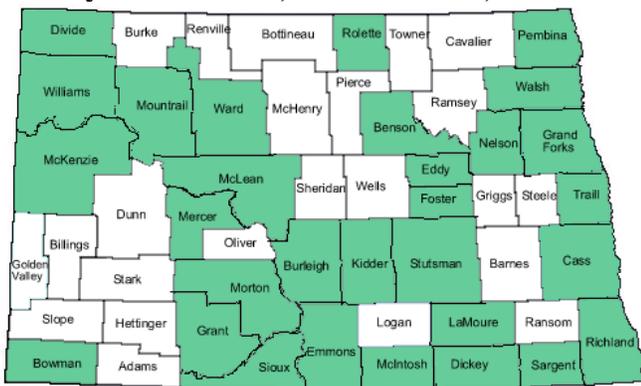


## 2005 West Nile Virus Summary

On June 1, 2005 the North Dakota Department of Health (NDDoH) West Nile virus (WNV) surveillance program initiated its fourth season of human arboviral encephalitis surveillance. In 2005, the Division of Microbiology conducted WNV testing on 1,468 human samples. Eighty-six positive human cases from thirty counties (highlighted in green) were reported (Figure 1).

**Figure 1. WNV Positive Human Cases by County of Residence, North Dakota, 2005**

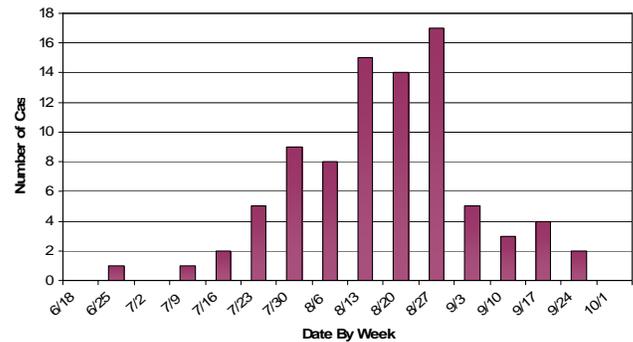


In 2005, follow-up interviews were conducted only with hospitalized patients (30). Of the 86 reported cases, 12 (14%) met the case definition of West Nile encephalitis, with the remaining 74 (86%) cases classified as West Nile fever. Five asymptomatic blood donors were identified with WNV. No deaths associated with WNV in 2005 were reported to the health department.

The peak of illness onset occurred during the week ending August 27, 2005 (Figure 2). This peak was about three weeks later than in 2004 when the peak illness occurred during the week ending August 6, 2004.

The North Dakota State University Veterinary Diagnostic Laboratory (NDVDL) tested 53 horses for WNV infection. Of the 53 samples submitted, four (7.5%) tested positive for WNV from three counties; Barnes, Burleigh and McHenry (Figure 3).

**Figure 2. West Nile Cases by Date of Onset, North Dakota, 2005**



**Figure 3. WNV Positive Equine Cases by County of Submission, North Dakota, 2005**

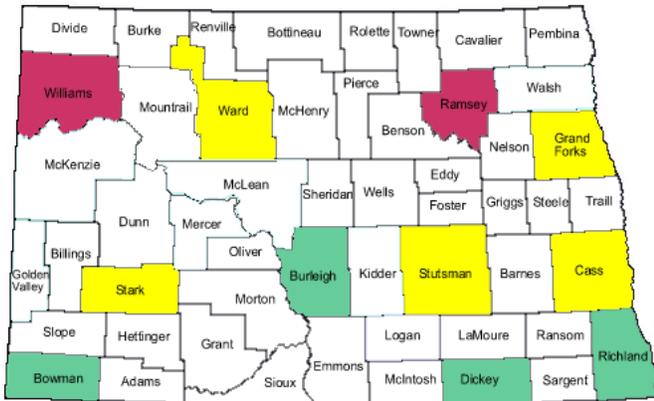


In 2005, dead bird collection was focused on birds from the corvid and raptor families. The corvid family includes crows, blue jays, magpies and ravens. The raptor family includes birds of prey such as hawks, eagles, falcons and owls. Thirty-one dead birds were collected and sent for WNV testing. Of those, 17 tested positive from nine counties.

In addition to dead bird testing, 573 sentinel chicken serums were sent to the NDVDL for WNV testing. Twenty-seven serums from seven counties tested positive for WNV. A total of 44 birds, representing seven species (Table 1) and collected in 11 counties tested positive for WNV in 2005 (Figure 4).

**Figure 4. WNV Positive Avian Cases by County of Submission, North Dakota, 2005**

(\*Counties with dead birds in green, live birds in red & both dead and live birds in yellow).



In 2005, mosquito monitoring was conducted weekly from June to August using 30 live traps and 100 NJ light traps from around the state. During this time, 243 mosquito pools were tested for WNV with four pools, three from Grand Forks and one from Ward County, testing positive. Female *Culex tarsalis* counts peaked around the end of August (see table 2 for county specific data).

**Table 1. WNV Positive Bird Species, North Dakota, 2005**

North Dakota Bird Species	# WNV Positive
American Crow	8
Blue Jay	4
Chicken	27
Magpie	1
Raven	2
Sage Grouse	1
Corvid (unknown)	1



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

**Table 2. Number of WNV Cases Per County, North Dakota, 2005**

County	Human	Horse	Bird	Pools*
Adams				
Barnes		1		
Benson	1			
Billings				
Bottineau				
Bowman	1		1	
Burke				
Burleigh	15	2	1	
Cass	12		10	
Cavalier				
Dickey	2		1	
Divide	2			
Dunn				
Eddy	1			
Emmons	1			
Foster	2			
Golden Valley				
Grand Forks	2		5	3
Grant	1			
Griggs				
Hettinger				
Kidder	1			
LaMoure	1			
Logan				
McHenry		1		
McIntosh	2			
McKenzie	1			
McLean	4			
Mercer	2			
Morton	7			
Mountrail	2			
Nelson	1			
Oliver				
Pembina	1			
Pierce				
Ramsey			3	
Ransom				
Renville				
Richland	1		1	
Rolette	1			
Sargent	1			
Sheridan				
Sioux	1			
Slope				
Stark			2	
Steele				
Stutsman	5		8	
Towner				
Traill	2			
Walsh	2			
Ward	8		9	1
Wells				
Williams	3		3	

\*Mosquito pools tested