2021 Summary of West Nile Virus Equine Cases in the United States

January 1 – December 31, 2021

This report is a descriptive summary of equine West Nile virus (WNV) cases in the United States as reported to the United States Department of Agriculture (USDA) during 2021. The USDA Animal and Plant Health Inspection Service (APHIS) Veterinary Services (VS) branch collaborates with the U.S. Centers for Disease Control and Prevention (CDC) and State veterinary and public health officials to facilitate communication about arbovirus disease cases in horses and confirm equine cases in each State. CDC collects arbovirus case information using its ArboNET reporting system, an electronic surveillance and reporting system for tracking and reporting arboviral activity in humans and animals. During the transmission season, VS disseminates the equine arbovirus case information to State animal health officials for confirmation and epidemiological follow-up. The USDA equine website provides further WNV information, including specific case definitions: https://www.aphis.usda.gov/aphis/ourfocus/animalhealth/animal-disease-information/equine. In this document, 'reported cases' of WNV may include presumptive positive and confirmed positive cases.

In 2021, **220** equine cases of WNV were reported from **34** States. Figure 1 shows the annual number of equine WNV cases reported in the United States from 2008 through 2021. Figure 2 shows the number of equine WNV cases in each State in 2021, and table 1 provides the number of cases per county or parish in those States in 2021.
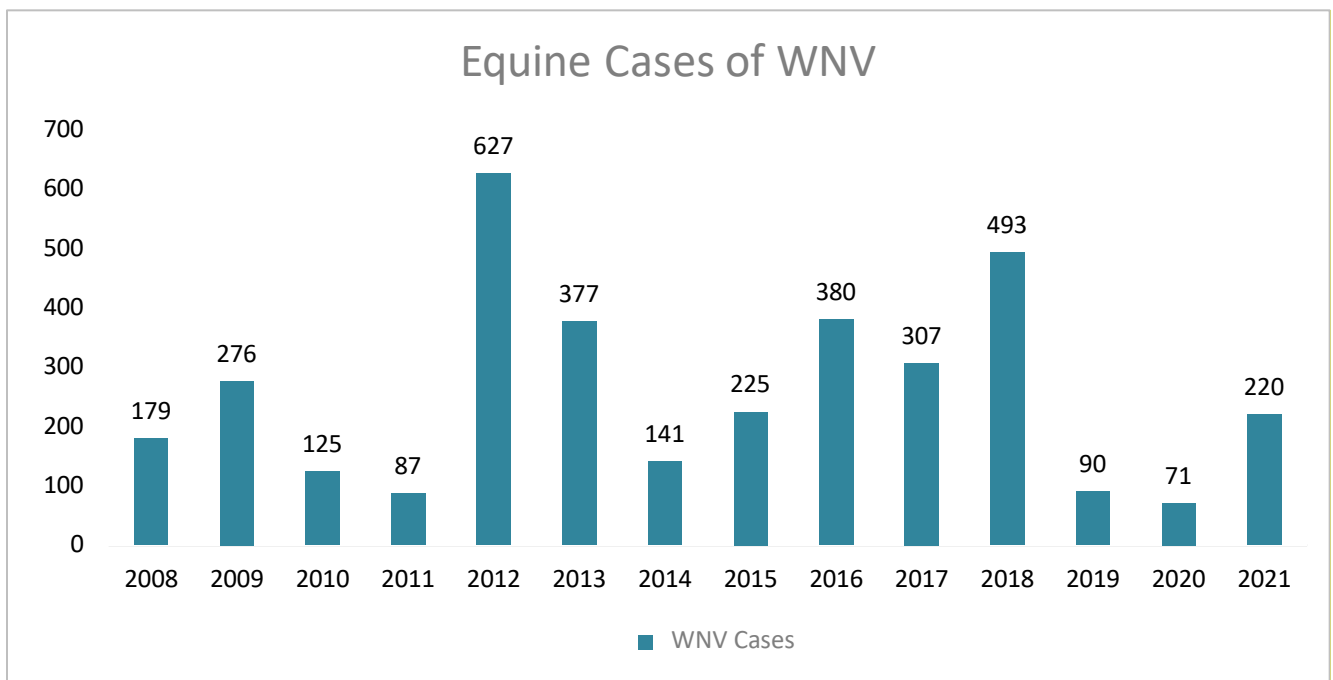

Figure 1. Reported U.S. equine cases of West Nile virus, 2008-2021
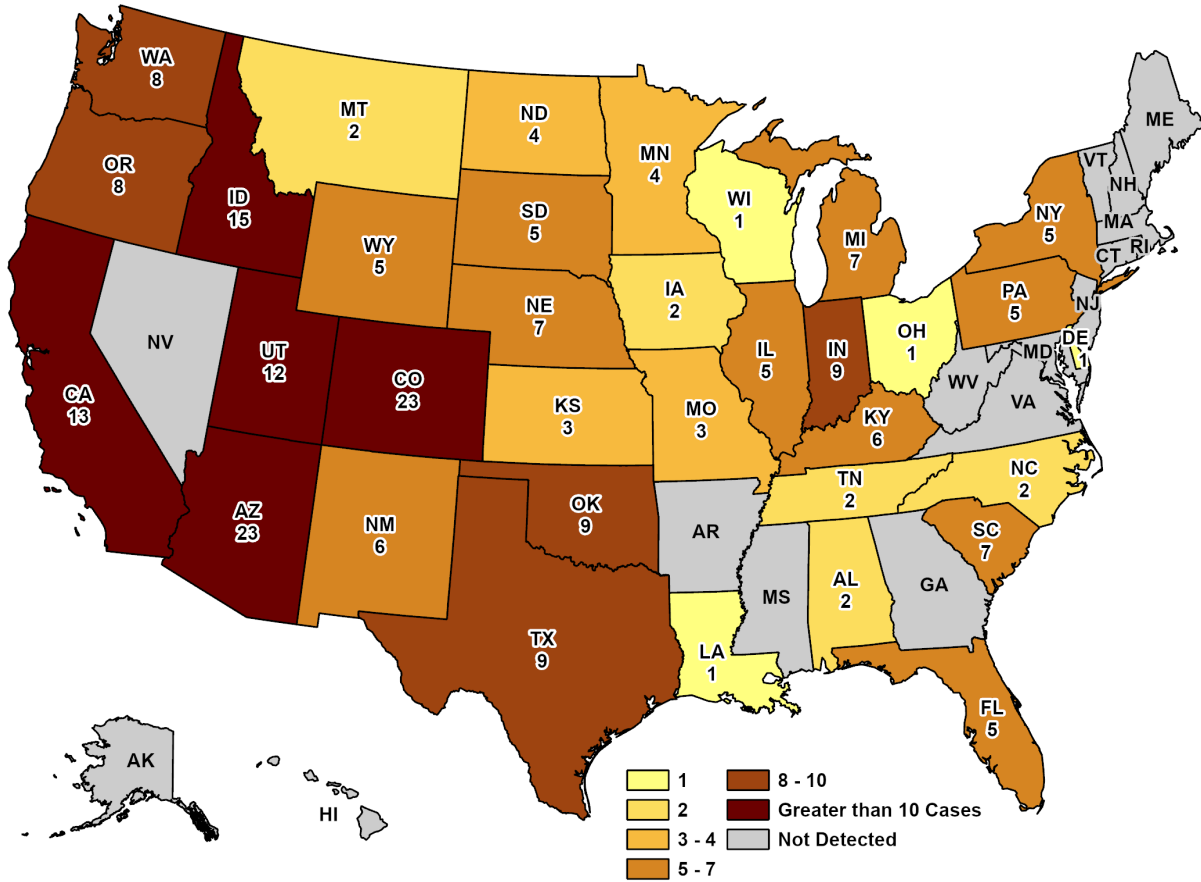
Figure 2. Distribution of reported equine WNV cases in 2021 (220 total cases)

Table 1. Number of reported equine WNV cases by State and county, 2021

State	County	West Nile Virus Reported Cases
Alabama	Baldwin County	1
	Conecuh County	1
Total cases for Alabama		**2**
Arizona	Cochise County	1
	Gila County	1
	Graham County	3
	Maricopa County	8
	Pima County	8
	Pinal County	2
Total cases for Arizona		**23**
California	Amador County	1
	Fresno County	2

State	County	West Nile Virus Reported Cases
	Kings County	1
	Merced County	1
	Sacramento County	2
	San Joaquin County	3
	Stanislaus County	1
	Yuba County	2
Total cases for California		**13**
Colorado	Adams County	3
	Boulder County	1
	Douglas County	1
	Elbert County	1
	El Paso County	1
	Fremont County	1
	Larimer County	1
	Logan County	1
	Mesa County	1
	Morgan County	2
	Otero County	1
	Weld County	9
Total cases for Colorado		**23**
Delaware	Kent County	1
Total cases for Delaware		**1**
Florida	Glades County	1
	Hendry County	1
	Lee County	1
	Suwannee County	1
	Volusia County	1
Total cases for Florida		**5**
Idaho	Ada County	4
	Blaine County	1
	Canyon County	3
	Elmore County	1
	Gooding County	1
	Lemhi County	2
	Payette County	1
	Twin Falls County	1
	Washington County	1

State	County	West Nile Virus Reported Cases
Total cases for Idaho		**15**
Illinois	Douglas County	3
	Moultrie County	1
	Richland County	1
Total cases for Illinois		**5**
Indiana	Adams County	6
	Elkhart County	1
	Monroe County	1
	Ripley County	1
Total cases for Indiana		**9**
Iowa	Howard County	2
Total cases for Iowa		**2**
Kansas	Ford County	1
	Shawnee County	2
Total cases for Kansas		**3**
Kentucky	Ballard County	1
	Christian County	1
	Graves County	1
	Todd County	1
	Trigg County	1
	Woodford County	1
Total cases for Kentucky		**6**
Louisiana	Beauregard Parish	1
Total cases for Louisiana		**1**
Michigan	Genesee County	1
	Kent County	1
	Lenawee County	1
	Midland County	1
	Montcalm County	1
	Sanilac County	1
	Van Buren County	1
Total cases for Michigan		**7**
Minnesota	Benton County	1
	Crow Wing County	1
	Freeborn County	1
	Wadena County	1
Total cases for Minnesota		**4**

State	County	West Nile Virus Reported Cases
Missouri	Macon County	1
	Moniteau County	2
Total cases for Missouri		**3**
Montana	Phillips County	1
	Richland County	1
Total cases for Montana		**2**
Nebraska	Arthur County	1
	Cherry County	1
	Grant County	1
	Holt County	1
	Lincoln County	1
	Scotts Bluff County	1
	Sheridan County	1
Total cases for Nebraska		**7**
New Mexico	Dona Ana County	1
	Luna County	1
	Otero County	2
	Quay County	1
	Santa Fe County	1
Total for New Mexico		**6**
New York	Cattaraugus County	1
	Chautauqua County	1
	Lewis County	1
	Onondaga County	1
	Yates County	1
Total for New York		**5**
North Carolina	Guilford County	1
	Union County	1
Total for North Carolina		**2**
North Dakota	Barnes County	1
	McIntosh County	1
	Nelson County	1
	Ramsey County	1
Total cases for North Dakota		**4**
Ohio	Cuyahoga County	1
Total for Ohio		**1**
Oklahoma	Adair County	1

State	County	West Nile Virus Reported Cases
	Ellis County	1
	Garfield County	1
	Jackson County	1
	McClain County	1
	Oklahoma County	2
	Osage County	1
	Texas County	1
Total cases for Oklahoma		**9**
Oregon	Baker County	1
	Jackson County	1
	Klamath County	1
	Malheur County	3
	Morrow County	1
	Umatilla County	1
Total cases for Oregon		**8**
Pennsylvania	Cumberland County	1
	Lancaster County	2
	Northumberland County	1
	Snyder County	1
Total cases for Pennsylvania		**5**
South Carolina	Bamberg County	1
	Berkeley County	2
	Colleton County	1
	Lexington County	1
	Orangeburg County	1
	Sumter County	1
Total cases for South Carolina		**7**
South Dakota	Bon Homme County	2
	Butte County	1
	Jackson County	1
	Stanley County	1
Total cases for South Dakota		**5**
Tennessee	Davidson County	1
	Weakley County	1
Total cases for Tennessee		**2**
Texas	Freestone County	1
	Grayson County	1

State	County	West Nile Virus Reported Cases
	Hood County	1
	Llano County	1
	Lubbock County	2
	Parker County	1
	Reeves County	1
	Scurry County	1
Total cases for Texas		**9**
Utah	Box Elder County	2
	Salt Lake County	1
	Utah County	1
	Weber County	8
Total cases for Utah		**12**
Washington	Benton County	1
	Kittitas County	1
	Klickitat County	1
	Lewis County	1
	Yakima County	4
Total cases for Washington		**8**
Wisconsin	Crawford County	1
Total cases for Wisconsin		**1**
Wyoming	Campbell County	1
	Converse County	1
	Platte County	1
	Uinta County	1
	Washakie County	1
Total cases for Wyoming		**5**
Total Reported West Nile Virus Equine Cases for the United States		**220**

WNV can be a deadly disease in equids, with mortality occurring in roughly 33 percent of all infected animals. Furthermore, up to 40 percent of affected equids may still exhibit neurological signs as long as 6 months after diagnosis.[1] This susceptibility to the virus makes equids a recognized WNV sentinel species for the human population. The main public health purpose of confirming and reporting equine WNV cases is to inform human surveillance efforts. Because equine commercial vaccines are available and convey good protection against WNV infection, reported cases of WNV in equids tend to be in unvaccinated or under-vaccinated animals.

1. "Core Vaccination Guidelines: West Nile Virus." *American Association of Equine Practitioners*, https://aaep.org/guidelines/vaccination-guidelines/core-vaccination-guidelines/west-nile-virus. Accessed 9 April 2021.