have examined a total of 44 dead birds for WNV: Ontario (39), Quebec (3), and Saskatchewan (2), of which 6 (14%) dead birds have tested positive for WNV: Ontario (5) [Toronto (1), Sarnia (1), Thorold (1), Bradford (1), Hamilton (1)]and Quebec (1). The positive birds were identified as Red- tailed Hawks (33%), American Crows (50%) and Merlins (17%).

Domestic Animals:

As of Aug 27, 2016, the Canadian Food Inspection Agency has reported a total of 6 horses that have tested positive for WNV: British Columbia (1), Manitoba (3), Saskatchewan (2).

United States and U.S. territories

As of August 27, 2016, the Centers for Disease Control and Prevention have reported a total of 406 human clinical cases of West Nile virus disease in 34 states in the US, including the following border states: Washington (3), Idaho (2), Montana (0), North Dakota (11), Minnesota (14), Michigan (3), and Vermont (2). Of these, 190 (47%) were classified as neuroinvasive disease and 216 (53%) were classified as non- neuroinvasive disease. Nine fatal cases have been reported. In addition, 78 presumptive viremic blood donors have been identified.
Detailed information can be accessed via the CDC web site: http://www.cdc.gov/westnile/statsmaps/preliminarymapsdata/histatedate.html

Europe and Neighbouring Countries

As of August 27, 2016, 54 human cases of WNV have been reported in the European Union and 63 cases have been reported in the neighbouring countries.
Detailed information can be accessed via the ECDC web site:
http://ecdc.europa.eu/en/healthtopics/west_nile_fever/West-Nile-fever-maps/pages/index.aspx

*Mixed-Grass Prairie (Sun Country, Regina Qu'Appelle, Five Hills, Cypress, Heartland Health Regions)

FIGURE 1: Geographic distribution of Human Clinical cases of WNV in Canada, as of August 27, 2016

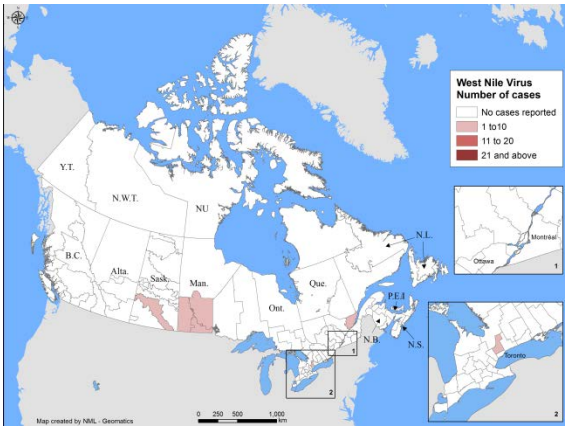


FIGURE 2: WNV Human Clinical cases and Asymptomatic Infections, by Province/ Territory and by Report week, as of August 27, 2016

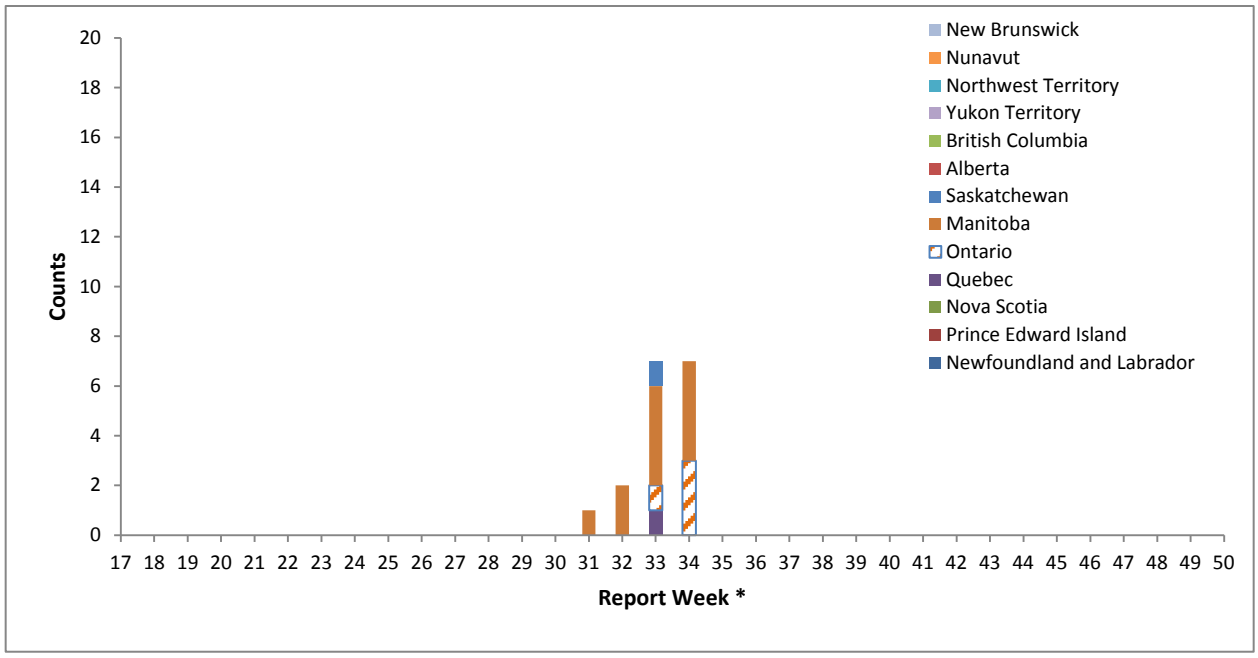
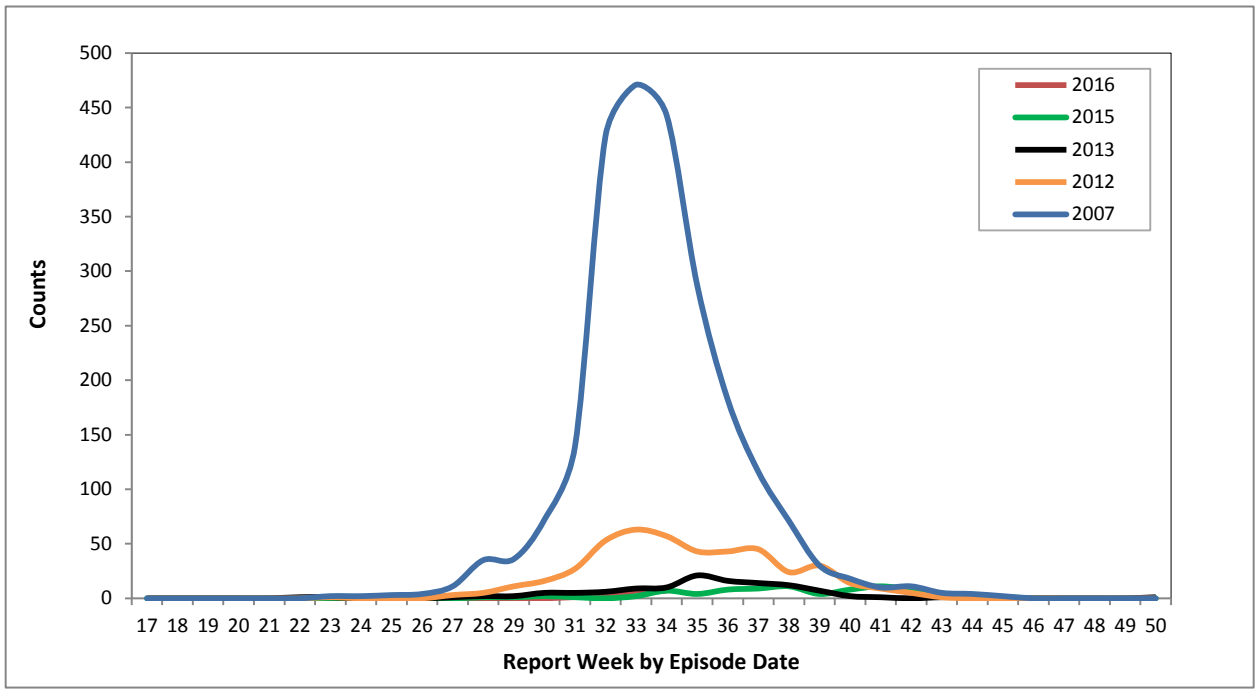


FIGURE 3: WNV Human Clinical cases and Asymptomatic Infections by Report week for selected years, in Canada



*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, 2016 season

	Week 34: August 21 to August 27, 2016					
	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	1	1	2	0	1
Manitoba	0	1	3	4	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	2	4	6	0	1

	Year to date: January 1 to August 27 , 2016					
	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	1	0	0	1	0	0
Ontario	1	1	1	3	0	1
Manitoba	3	2	6	11	0	0
Saskatchewan	0	0	1	1	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	5	3	8	16	0	1

[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 and number of positive mosquito pools by Province/Territory, 2016 season

Province	Year to date: January 1 to August 27, 2016[≈]		
	Number of positive mosquito pools	Number of mosquito pools tested	Percentage of positive mosquito pools (%)
Quebec	16	539	2.97
Ontario	136	8492	1.60
Manitoba	38	1313	2.89
Saskatchewan	40	521	7.68
Total	230	10865	2.12

[≈]In 2016, mosquito surveillance is conducted by the following provinces only: Quebec, Ontario, Manitoba and Saskatchewan

TABLE 3: Number of WNV positive mosquito pools/ Total number of WNV mosquito pools tested by Report week and by Province/ Territory, 2016 season ǂ

vince / itory	Report week of 2016																				
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
foundland Labrador	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
ce Edward nd	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
nswick	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
a Scotia	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
bec	0	0	0	0	0	0	0	0	0	0	2/59	0/67	0/65	2/78	4/69	2/79	0/60	6/62			
ario	0	0/6	0/5	0/12	0/49	0/90	0/190	0/460	0/542	0/562	0/802	1/795	2/688	5/649	20/927	30/947	36/882	42/886			
itoba	0	0	0	0	0/4	0/8	0/3	0/17	0/56	0/58	0/69	0/100	4/113	7/192	5/241	6/246	15/143	1/63			
atchewan	0	0	0	0	0	0	0/1	0/9	0/8	0/14	1/26	0/37	0/31	3/62	10/67	16/106	10/117	0/40			
rta	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
sh umbia	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
on itory	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
thwest itory	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
avut	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–			
l	0	0/6	0/5	0/12	0/53	0/98	0/194	0/486	0/606	0/634	3/956	1/999	6/897	17/983	39/1305	54/1378	61/1202	49/1051			

[ǂ] Detailed West Nile virus mosquito surveillance data can be accessed through Provincial/ Territorial websites.

_These jurisdictions do not maintain regular mosquito surveillance.

FIGURE 4: Reported number of dead birds tested positive for WNV by Province/ Territory and by Report week, 2016 season in Canada

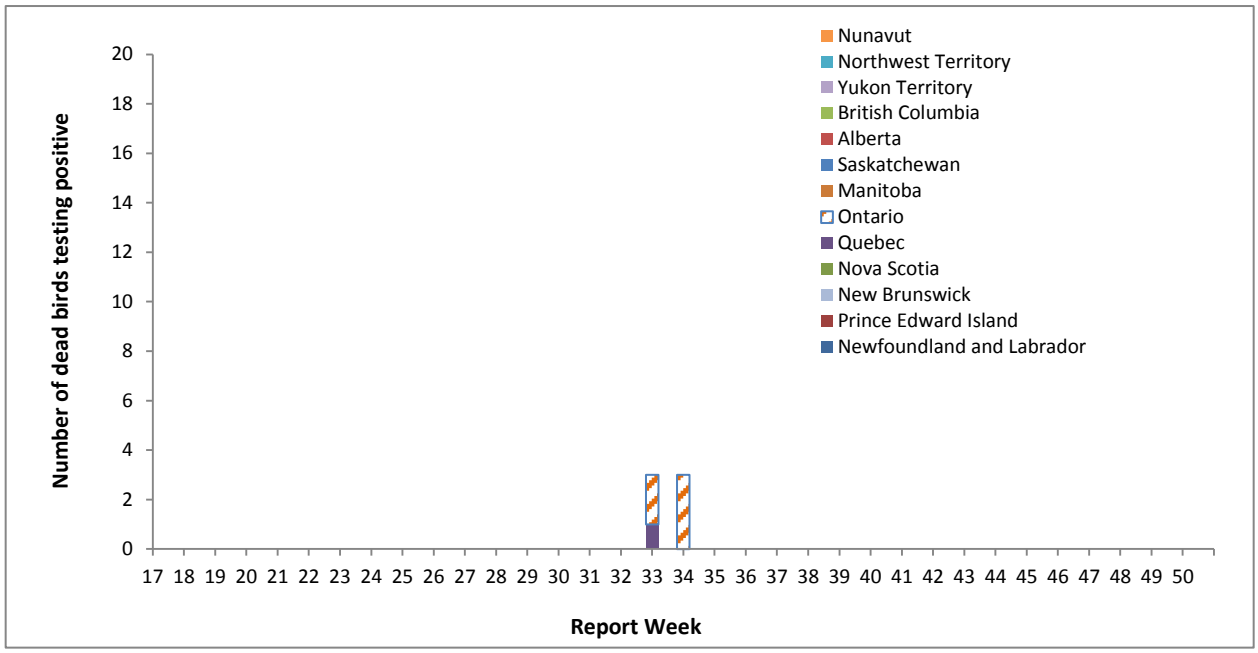
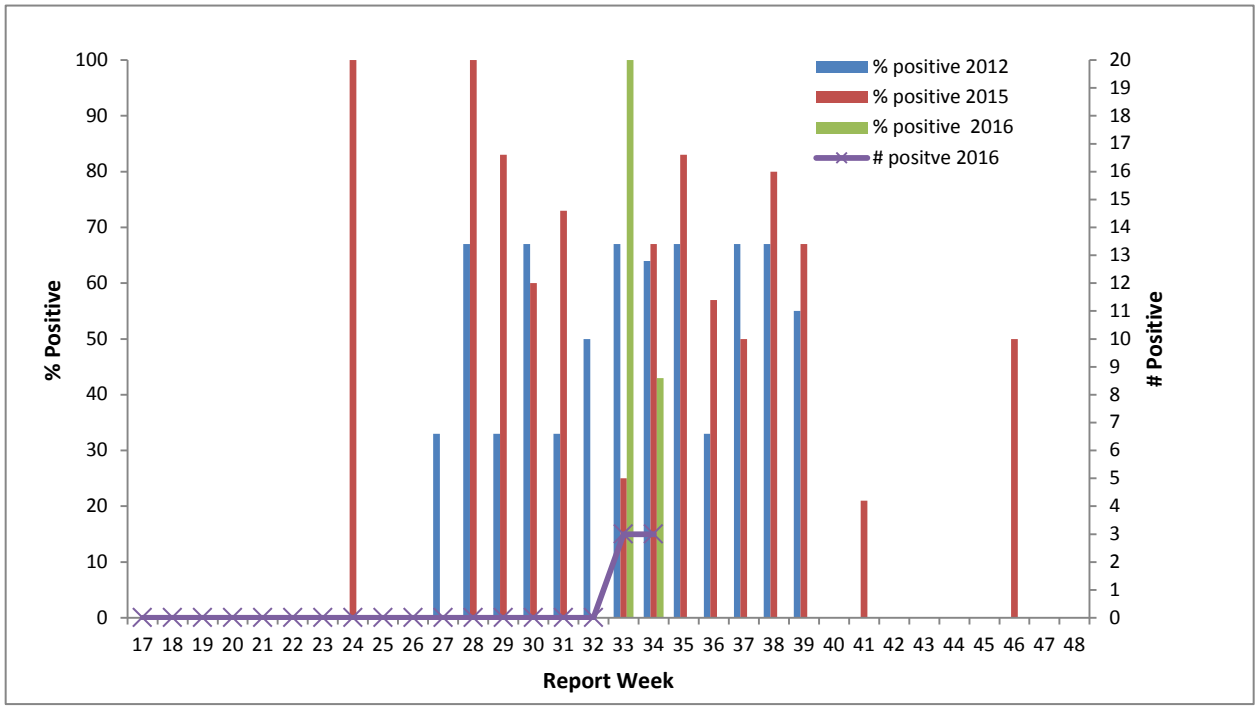


FIGURE 5: Percentage of dead birds tested positive for WNV by Report week in 2012, 2015 and 2016, and number of dead birds tested positive for WNV, by Report week, 2016, in Canada ¶



¶ 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 (CWHC)