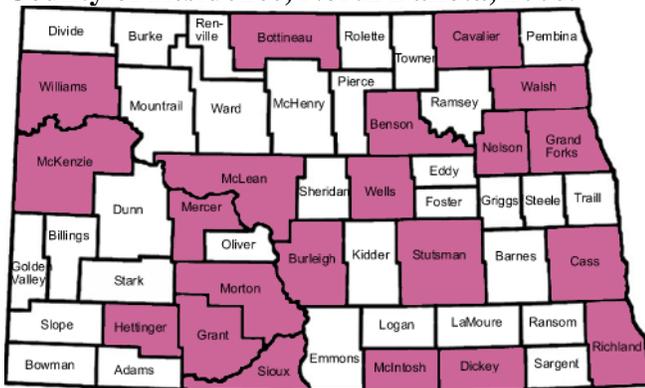


## 2008 West Nile Virus Summary

On June 1, 2008 the North Dakota Department of Health (NDDoH) West Nile virus (WNV) surveillance program initiated its seventh season of human arboviral surveillance. In 2008, the Division of Laboratory Services conducted WNV testing on 1,149 human samples. Thirty-seven positive human cases from 21 counties were reported (**Figure 1**).

**Figure 1. WNV Positive Human Cases by County of Residence, North Dakota, 2008.**



Of the 37 reported cases, two (5.4%) met the case definition of West Nile encephalitis/meningitis, with the remaining 35 (94.6%) cases classified as West Nile fever. Nine of the 37 cases were hospitalized, and no deaths associated with WNV in 2008 were reported to the NDDoH. Six asymptomatic North Dakota blood donors were identified with WNV in 2008.

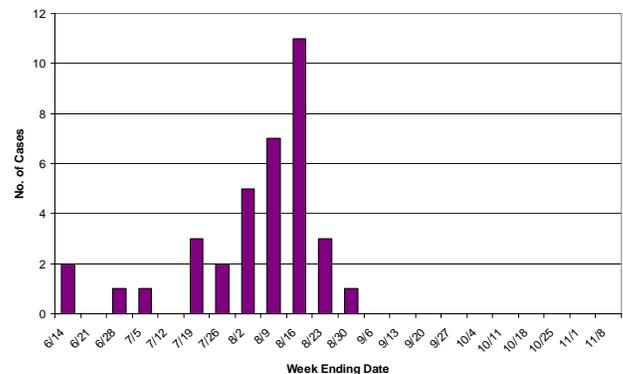
**Table 1. WNV Cases by Age Group, North Dakota, 2008.**

Age Group	Cases
Age <10	0
Ages 10-19	0
Ages 20-29	7
Ages 30-39	8
Ages 40-49	10
Ages 50-59	4
Age 60 and older	8

Males accounted for 23 (62%) out of the 37 total cases. No WNV cases were identified in individuals under the age of 20 in 2008 and those in their 40's was the age group with the largest total cases (**Table 1**).

The peak of illness onset occurred during the week ending Aug. 16, 2008 (**Figure 2**). This peak is the same week as the peak illness in 2007, which occurred during the week ending Aug. 18, 2007.

**Figure 2. West Nile Cases by Date of Onset, North Dakota, 2008.**



During the 2008 WNV season, an increase in false-positive test results from a commercial test kit was detected. A specific lot of this test kit was distributed to four laboratories in the United States from July to September. It was found that this lot produced a high number of false positive WNV test results and was recalled. The NDDoH and the Centers for Disease Control and Prevention (CDC) retested the samples or patients who were positive for WNV using the recalled commercial kit. As a result of further testing and investigation, the number of human WNV cases in North Dakota was adjusted to 37 cases from the preliminary count of 43 cases in 2008.

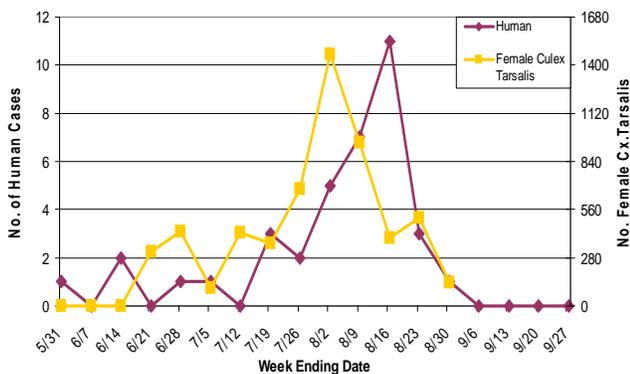
The North Dakota Veterinary Diagnostic Laboratory (NDVDL) tested 13 horses for WNV infection. Of the 13 samples submitted, one

(8%) from Grand Forks County tested positive for WNV. In addition, four dogs that tested positive for WNV were reported to the NDDoH from Grand Forks (1), Ramsey (1) and Walsh (2) Counties.

In 2008, 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. Five 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 approximately the last week in July, two weeks prior to the peak of human WNV illness onset (Figure 3).

**Figure 3. Human West Nile Cases by Date of Onset and No. of Female Culex Tarsalis Mosquitoes by Week of Collection, North Dakota, 2008.**



**Table 2. Number of WNV Cases Per County, North Dakota, 2008.**

County	Human	Horse	Bird	Pools*
Adams				
Barnes				
Benson	1			
Billings				
Bottineau	1			
Bowman				
Burke				
Burleigh	6			
Cass	2			
Cavalier	1			
Dickey	1			
Divide				
Dunn				
Eddy				
Emmons				
Foster				
Golden Valley				
Grand Forks	1	1		
Grant	1			
Griggs				
Hettinger	1			
Kidder				
LaMoure				
Logan				
McHenry				
McIntosh	1			
McKenzie	2			
McLean	1			
Mercer	2			
Morton	5			
Mountrail				
Nelson	1			
Oliver				
Pembina				
Pierce				
Ramsey				
Ransom				
Renville				
Richland	1			
Rolette				
Sargent				
Sheridan				
Sioux	2			
Slope				
Stark				
Steele				
Stutsman	1			
Towner				
Traill				
Walsh	1			
Ward				
Wells	1			
Williams	4			



Visit [www.ndhealth.gov/wnv](http://www.ndhealth.gov/wnv) to find additional information about West Nile virus in North Dakota, to order campaign materials, view public service announcements, print fact sheets or locate contacts in your area.