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

Canada

# West Nile Virus National Surveillance Report

English Edition

## Summary of 2006 WNV Season

**Canada**

**Human:**

During the 2006 WNV season, 151 confirmed and probable human WNV cases [Alberta (39), Saskatchewan (19), Manitoba (50), Ontario (42), and Quebec (1)] and three asymptomatic infections [Alberta (1), Saskatchewan (1), and Manitoba (1) ] have been reported to the PHAC. Of the 151 clinical cases, 38 (25.2%) were classified as West Nile Neurological Syndrome, and 113 (74.8%) as West Nile Virus Non-Neurological Syndrome. There have been two deaths reported in patients with WNV infection during this season.

**Bird:**

During the 2006 WNV season, a total of 2476 dead birds have been tested since April 2006, of which 273 (11.1%) were positive for WNV. Of the 273 positive birds, 12 were reported in Alberta [Calgary (1), Palliser (8) and Chinook (3)], 5 were reported in Sastachewan [ Heartland (1), Cypress (1) and Regina (3)] and 256 were reported in Ontario [ Central East (60), Central West (47), East (29), North East (29), North West (27), South West (51) and Toronto (13)]. The positive birds were American crows (85.4%), blue jays (13.2%), black-billed magpies (0.7%), ravens (0.4%) and pelicans (0.4%).

**Mosquito:**

During the 2006 WNV season, 499 WNV positive mosquito pools have been reported, including 114 in Alberta [Palliser (87), David Thompso (3), Calgary (7) East Central (1) and Chinook (16)], 36 in Saskatchewan [Cypress (3), Heartland (1), Five Hills (1), Saskatoon (2) and Sun Country (29)], 171 in Manitoba [Assiniboine (34), Central (7), Interlake (40), Brandon (7), North Eastman (9), South Eastman (4), and Winnipeg (70)], 169 in Ontario [Central East (30), Central West (39), East (3), North East (17), North West (4) South West (32) and Toronto (44)] and 9 in Quebec [Monteregie (6) and Montreal-Centre(3)].

**Domestic Animal:**

During the 2006 WNV season, thirteen WNV positive horses have been reported in Manitoba (1), Alberta(9) and Ontario (3).

**National WNV surveillance data and maps can be found on the PHAC web site at:**

http://www.phac-aspc.gc.ca/wnv-vwn/index.html

**Provinces/Territories:** Detailed WNV information can be accessed through the Links section on the PHAC WNV web site.

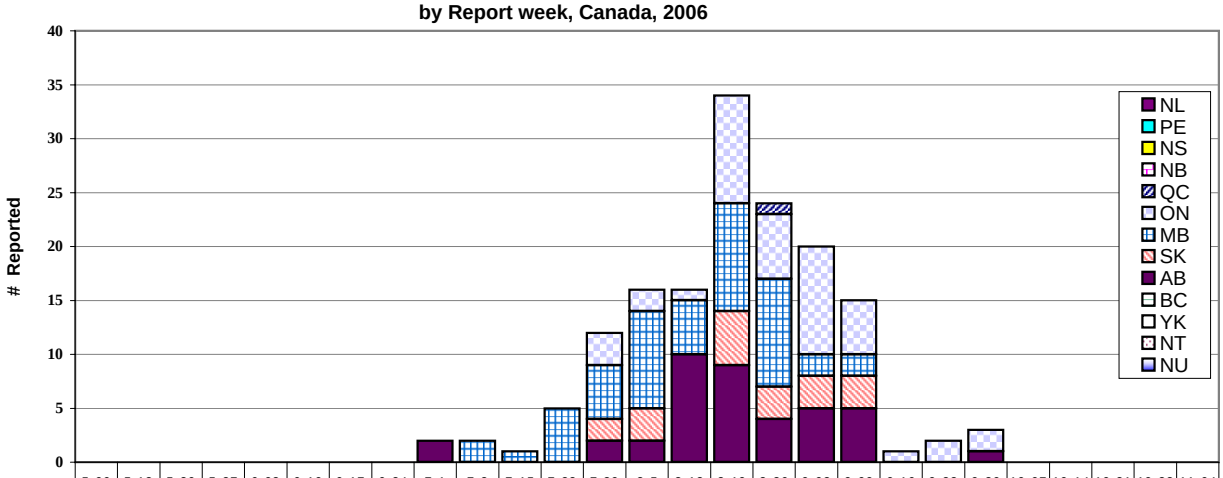
**United States**

**Human:**

Between 1 January and 11 December 2006, 4052 human WNV cases [2459 (61%) fever, 1396 (34%) neuroinvasive disease and 197 (5%) clinically unspecified] have been reported to the Centers for Disease Control and Prevention (CDC) in the U.S. There have been 146 deaths reported.

**States:** Detailed State information can be accessed through the CDC web site: http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm

**WNV Human Clinical Cases[1] and Asymptomatic Infections, by Province/Territory, by Report week, Canada, 2006**




| Mon-Day | 5-06 | 5-13 | 5-20 | 5-27 | 6-03 | 6-10 | 6-17 | 6-24 | 7-1 | 7-8 | 7-15 | 7-22 | 7-29 | 8-5 | 8-12 | 8-19 | 8-26 | 9-02 | 9-09 | 9-16 | 9-23 | 9-30 | 10-07 | 10-14 | 10-21 | 10-28 | 11-04 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NL | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| PE | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| QC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ON | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 | 1 | 10 | 6 | 10 | 5 | 1 | 2 | 2 | 0 | 0 | 0 | 0 | 0 |
| MB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 5 | 5 | 9 | 5 | 10 | 10 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 5 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| AB | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 2 | 10 | 9 | 4 | 5 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| BC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| YK | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NT | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NU | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Abbreviations**: Newfoundland & Labrador (NL), Prince Edward Island (PE), New Brunswick (NB), Nova Scotia (NS), Quebec (QC), Ontario (ON) Manitoba (MB), Saskatchewan (SK), Alberta (AB), British Columbia (BC), Yukon Territory (YK), Northwest Territories (NT), Nunavut (NU).

1 These totals include both probable and confirmed WNV cases.

**WNV Human Clinical Cases[1] and Asymptomatic Infections Year-to-Date, by Province/Territory, Canada, 2006**

| Provinces Territories | Report Week: Summary of 2006 WNV Season | | | | | |
|---|---|---|---|---|---|---|
| | West Nile Virus Neurological Syndrome | West Nile Virus Non-Neurological Syndrome | Unclassified / Unspecified | Total Clinical Cases[2] | No. of travel related cases[3] | West Nile Virus Asymptomatic Infections[4] |
| | No. Cases | No. Cases | | | | |
| NL | 0 | 0 | 0 | 0 | 0 | 0 |
| PE | 0 | 0 | 0 | 0 | 0 | 0 |
| NS | 0 | 0 | 0 | 0 | 0 | 0 |
| NB | 0 | 0 | 0 | 0 | 0 | 0 |
| QC | 0 | 1 | 0 | 1 | 0 | 0 |
| ON | 17 | 25 | 0 | 42 | 3 | 0 |
| MB | 17 | 33 | 0 | 50 | 0 | 1 |
| SK | 3 | 16 | 0 | 19 | 2 | 1 |
| AB | 1 | 38 | 0 | 39 | 1 | 1 |
| BC | 0 | 0 | 0 | 0 | 0 | 0 |
| YT | 0 | 0 | 0 | 0 | 0 | 0 |
| NT | 0 | 0 | 0 | 0 | 0 | 0 |
| NU | 0 | 0 | 0 | 0 | 0 | 0 |
| Canada | 38 | 113 | 0 | 151 | 6 | 3 |

[2] Total clinical cases is the sum of WNV Neurological Syndrome + WNV Non-Neurological Syndrome + WNV Unclassified/Unspecified

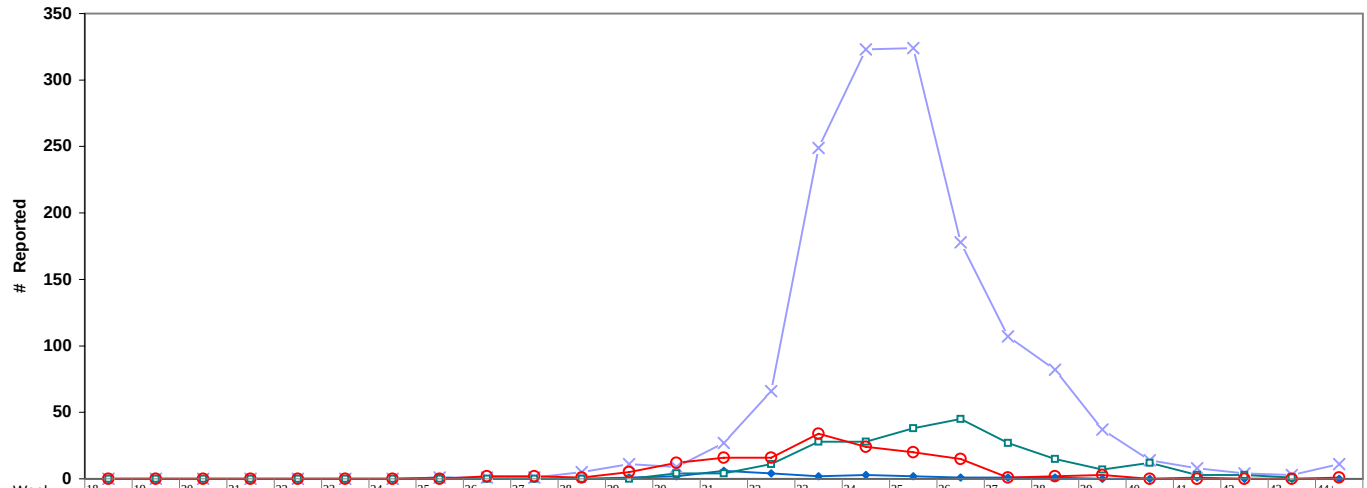
[3] Likely related to travel outside the province / territory

[4] 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 (NAT), 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 WN virus-specific NAT following any positive donor screen test result.

*Details on human case definitions can be seen on the PHAC West Nile virus surveillance web site:*

http://www.phac-aspc.gc.ca/wnv-vwn/hmncasedef_e.html

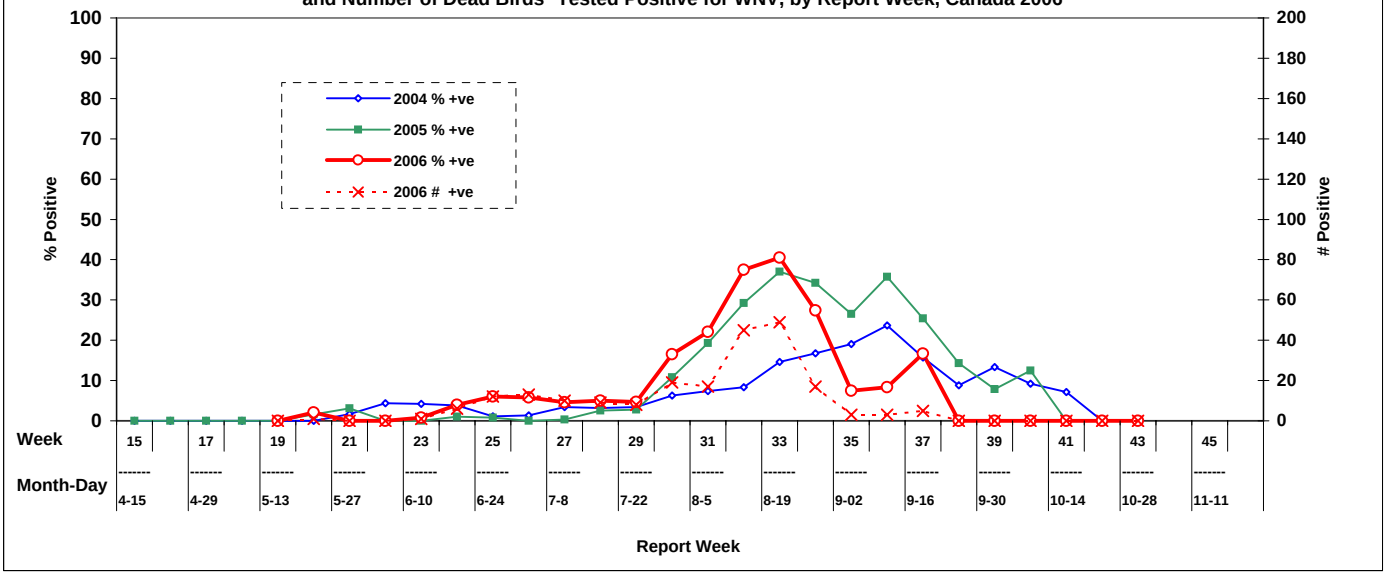
## WNV Human Clinical Cases[1] and Asymptomatic Infections in Canada, 2003 to 2006




| Week | 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+ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Month-Day | 5-06 | 5-13 | 5-20 | 5-27 | 6-03 | 6-10 | 6-17 | 6-24 | 7-1 | 7-8 | 7-15 | 7-22 | 7-39 | 8-5 | 8-12 | 8-19 | 8-26 | 9-02 | 9-09 | 9-16 | 9-23 | 9-30 | 10-07 | 10-14 | 10-21 | 10-28 | 11-04 |
| 2003 | 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 | 11 |
| 2004 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 2 | 6 | 4 | 2 | 3 | 2 | 1 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 2005 | 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 | |
| 2006 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 1 | 5 | 12 | 16 | 16 | 34 | 24 | 20 | 15 | 1 | 2 | 3 | 0 | 0 | 0 | 0 | 1 |

**Report Week by Episode date** [5]

## Percentage of Dead Birds[6] Tested Positive for WNV, by Report Week, Canada 2004, 2005 & 2006[7], and Number of Dead Birds[6] Tested Positive for WNV, by Report Week, Canada 2006




[5] Episode date could include one of the following: onset date, diagnosis date, lab sample date, or reporting date.

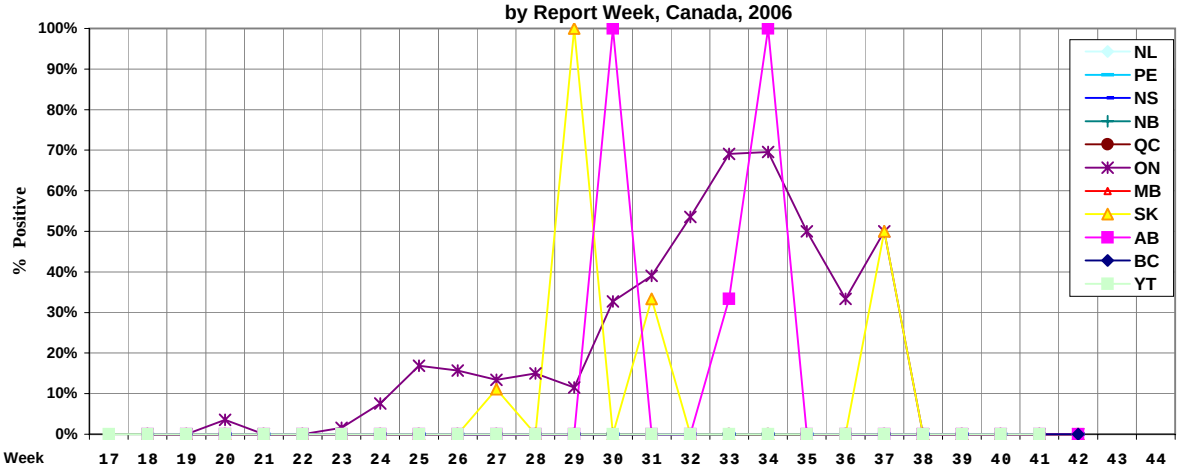
[6] Mostly corvids (e.g. crows, blue jays, and ravens).

[7] Not all provinces are conducting dead bird surveillance as part of their own WNV surveillance program in 2006. However, WNV positive dead birds may be identified through the National Wildlife Disease Surveillance Program of the Canadian Cooperative Wildlife Health Centre (CCWHC).

## Dead Bird[6] WNV Test Results for Year-to-Date, by Province/Territory, Canada, 2006

| Provinces / Territories | Summary of 2006 WNV Season | |
|---|---|---|
| | No. tests | No. confirmed positive tests |
| NL | 0 | 0 |
| PE | 98 | 0 |
| NS | 131 | 0 |
| NB | 308 | 0 |
| QC[8] | 0 | 0 |
| ON | 972 | 256 |
| MB[8] | 1 | 0 |
| SK[8] | 54 | 5 |
| AB | 86 | 12 |
| BC | 808 | 0 |
| YT | 9 | 0 |
| NT | 9 | 0 |
| NU | 0 | 0 |
| Canada | 2476 | 273 |

## Percentage of Dead Birds[6] Tested Positive for WNV, by Province/Territory, by Report Week, Canada, 2006




| 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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NL | | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| PE | | 0/0 | 0/0 | 0/0 | 0/0 | 0/2 | 0/7 | 0/14 | 0/16 | 0/9 | 0/13 | 0/10 | 0/5 | 0/6 | 0/1 | 0/2 | 0/2 | 0/2 | 0/4 | 0/1 | 0/4 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| NS | | 0/0 | 0/0 | 0/1 | 0/1 | 0/1 | 0/1 | 0/0 | 0/1 | 0/6 | 0/18 | 0/10 | 0/14 | 0/7 | 0/4 | 0/3 | 0/1 | 0/2 | 0/2 | 0/3 | 0/1 | 0/1 | 0/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| NB | | 0/0 | 0/0 | 0/0 | 0/1 | 0/0 | 0/8 | 0/19 | 0/39 | 0/41 | 0/42 | 0/40 | 0/33 | 0/24 | 0/8 | 0/10 | 0/7 | 0/8 | 0/8 | 0/5 | 0/3 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| QC[8] | | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| ON | | 0/1 | 0/9 | 1/28 | 0/37 | 0/50 | 1/62 | 6/79 | 12/71 | 13/83 | 9/67 | 9/60 | 7/61 | 18/55 | 16/41 | 45/84 | 47/68 | 16/23 | 3/6 | 3/9 | 3/6 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| MB[8] | | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| SK[8] | | 0/0 | 0/2 | 0/6 | 0/0 | 0/0 | 0/0 | 0/3 | 0/3 | 0/5 | 1/9 | 0/8 | 1/1 | 0/2 | 1/3 | 0/3 | 0/0 | 0/3 | 0/0 | 0/0 | 2/4 | 0/3 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| AB | | 0/0 | 0/0 | 0/0 | 0/0 | 0/1 | 0/1 | 0/2 | 0/1 | 0/13 | 0/12 | 0/1 | 0/8 | 1/1 | 0/3 | 0/1 | 2/6 | 1/1 | 0/3 | 0\3 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| BC | | 0/1 | 0/6 | 0/12 | 0/13 | 0/34 | 0/46 | 0/35 | 0/68 | 0/66 | 0/54 | 0/51 | 0/49 | 0/20 | 0/17 | 0/17 | 0/37 | 0/23 | 0/17 | 0/15 | 0/12 | 0/17 | 0/14 | 0/3 | 0/10 | 0/0 | 0/0 | 0/0 |
| YT | | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| NT | | 0/0 | 0/1 | 0/1 | 0/1 | 0/0 | 0/1 | 0/0 | 0/1 | 0/1 | 0/1 | 0/0 | 0/1 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| NU | | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 | 0/0 |
| CA | | 0/2 | 0/18 | 1/48 | 0/53 | 0/88 | 1/126 | 6/152 | 12/200 | 13/224 | 10/216 | 9/180 | 8/172 | 19/115 | 17/77 | 45/120 | 49/121 | 17/62 | 3/40 | 3/36 | 5/30 | 0/21 | 0/15 | 0/3 | 0/10 | 0/0 | 0/0 | 0/0 |

[8] These provinces are not conducting dead bird surveillance as part of their own WNV surveillance program in 2006. However, WNV positive dead birds may be identified through the National Wildlife Disease Surveillance Program of the Canadian Cooperative Wildlife Health Centre (CCWHC).