



2024 WEST NILE VIRUS ANNUAL SUMMARY

In May 2024, vector control districts throughout North Dakota and state lab employees in Bismarck began West Nile virus (WNV) surveillance. PCR and RAMP testing for WNV was conducted on mosquito pools and dead birds. Surveillance ran until cooler fall temperatures significantly decreased mosquito activity. Results were reported to North Dakota Department of Health and Human Services (NDHHS).

In 2024 there were 38 cases of human WNV cases reported within 17 counties in North Dakota (Figure 1). Of the 38 cases reported, 22 (58%) met the case definition of West Nile neuroinvasive disease and 16 (42%) cases were classified as West Nile fever. Twenty-three of the cases were hospitalized and no cases were fatal. Eight asymptomatic blood donors with WNV infections were also reported to NDHHS in 2024.

Of the 38 total human cases, 14 were female, and 24 were male. Seventeen (~45%) of cases were age 60 or older. The elderly, especially those over 60, are at an increased risk for severe WNV illness (Table 1).

Mosquito monitoring was conducted weekly from late May through September in five counties. The state lab in Bismarck also set traps to collect mosquitoes and test for WNV (Figure 2).

Culex tarsalis, the main species that transmits WNV in the Midwest, typically reaches its peak numbers in North Dakota at the end of July or beginning of August. An increased number of *Culex tarsalis* pose a higher risk for human WNV infection.

Figure 1. 2024 WNV Human Cases by County, ND

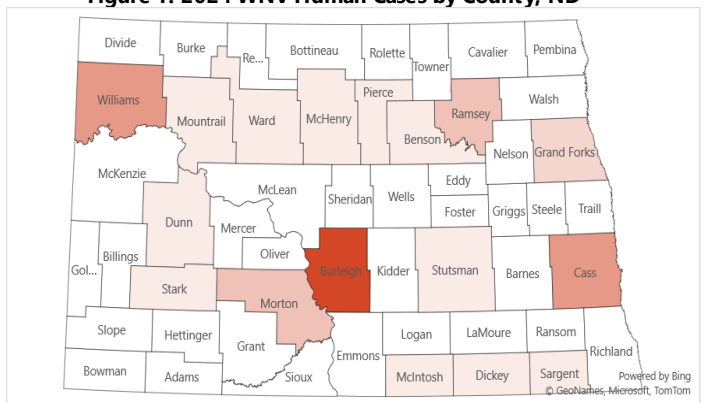


Table 1. 2024 WNV Human Cases by Age Group, ND

Age Group	Cases
<10	1
10-19	0
20-29	5
30-39	5
40-49	5
50-59	5
≥60	17

Figure 2. 2024 Positive Mosquito Pool(s)

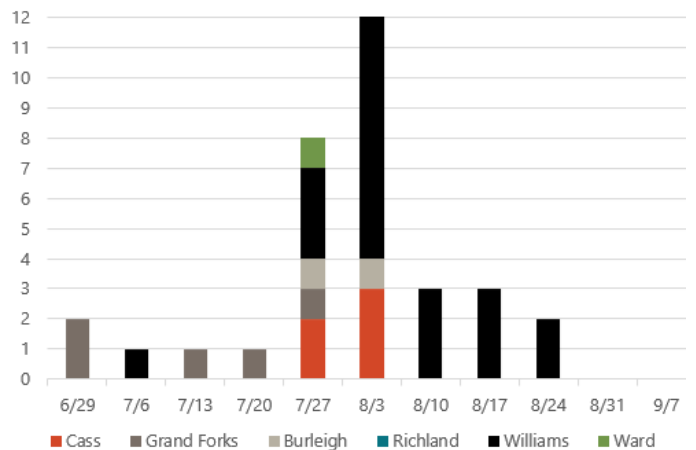


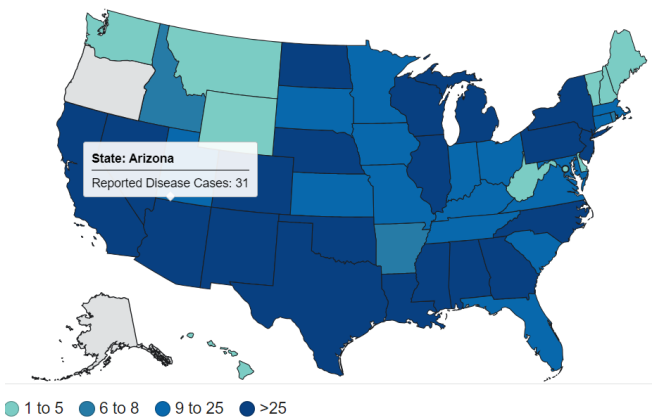
Table 2. WNV Activity by County, 2024

County	Human	Avian/ Veterinary	Live Mosquito Pools
Adams			
Barnes			
Benson	1		
Billings			
Bottineau			
Bowman			
Burke			
Burleigh	9		2
Cass	5		5
Cavalier			
Dickey	1		
Divide			
Dunn	1		
Eddy			
Emmons			
Foster			
Golden Valley			
Grand Forks	2		5
Grant			
Griggs			
Hettinger			
Kidder			
LaMoure			
Logan			
McHenry	1		
McIntosh	1		
McKenzie			
McLean			
Mercer			
Morton	3		
Mountrail	1		
Nelson			
Oliver			
Pembina			
Pierce	1		
Ramsey	3		
Ransom			
Renville			
Richland			
Rolette			
Sargent	1		
Sheridan			
Sioux			
Slope			
Stark	1		
Steele			
Stutsman	1		
Towner			
Traill			
Walsh			
Ward	1		2
Wells			
Williams	5		23

The North Dakota Veterinary Diagnostic Laboratory (NDVDL) in Fargo, ND, tests various animals for WNV. In 2024 no animals tested positive for WNV (Table 2).

Dead bird testing focused primarily on birds in the Corvidae family, which includes crows, jays, magpies, and ravens. In 2024 no birds tested positive for WNV (Table 2).

**West Nile Virus In the United States, 2024
(results as of January 14th, 2025)**



West Nile Virus in the United States

As of January 14th, 2025, 1,466 human cases of WNV have been reported in 49 states and the District of Columbia for 2024. Of these reported cases, 1,063 (73%) met the case definition of neuroinvasive disease. There have been 134 reported deaths due to WNV and 361 presumptive viremic blood donors.