



West Nile Virus Surveillance



West Nile Virus Surveillance Summary #8

Thursday, September 16, 2010

WNV Activity in BC

(Data as of September 15, 2010)

One human case of non-neurological WNV has been reported in BC from the Central Okanagan region. The onset date of this case is in mid August, and the case had not travelled outside of BC during the incubation period. Five birds have also tested positive for WNV from the Central Okanagan. No other positive indicators have been reported.

The number of human samples and corvids tested are higher while the number of mosquito pools tested and corvids sighted are lower compared to the same time period in 2009.

From Jun 1 st , 2010	Human samples*	Corvids tested	Corvids sighted	Mosquito pools
# Tested	268	219	335	1,995
# Positive	1**	5		0

*includes routine screening of CSF, organ and stem cell donations in addition to physician test requests

**Probable Case

The BCCDC webpage including maps and graphs of BC surveillance data can be found at:

<http://www.bccdc.ca/dis-cond/a-z/w/WestNileVirus/Surveillance>

Canadian Blood Services Data

CBS performs year-round WNV nucleic acid testing and this information is provided as aggregate, regional updates throughout the WNV season to BCCDC. This reporting provides geographic and timely human WNV surveillance data.

Between May 31-September 12, 2010 there were 33,687 collections of blood in BC. There were no positive WNV screening test results. Between August 30 and September 12, 2010 there were 4637 collections in BC.

Health Service Delivery Area	Number of collections (August 30-September 12, 2010)
Fraser East	258
Fraser South	660
Fraser North	271
Okanagan	623
Vancouver	906
Richmond	178
North Shore/Coast Garibaldi	96
South Vancouver Island	820
Central Vancouver Island	503
Northern Interior	322
BC	4,637

No collections were reported in East Kootenay, Kootenay Boundary, Thompson Cariboo Shuswap, North Vancouver Island, Northwest or Northeast in this two week period.



BC Centre for Disease Control

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Past Temperature and Future Climate Predictions for BC

Warmer temperatures favour greater mosquito abundance, biting activity and WNV amplification. Accumulated degree days (i.e. heat units) are calculated to forecast mosquito development.

Accumulated base 14.3 °C growing degree days comparison for select BC communities

August 31	2010	2009	2008	2007	2006	2005	2004	2003
Cranbrook	399	478	475	561	542	410	479	598
Creston	515	661	552	757	700	581	668	770
Osoyoos	761	919	811	859	851	850	993	962
Kamloops	688	860	729	738	821	738	879	820
Abbotsford	392	518	387	417	470	481	586	485
Vancouver	322	422	312	344	366	386	485	408
Victoria	277	365	282	311	346	357	425	375
Prince George	285	343	265	273	237	275	361	283

Overall, all communities experienced fewer accumulated degree days this year compared to 2009 (which was among the hottest on record) and the previous 7 years. However, WNV activity still occurred in the central Okanagan region despite the cooler climate in 2010. Degree days calculations beyond August 31st are not calculated as newly hatched mosquitoes have entered diapause by this time (a state where they do not seek a blood meal); therefore, the effect of temperature on mosquito development and viral replication after this time does not contribute to WNV risk.

WNV Activity in Canada

(Data as of September 15, 2010)

There are 3 human cases of WNV reported across Canada; One in BC and 2 in Saskatchewan (Estevan area). There have been no WNV positive blood donors across the country by CBS or Hema-Quebec. Nationally there have been a total of 76 positive mosquito pools (9 in SK, 47 in ON and 20 in MB). Fourteen positive birds have been reported (1 in SK, 5 in BC and 8 in ON). One equine case has been reported in Saskatchewan. The positive indicators in Ontario and Manitoba are slightly higher than in 2009, however nationally the activity reported in 2010 remains low relative to most other years.

WNV Activity in the US

(Data as of September 15, 2010)

- Washington:
 - One hundred and five positive mosquito pools have been reported; 94 in Grant County, 5 in Yakima County and 6 in Benton County. All counties are located in the southern region of WA State.
 - The 2010 activity is lower than what was reported for the same time period in 2009
- Oregon:
 - Three positive mosquito pools have been reported; 2 in Morrow County and 1 in Malheur County. Morrow County is located in the northern region, Malheur County is in the south-east corner of the State.
- Idaho:
 - One positive horse has been reported in Franklin County
- California:
 - 34 counties are reporting WNV activity.
 - There have been 45 human cases reported from 11 counties
 - Positive indicators: 333 dead birds, 1098 mosquito pools, 14 horses, 148 chickens and 14 squirrels.
 - The number of human cases, positive mosquito pools, and positive horses are higher than for the same time period in 2009

Other US states reporting WNV activity:
(Data as of September 14, 2010; Sources: USGS survey and CDC)

As of September 14th, 381 human cases of WNV have been reported from 30 States. Two hundred and seventeen cases (57%) were reported as neuroinvasive. Twelve deaths have been reported from Arizona, Florida, Nebraska, New York, and Texas. Positive blood donors have been reported in 13 States. The activity reported in the US is slightly higher than in the same time period in 2009.

West Nile virus (WNV) activity reported to ArboNET, by state, United States, 2010
as of September 14, 2010

