NORTH DAKOTA
DEPARTMENT of HEALTH

Division of Disease Control
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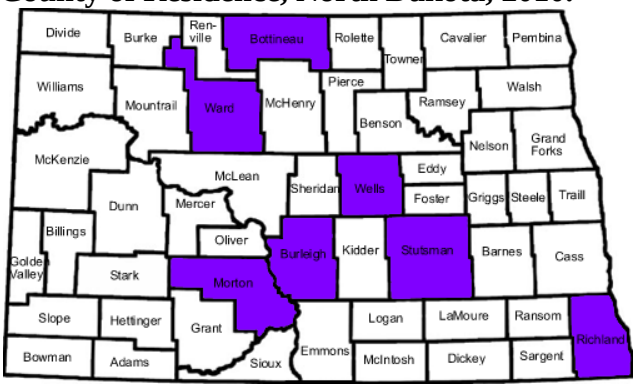
2010 West Nile Virus Summary

On June 1, 2010, the North Dakota Department of Health (NDDoH) West Nile virus (WNV) surveillance program initiated its ninth season of human arboviral surveillance. In 2010, the Division of Laboratory Services conducted WNV testing on 323 human samples. Nine positive human cases were identified **(Figure 1)**.

Figure 1. WNV Positive Human Cases by County of Residence, North Dakota, 2010.



Of the nine reported cases, two (22%) met the case definition of West Nile encephalitis/meningitis, with the remaining seven (78%) cases classified as West Nile fever. Three of the nine cases were hospitalized, of which none were fatal. No asymptomatic North Dakota blood donors with WNV were reported to the NDDoH in 2010.

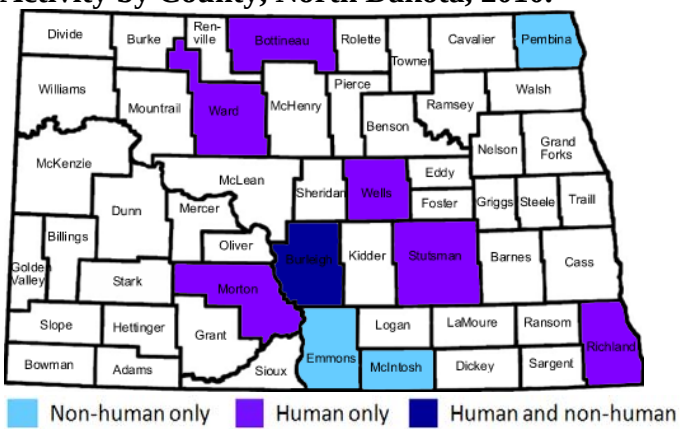
Table 1. Human WNV Cases by Age Group, North Dakota, 2010.

Age Group	Cases
Age <10	1
Ages 10-19	0
Ages 20-29	0
Ages 30-39	1
Ages 40-49	2
Ages 50-59	1
Age 60 and older	4

In 2010, three of the reported human WNV cases were male and six were female. Of the nine reported cases, five (56%) were age 50 or older **(Table 1)**. Although WNV can affect all age groups, those older than 50 have an increased risk of developing more severe disease. Peak illness onset occurred during the week ending Aug. 21, 2010. This is one week later than the illness onset in 2009, which occurred during the week ending Aug. 15, 2009 **(Figure 3)**.

The North Dakota Veterinary Diagnostic Laboratory (NDVDL) tested nine horses for WNV infection. Of the nine samples submitted, two (22%) tested positive for WNV from two counties; Emmons and McIntosh Counties. In addition, one dog and one reindeer that tested positive for WNV were reported to the NDDoH from Burleigh and Pembina Counties respectively **(Figure 2)**.

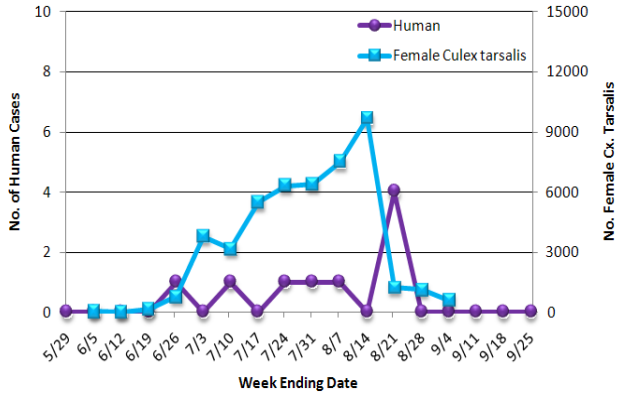
Figure 2. WNV Human and Non-human Activity by County, North Dakota, 2010.



In 2010, dead bird collection focused on birds from the corvid and raptor families. The corvid family includes crows, blue jays, magpies and ravens. The raptor family includes birds of prey such as hawks, eagles, falcons and owls. Seven dead birds were collected and sent to the NDVDL for WNV testing. Of those, none tested positive.

Statewide mosquito monitoring was conducted weekly from June through August using 92 NJ light traps stationed around the state. Female *Culex tarsalis* counts peaked the second week in August, which is one week prior to the peak of human WNV illness onset **(Figure 3)**.

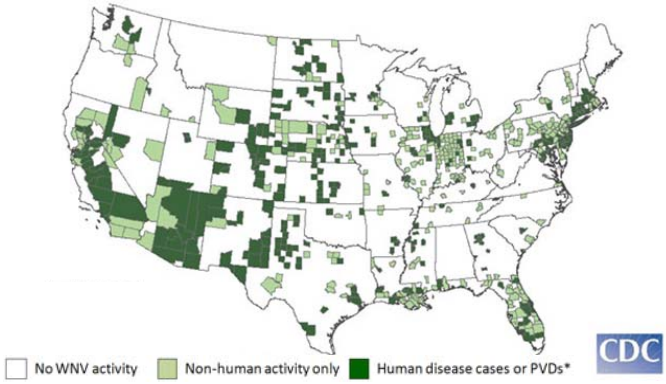
Figure 3. Human WNV Cases by Date of Onset and No. of Female Culex Tarsalis Mosquitoes by Week of Collection, North Dakota, 2010.



West Nile Virus in the U.S.

In 2010, 1,021 human cases of WNV were reported from 40 states and the District of Columbia **(Figure 4)**. Of the 1,021 reported cases, 629 (62%) met the case definition of West Nile encephalitis/meningitis, with the remaining 392 (38%) cases classified as West Nile fever. Additionally, there were 57 WNV deaths reported from 17 states.

Figure 4. WNV Activity Reported by County, United States, 2010.



Visit www.ndhealth.gov/wnv to find additional information about WNV in North Dakota.

Table 2. Number of WNV Cases Per County, North Dakota, 2010.

County	Human	Horse	Bird	Other Vet
Adams				
Barnes				
Benson				
Billings				
Bottineau	1			
Bowman				
Burke				
Burleigh	2			1
Cass				
Cavalier				
Dickey				
Divide				
Dunn				
Eddy				
Emmons		1		
Foster				
Golden Valley				
Grand Forks				
Grant				
Griggs				
Hettinger				
Kidder				
LaMoure				
Logan				
McHenry				
McIntosh		1		
McKenzie				
McLean				
Mercer				
Morton	1			
Mountrail				
Nelson				
Oliver				
Pembina				1
Pierce				
Ramsey				
Ransom				
Renville				
Richland	1			
Rolette				
Sargent				
Sheridan				
Sioux				
Slope				
Stark				
Steele				
Stutsman	1			
Towner				
Traill				
Walsh				
Ward	2			
Wells	1			
Williams				