

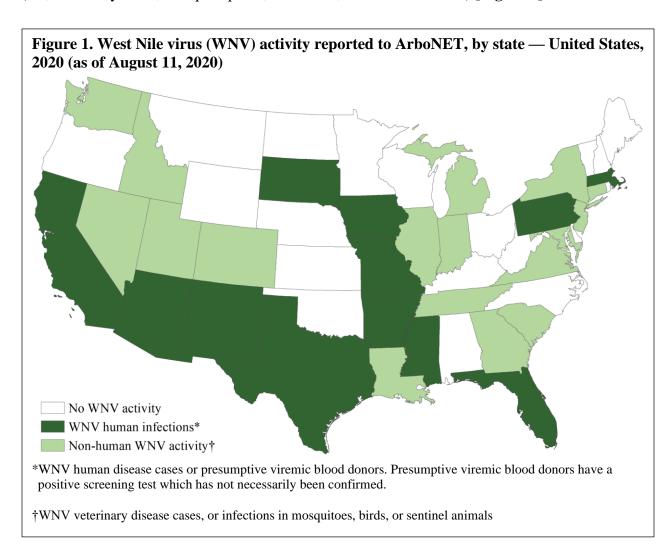
# West Nile virus and other domestic arboviral activity -- United States, 2020 Provisional data reported to ArboNET

August 11, 2020

This update from the CDC Arboviral Disease Branch includes provisional data reported to ArboNET for **January 1–August 11, 2020** for West Nile virus and selected other nationally notifiable domestic arboviruses. Additional resources for ArboNET and arboviral diseases are provided on page 9.

### West Nile virus (WNV) activity in 2020

As of August 11<sup>th</sup>, 136 counties from 29 states have reported WNV activity to ArboNET for 2020, including 12 states with reported WNV human infections (i.e., disease cases or viremic blood donors) and 17 additional states with reported WNV activity in non-human species only (i.e., veterinary cases, mosquito pools, dead birds, or sentinel animals) [Figure 1].





## Reported WNV disease cases

To date, 22 human WNV disease cases have been reported from 19 counties in 12 states [**Table 1**]. Dates of illness onset for cases ranged from January–August [**Figure 2**].

Of the 22 reported cases, 13 (59.1%) were classified as neuroinvasive disease (e.g., meningitis or encephalitis) and 9 (40.9%) were classified as non-neuroinvasive disease [**Table 1 and Figure 3**].

# Presumptive viremic donors (PVDs)

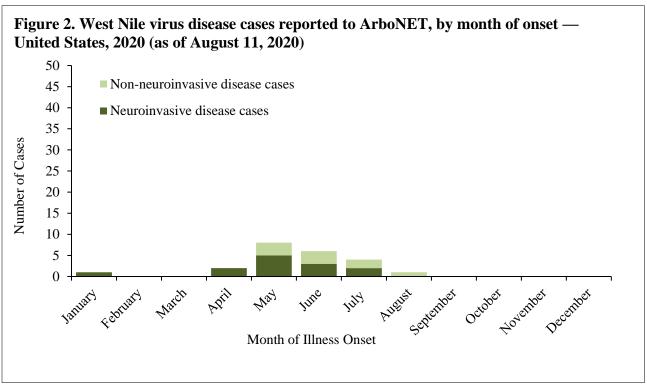
Overall, 32 WNV PVDs have been reported from four states. [Table 1].

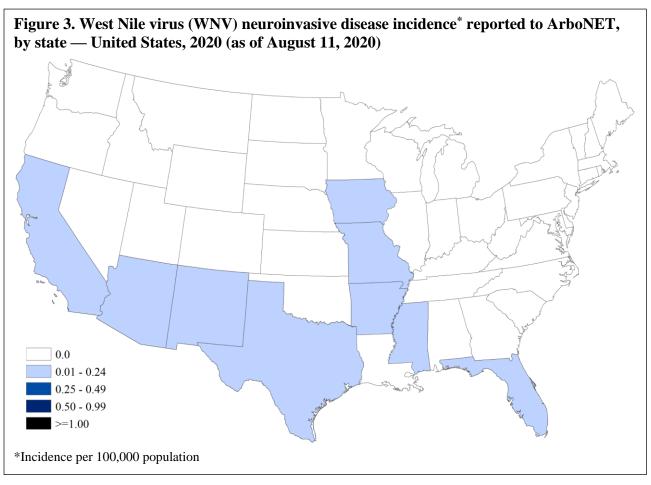
Table 1. West Nile virus infections in humans reported to ArboNET, 2020

	Human disease cases reported to CDC*				Presumptive viremic blood
State	Neuroinvasive	Non-neuroinvasive	Total	Deaths	donors
Arizona	3	1	4	0	0
Arkansas	1	0	1	0	0
California	1	1	2	0	2
Florida	1	2	3	0	24
Iowa	1	0	1	0	0
Massachusetts	0	1	1	0	1
Mississippi	1	1	2	0	0
Missouri	1	0	1	0	0
New Mexico	3	0	3	0	0
Pennsylvania	0	1	1	0	0
South Dakota	0	2	2	0	0
Texas	1	0	1	0	5
Totals	13	9	22	0	32

<sup>\*</sup>Includes confirmed and probable cases









# Eastern equine encephalitis virus (EEEV) activity in 2020

As of August 11<sup>th</sup>, one human case of EEE has been reported from Massachusetts [**Figure 4 and Table 2**]. Nine states have reported EEEV activity in non-human species to ArboNET for 2020.

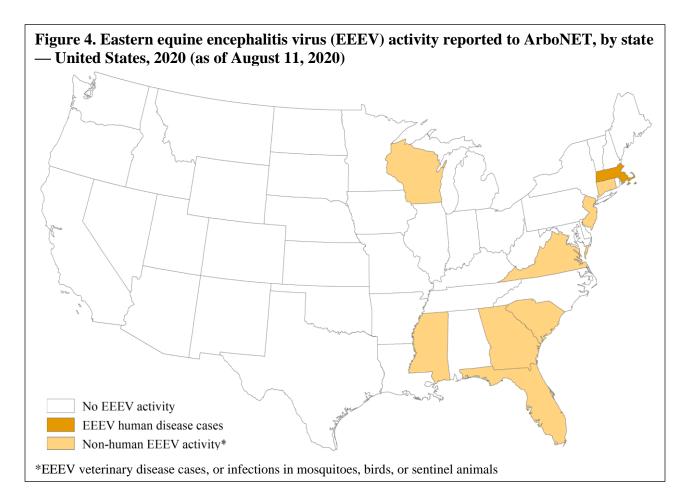


Table 2. Eastern Equine encephalitis virus human disease cases reported to ArboNET, United States, 2020

	Neuroinvasive	Non-neuroinvasive		
State	disease cases	disease cases	Total cases*	Deaths
Massachusetts	1	0	1	0
Totals	1	0	1	0

<sup>\*</sup>Includes confirmed and probable cases



## Jamestown Canyon virus (JCV) activity in 2020

As of August 11<sup>th</sup>, three human cases of JCV have been reported from Michigan and New Hampshire [**Table 3 and Figure 5**]. To date, two states, Connecticut and New Jersey, have reported JCV activity in non-human species to ArboNET for 2020.

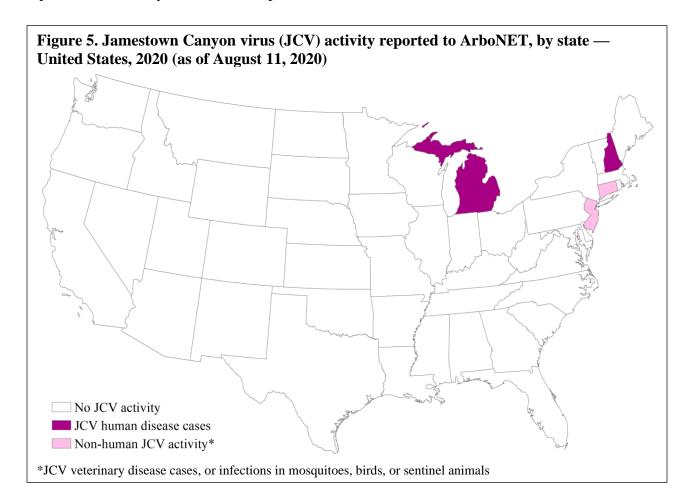


Table 3. Jamestown Canyon virus human disease cases reported to ArboNET, United States, 2020

714105, 2020	Neuroinvasive	Non-neuroinvasive		
State	disease cases	disease cases	Total cases*	Deaths
Michigan	1	0	1	0
New Hampshire	2	0	2	0
Totals	3	0	3	0

<sup>\*</sup>Includes confirmed and probable cases



# La Crosse encephalitis virus (LACV) activity in 2020

As of August 11<sup>th</sup>, six human cases of LACV disease in two states, North Carolina and Tennessee, have been reported to ArboNET for 2020 [**Figure 6 and Table 4**]. To date, no states have reported LACV activity in non-human species.

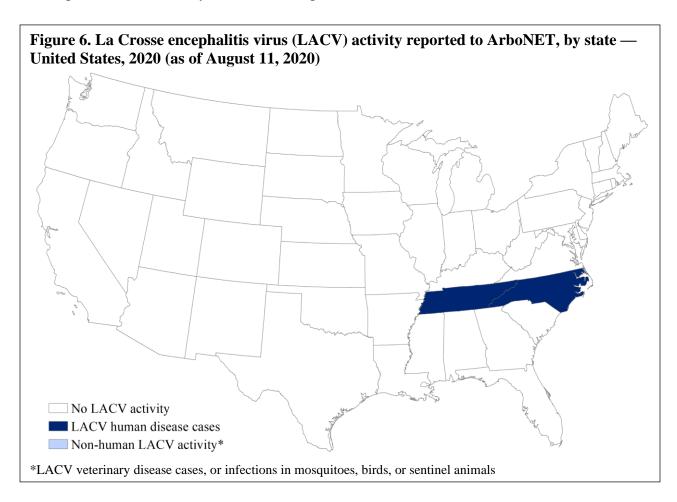


Table 4. La Crosse encephalitis virus human disease cases reported to ArboNET, United States, 2020

	Neuroinvasive	Non-neuroinvasive		
State	disease cases	disease cases	Total cases*	Deaths
North Carolina	1	0	1	0
Tennessee	5	0	5	0
Totals	6	0	6	0

<sup>\*</sup>Includes confirmed and probable cases



<u>Powassan virus (POWV) activity in 2020</u> As of August 11<sup>th</sup>, four human cases of POWV disease in three states, Connecticut, Massachusetts, and Pennsylvania, have been reported to ArboNET for 2020 [Figure 7 and Table 5].

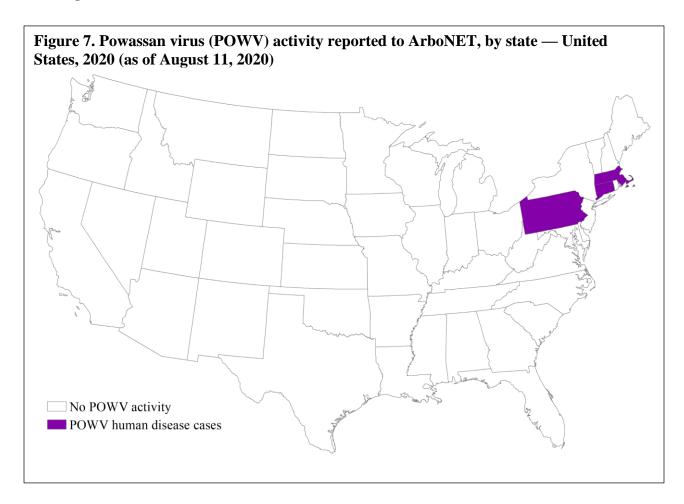


Table 5. Powassan virus human disease cases reported to ArboNET, United States, 2020

	Neuroinvasive	Non-neuroinvasive		
State	disease cases	disease cases	Total cases*	Deaths
Connecticut	1	0	1	0
Massachusetts	1	0	1	0
Pennsylvania	2	0	2	0
Totals	4	0	4	0

<sup>\*</sup>Includes confirmed and probable cases



# St. Louis encephalitis virus (SLEV) activity in 2020

As of August 11<sup>th</sup>, two human cases of SLEV disease has been reported from Arizona [Figure 8 and Table 6]. To date, two states, California and Texas, have reported SLEV activity in non-human species to ArboNET for 2020.

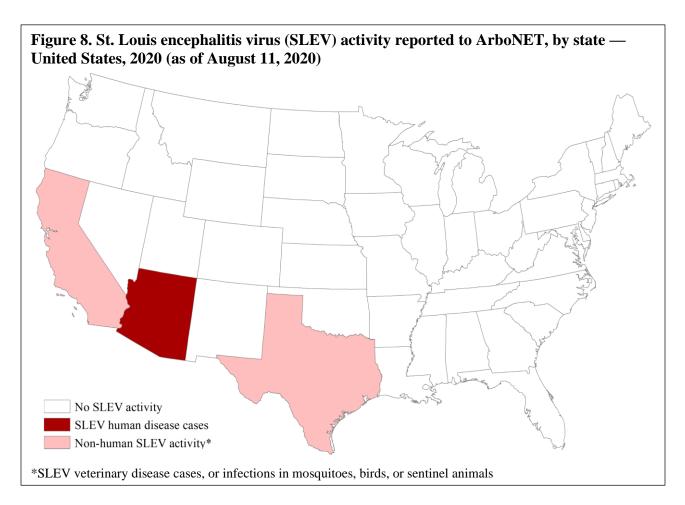


Table 6. St. Louis encephalitis human disease cases reported to ArboNET, United States, 2020

State	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Arizona	2	0	2	0
Totals	2	0	2	0

<sup>\*</sup>Includes confirmed and probable cases.



### **About ArboNET**

ArboNET is a national arboviral surveillance system managed by CDC and state health departments. In addition to human disease, ArboNET maintains data on arboviral infections among presumptive viremic blood donors (PVDs), veterinary disease cases, mosquitoes, dead birds, and sentinel animals. As with other national surveillance data, ArboNET data has several limitations that should be considered in analysis, interpretation, and reporting [Box].

## **Box: Limitations of ArboNET data**

The following should be considered in the analysis, interpretation, and reporting of ArboNET data:

- 1. ArboNET is a passive surveillance system. It is dependent on clinicians considering the diagnosis of an arboviral disease and obtaining the appropriate diagnostic test, and reporting of laboratory-confirmed cases to public health authorities. Diagnosis and reporting are incomplete, and the incidence of arboviral diseases is underestimated.
- 2. Reported neuroinvasive disease cases are considered the most accurate indicator of arboviral activity in humans because of the substantial associated morbidity. In contrast, reported cases of nonneuroinvasive arboviral disease are more likely to be affected by disease awareness and healthcare-seeking behavior in different communities and by the availability and specificity of laboratory tests performed. Surveillance data for nonneuroinvasive disease should be interpreted with caution and generally should not be used to make comparisons between geographic areas or over time.

## **Additional resources**

For additional arboviral disease information and data, please visit the following websites:

- CDC's Division of Vector-Borne Diseases: http://www.cdc.gov/ncezid/dvbd/
- National Notifiable Diseases Surveillance System:
   <a href="http://wwwn.cdc.gov/nndss/conditions/arboviral-diseases-neuroinvasive-and-non-neuroinvasive/case-definition/2015/">http://wwwn.cdc.gov/nndss/conditions/arboviral-diseases-neuroinvasive-and-non-neuroinvasive/case-definition/2015/</a>
- CDC Disease Maps
   https://wwwn.cdc.gov/arbonet/Maps/ADB\_Diseases\_Map/index.html
- AABB (American Association of Blood Banks):
   www.aabb.org/programs/biovigilance/Pages/wnv.aspx