

# WEST NILE VIRUS AND OTHER MOSQUITO-BORNE DISEASE NATIONAL SURVEILLANCE REPORT

AUGUST 24 TO AUGUST 30, 2014 – REPORT WEEK 35

## CANADA

### HUMANS:

During surveillance week 35 (August 24 to August 30, 2014), one asymptomatic infection of West Nile virus was reported in Ontario (Windsor-Essex County).

As of surveillance week 35, a reported three human clinical cases have tested positive for West Nile virus in Canada: two in Manitoba [Prairie Mountain (1)\* and Winnipeg (1)] and one in Ontario [Simcoe-Muskoka District (1)]; these cases were clinically unclassified. One asymptomatic infection was reported in Ontario (Windsor-Essex County).

\* This case was likely exposed prior to the 2014 West Nile virus season.

### MOSQUITOES:

As of surveillance week 35, a reported 111 mosquito pools have tested positive for West Nile virus in Canada: 22 in Manitoba [Interlake-Eastern Health Region (7), Southern Health Region (11) and Winnipeg Health Region (4)]; 30 in Ontario [Haliburton-Kawartha-Pine Ridge District (1), Halton Regional (2), City of Hamilton (3), Lambton (1), Middlesex-London (4), Niagara Regional (1), City of Ottawa (1), Peel Regional (10), City of Toronto (5) and York Regional (2)]; 39 in Quebec [Laval (7), Montérégie (11) and Montreal (21)] and 20 in Saskatchewan.

### DEAD BIRDS:

During surveillance week 35, the [Canadian Wildlife Health Cooperative](#) tested 11 dead birds for West Nile virus in Canada: Ontario (2), Quebec (3) and

Saskatchewan (6). Two (18.2%) dead birds tested positive for West Nile virus in Ontario.

As of surveillance week 35, the [Canadian Wildlife Health Cooperative](#) has tested 87 dead birds for West Nile virus in Canada: Ontario (20), Quebec (10) and Saskatchewan (57). Of these, seven (8.0%) dead birds have tested positive for West Nile virus in Canada: Ontario (4), Quebec (1) and Saskatchewan (2).

### DOMESTIC ANIMALS:

As of surveillance week 35, the [Canadian Food Inspection Agency](#) reported five horses tested positive for West Nile virus in Canada: Alberta (3) and Saskatchewan (2).

## UNITED STATES

As of August 26, 2014, the [Centers for Disease Control and Prevention \(CDC\)](#) reported 297 West Nile virus human disease cases: Arizona (16), Arkansas (2), California (93), Colorado (19), District of Columbia (1), Georgia (3), Idaho (4), Illinois (1), Indiana (2), Iowa (5), Kansas (1), Louisiana (43), Massachusetts (1), Minnesota (3), Mississippi (14), Missouri (1), Montana (1), Nebraska (13), New Jersey (2), New York (2), North Dakota (3), Ohio (2), Oklahoma (2), Pennsylvania (2), South Dakota (22), Tennessee (2), Texas (30), Washington (3), Wisconsin (2) and Wyoming (2). Of these, 157 (52.9%) were diagnosed as neuroinvasive disease cases and 140 (47.1%) as non-neuroinvasive cases. Twelve fatal cases were reported. Eighty-seven presumptive viremic blood donors have been identified.

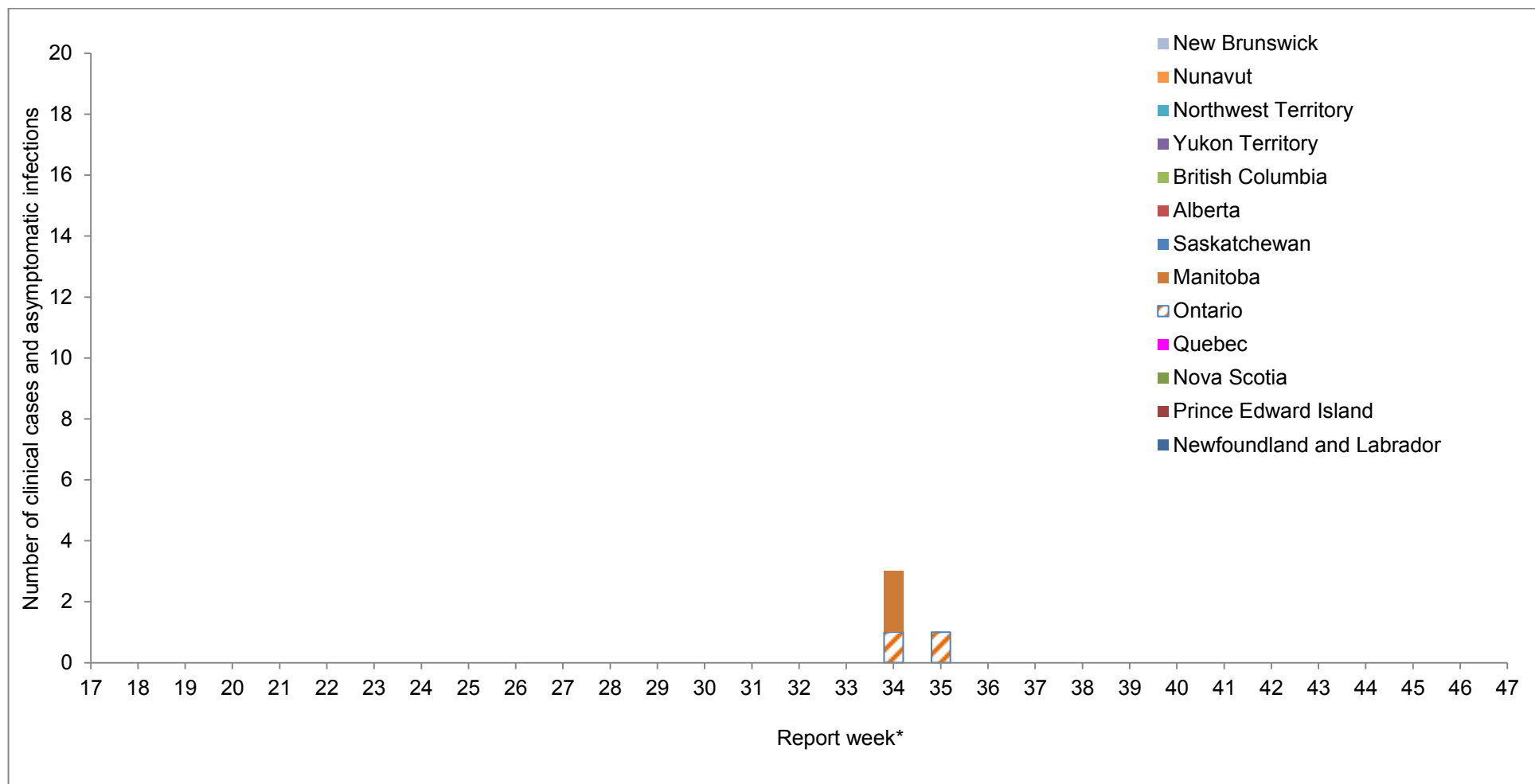
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## EUROPEAN UNION, EUROPEAN ECONOMIC AREA AND NEIGHBOURING COUNTRIES

As of August 28, 2014, the [European Centre for Disease Prevention and Control \(ECDC\)](#) reported that Greece reported three new probable cases; Italy reported its first case for the season and Romania reported its first two cases for the season. In the neighboring countries, Serbia reported nine new cases.

Since the start of the 2014 West Nile virus season, 10 human cases have been reported in Europe: Austria (1), Greece (6), Italy (1) and Romania (2). Thirty-six human cases have been reported in neighbouring countries: Bosnia and Herzegovina (13), Russian Federation (7), Serbia (14) and Israel (2).

**FIGURE 1:** West Nile Virus clinical cases and asymptomatic infections, by Province/Territory and by report week, 2014 season

\* 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 clinical cases and asymptomatic infections, by Province/Territory and by report week, 2014 season

	Report week of 2014																																	
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47			
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Quebec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Ontario	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1															
Manitoba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2*	0															
Saskatchewan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Alberta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
British Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Yukon Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Northwest Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Nunavut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0															
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	1															

\* One of these cases was likely exposed prior to the 2014 West Nile virus season.

**TABLE 2:** West Nile Virus human clinical cases and asymptomatic infections by Province/Territory for the current report week and year to date, 2014 season

	Week 35: August 24 to August 30, 2014					
	West Nile virus neurological syndrome	West Nile virus non-neurological syndrome	Unclassified/unspecified	Total clinical cases <sup>1</sup>	Number of travel-related cases <sup>2</sup>	West Nile virus asymptomatic infections <sup>3</sup>
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	1
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	1

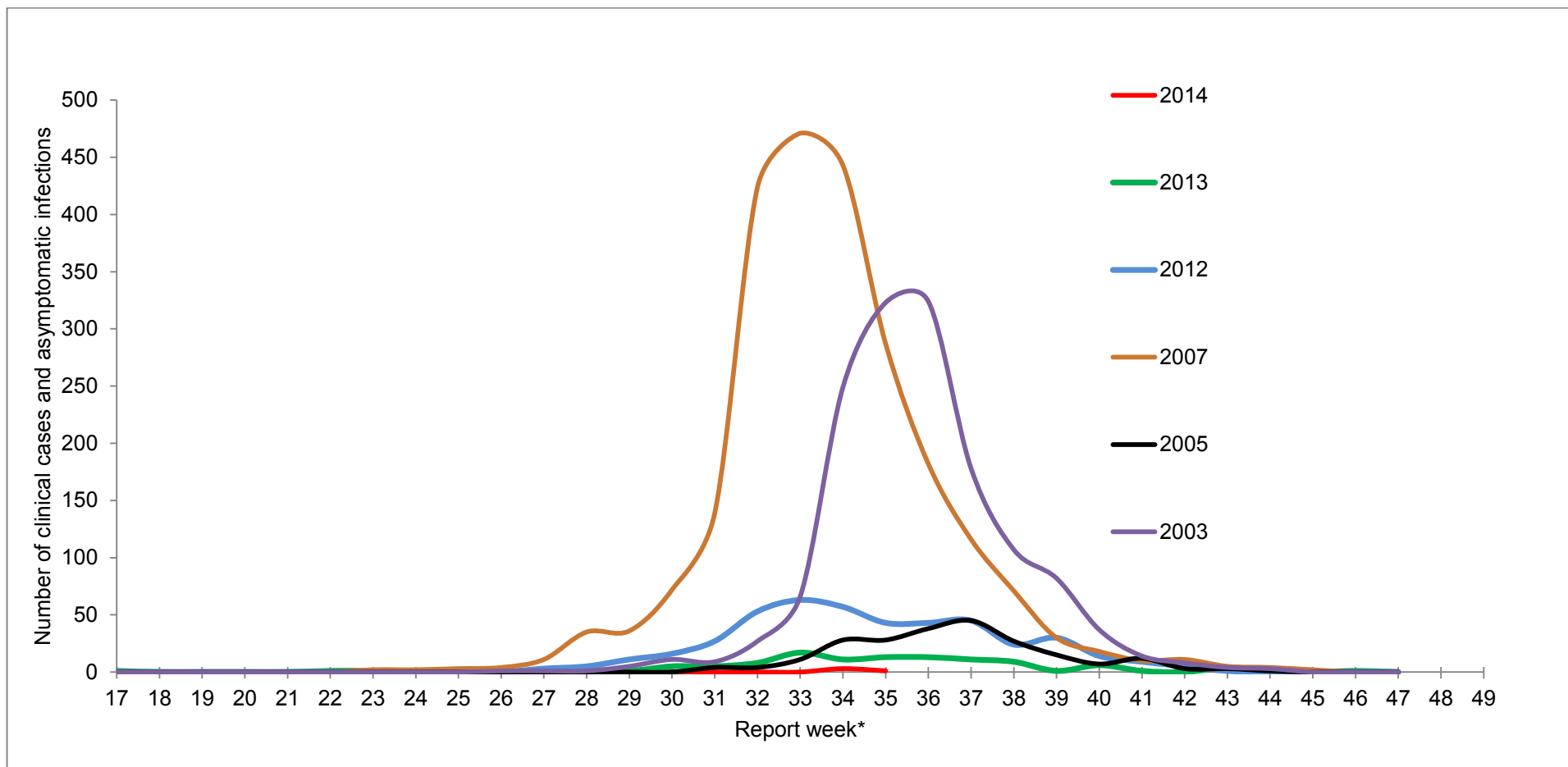
	Year to date: January 1 to August 30, 2014					
	West Nile virus neurological syndrome	West Nile virus non-neurological syndrome	Unclassified/unspecified	Total clinical cases <sup>1</sup>	Number of travel-related cases <sup>2</sup>	West Nile virus asymptomatic infections <sup>3</sup>
Newfoundland and 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	1	1	0	1
Manitoba	0	0	2*	2*	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	3*	3*	0	1

<sup>1</sup> 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.

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

<sup>3</sup> 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.

\* One of these cases was likely exposed prior to the 2014 West Nile virus season.

**FIGURE 2:** West Nile Virus clinical cases and asymptomatic infections by report week for selected years

\* 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 3:** West Nile Virus clinical cases and asymptomatic infections by report week for selected years

	Report week																																	
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47			
2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3*	1															
2013	1	0	0	0	0	1	1	0	0	0	1	2	1	5	5	8	17	11	13	13	11	9	1	6	1	0	4	1	0	1	0	1	0	
2012	1	0	0	0	0	0	0	0	0	0	3	5	11	16	27	53	63	57	43	43	45	24	30	14	9	5	1	0	0	0	0	0		
2007	0	0	0	0	0	0	2	2	3	4	11	35	36	72	139	424	471	443	287	182	116	71	30	18	10	11	5	4	2	0	0	0		
2005	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	11	28	28	38	45	27	15	7	12	3	3	1	0	0	0	0		
2003	0	0	0	0	0	0	0	0	0	1	1	1	5	11	9	27	66	249	323	324	178	107	82	37	14	8	4	3	0	0	0	0		

\* One of these cases was likely exposed prior to the 2014 West Nile virus season.



**TABLE 4.1:** Reported cumulative number of West Nile Virus positive mosquito pools by Province/Territory and by report week, 2014 season\*

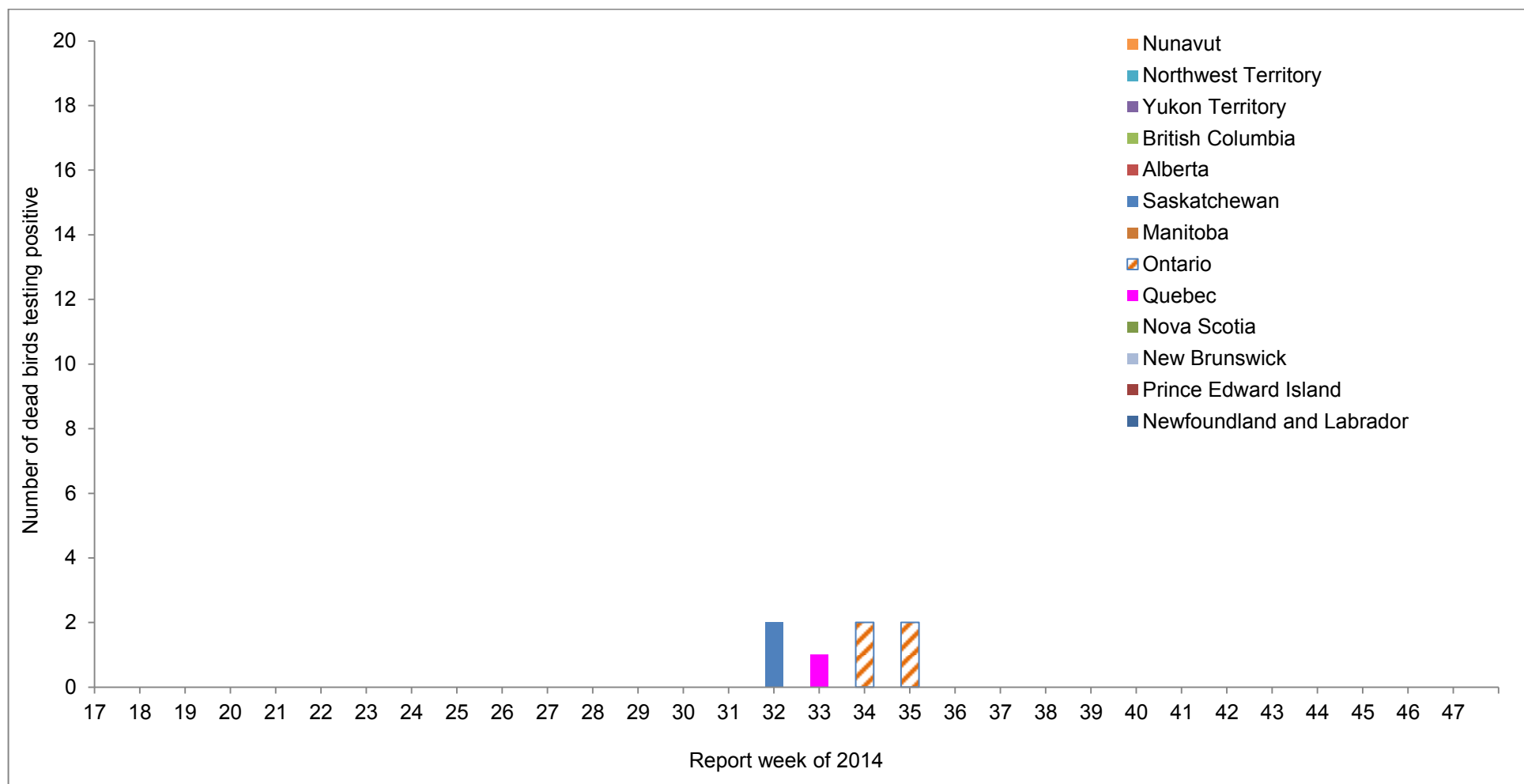
	Report week of 2014																															
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Quebec	0	0	0	0	0	0	0	0	0	0	0	0	1	4	9	10	19	19**	39													
Ontario	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	9	11	13	30													
Manitoba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	7	14	19	22													
Saskatchewan	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	9	19	20													
Alberta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
British Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Yukon Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Northwest Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Nunavut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Total	0	0	0	0	0	0	0	0	0	0	0	0	1	7	22	28	53	70	111													

\* Detailed West Nile virus mosquito surveillance data can be accessed through [Provincial/Territorial websites](#).

\*\* Week 34 data was not available at the time of publication.

**TABLE 4.2:** Number of mosquito pools tested and number of positive mosquito pools by Province/Territory, 2014 season

	Year to date: January 1 to August 30, 2014		
	Number of mosquito pools tested	Number of positive mosquito pools	Percentage of positive mosquito pools (%)
Quebec	7,974	39	0.5
Ontario	11,019	30	0.3
Manitoba	1,433	22	1.5
Saskatchewan	768	20	2.6
British Columbia	166	0	0
Total	21,360	111	0.5

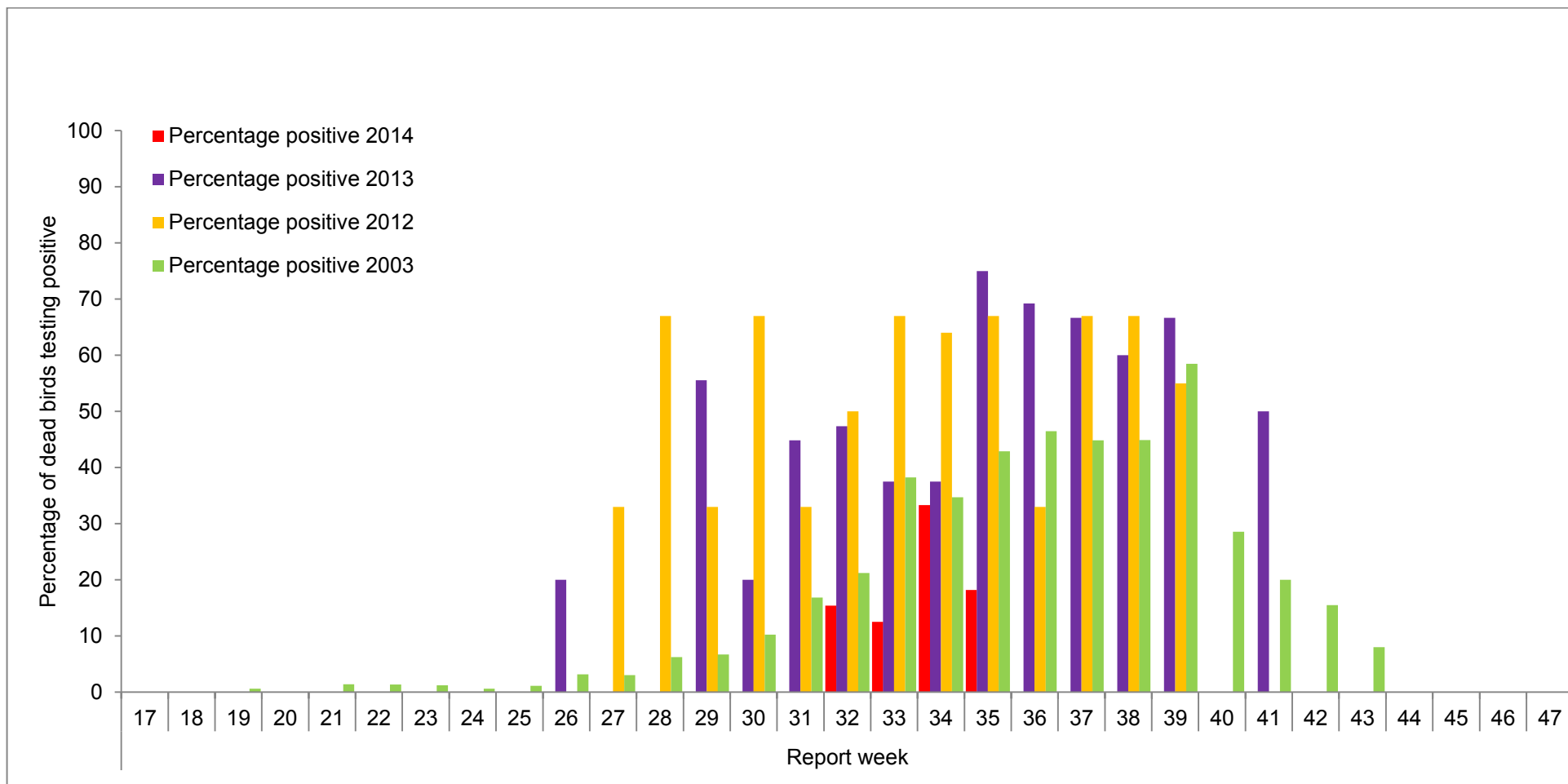
**FIGURE 3:** Reported number of dead birds testing positive for West Nile Virus by Province/Territory and by report week, 2014 season\*

\* Data from the [Canadian Wildlife Health Cooperative](#).

**TABLE 5:** Reported number of dead birds testing positive for West Nile Virus by Province/Territory and by report week, 2014 season\*

	Report week of 2014																																
	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	Total	
Newfoundland and Labrador	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Prince Edward Island	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
New Brunswick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Nova Scotia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Quebec	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0													1	
Ontario	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2													4	
Manitoba	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Saskatchewan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0													2	
Alberta	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
British Columbia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Yukon Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Northwest Territory	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Nunavut	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	2													7	

\* Data from the [Canadian Wildlife Health Cooperative](#).

**FIGURE 4:** Percentage of dead birds testing positive for West Nile Virus in the 2014 season by report week, as compared to the 2003, 2012 and 2013 seasons

**TABLE 6:** Percentage of dead birds testing positive for West Nile Virus in the 2014 season by report week, as compared to the 2003, 2012 and 2013 seasons

		Report week																														
		17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
Numbers positive	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	2												
Numbers tested	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	39*	10	13	8	6	11												
Percentage positive	2014	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	13	33	18												
Numbers positive	2013	0	0	0	0	0	0	0	0	0	1	0	0	5	2	13	9	6	6	18	9	6	6	2	0	1	0	0	0	0	0	0
Numbers tested	2013	0	0	0	1	0	0	0	2	2	5	8	5	9	10	29	19	16	16	24	13	9	10	3	3	2	0	0	0	0	0	0
Percentage positive	2013	0	0	0	0	0	0	0	0	0	20	0	0	56	20	45	47	38	38	75	69	67	60	67	0	50	0	0	0	0	0	0
Percentage positive	2012	0	0	0	0	0	0	0	0	0	0	33	67	33	67	33	50	67	64	67	33	67	67	55	0	0	0	0	0	0	0	0
Percentage positive	2003	0	0	1	0	1	1	1	1	1	3	3	6	7	10	17	21	38	35	43	46	45	45	58	29	20	15	8	0	0	0	0

\* Data became available during Week 30; this is a cumulative number of dead birds tested from Week 1 to Week 30.