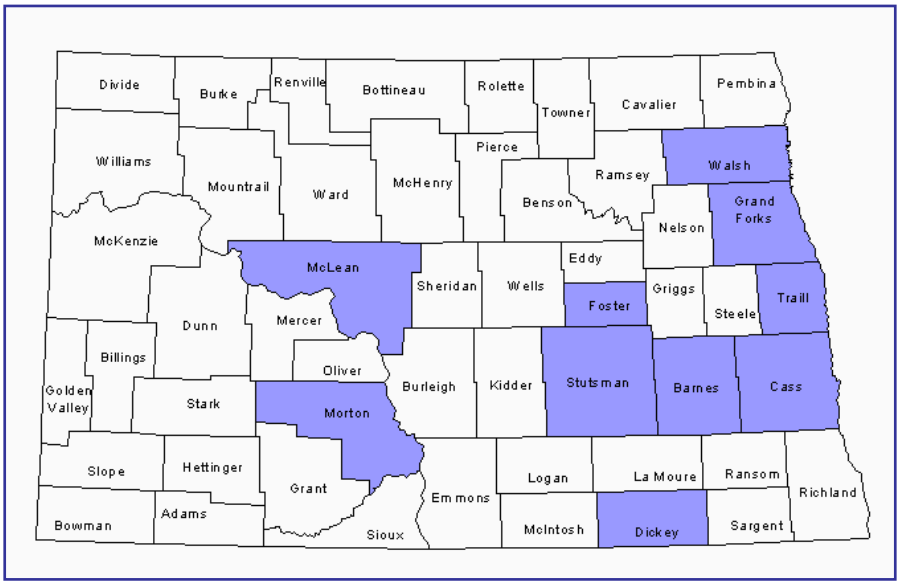
2002 West Nile Virus Summary

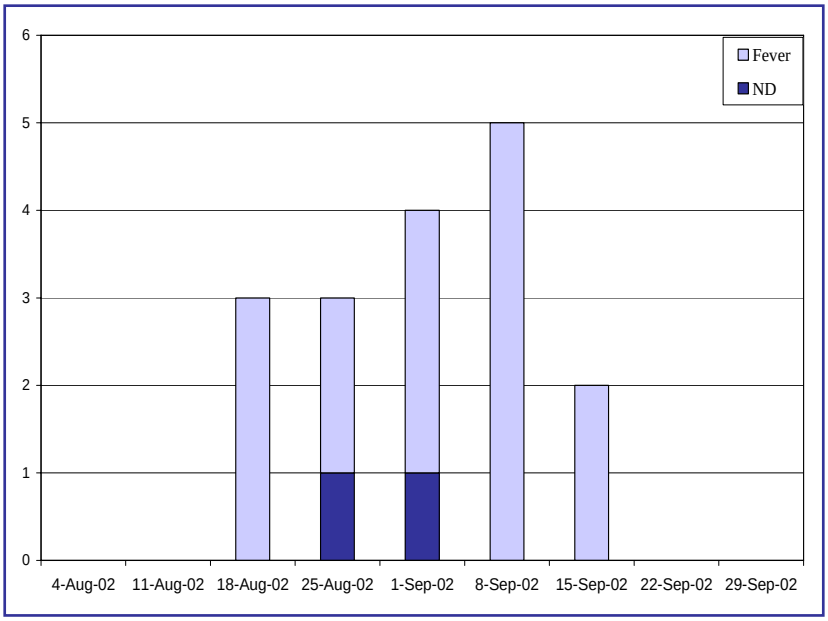
Figure 1. WNV-Positive Human Cases by County*of Residence, North Dakota, 2002



In 2002, the Division of Microbiology tested 371 human samples for arboviral disease. In 2002, 17 WNV human cases from 10 counties were reported (Figure 1). All specimens were negative for eastern equine encephalitis, western equine encephalitis, LaCrosse encephalitis, California serogroup encephalitis and St. Louis encephalitis.

*(Counties with WNV cases in blue)

Figure 2. Neurological disease (ND) and West Nile Fever Cases by Date of Onset, North Dakota, 2002



Of the 17 cases reported, 2 (11.7%) met the case definition of the West Nile neurological disease, with the remaining 15 cases classified as West Nile fever. Two deaths were associated with WNV in 2002. The peak of illness onset occurred the week ending Sept. 8, 2002 (Figure 2).

The symptoms most commonly reported by the WNV cases were headache (76.5%), fever (70.6%), muscle weakness/joint pain (41.2%) and rash (41.2%). Additional symptoms included stiff neck and altered mental status.

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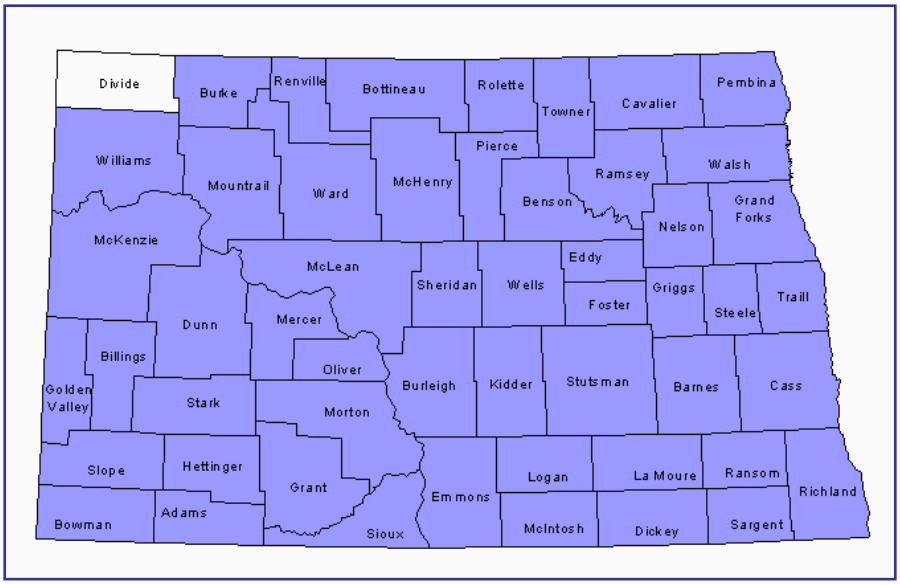
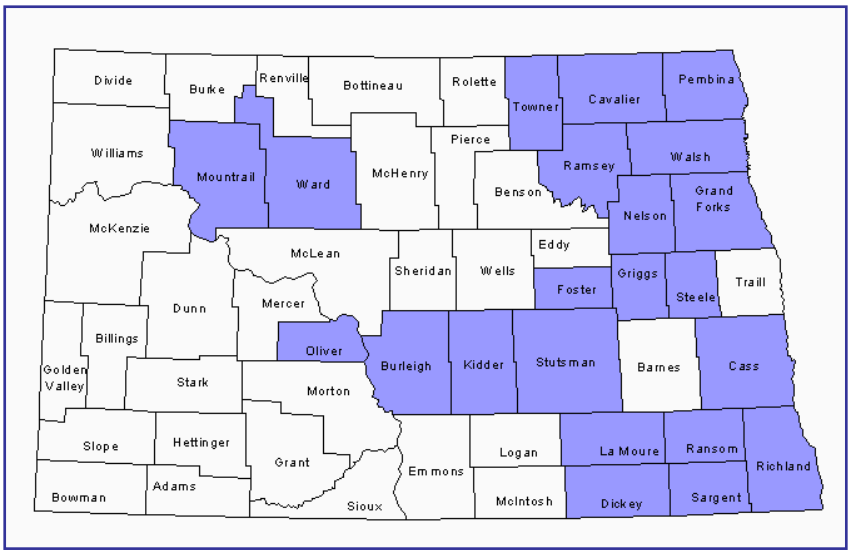
Figure 3. WNV-Positive Equine Cases by County*of Submission, North Dakota, 2002



Seven hundred and sixty-five equine serum samples were sent to the VDL for testing. The VDL reported 569 WNV-positive equine cases. Cases were reported in every county except Divide (Figure 3).

In addition, 321 dead birds collected from 40 counties were tested for WNV by the United States Geological Services Wildlife Laboratory in Madison, Wisconsin. Sixty-five birds belonging to 12 different species were positive for WNV (Table 1).WNV-positive birds were identified in 22 counties (Figure 4).

Figure 4. WNV-Positive Avian Cases by County*of Submission, North Dakota, 2002



Mosquito trapping was conducted at 36 sites with a total of 60 New Jersey light traps. Mosquitoes were collected from June 3 through Sept. 19, 2002. Female Culex tarsalis counts peaked around the beginning of August and remained at similar levels until the end of August. Seventy-eight Culex tarsalis mosquito pools were tested for WNV at the Division of Microbiology. One mosquito pool from Grand Forks County was found to be WNV-positive (See Table 2 for county specific data).This pool was collected in July near the site of the first horse identified with WNV infection.

Table 1. WNV-Positive Bird Species, 2002

Type of Bird	Number collected
American Crow	35
American Robin	2
Bald Eagle	1
Blue Jay	12
Canada Goose	2
Common Grackle	1
Eagle	1
House Finch	4
House Sparrow	2
Mallard Duck	1
Mourning Dove	1
Northern Groshawk	1
Ring-billed gull	2

Table 2. Number of WNV Cases Per County, North Dakota, 2002

County	Human	Horse	Bird	Mosquito Pools
Adams		6		
Barnes	2	13		
Benson		17		
Billings		3		
Bottineau		6		
Bowman		4		
Burke		3		
Burleigh		49	2	
Cass	4	25	13	
Cavalier		7	1	
Dickey	1	12	2	
Divide				
Dunn		9		
Eddy		7		
Emmons		21		
Foster	1	4	1	
Golden Valley		6		
Grand Forks	1	10	10	1

Table 2. Number of WNV Cases Per County, North Dakota, 2002 (cont.)

County	Human	Horse	Bird	Mosquito Pools
Grant		3		
Griggs		11	1	
Hettinger		1		
Kidder		13	2	
LaMoure		23	1	
Logan		2		
McHenry		16		
McIntosh		15		
McKenzie		8		
McLean	2	17		
Mercer		12		
Morton	1	29		
Mountrail		7	1	
Nelson		1	2	
Oliver		4	1	
Pembina		6	2	
Pierce		9		
Ramsey		17	1	
Ransom		8	3	
Renville		1		
Richland		20	10	
Rolette		9		
Sargent		4	2	
Sheridan		4		
Sioux		3		
Slope		1		
Stark		8		
Steele		8	1	
Stutsman	2	42	5	
Towner		2	1	
Traill	1	7		
Walsh	2	13	2	
Ward		19	1	
Wells		16		
Williams		8		