

**West Nile virus and other domestic arboviral activity -- United States, 2017**  
**Provisional data reported to ArboNET**  
*Tuesday, October 3, 2017*

This update from the CDC Arboviral Disease Branch includes provisional data reported to ArboNET for **January 1 – October 3, 2017** for West Nile virus and selected other nationally notifiable domestic arboviruses. Additional resources for ArboNET and arboviral diseases are provided on page 10.

**West Nile virus (WNV) activity in 2017**

As of October 3<sup>rd</sup>, 1,015 counties from 47 states and the District of Columbia have reported WNV activity to ArboNET for 2017, including 45 states and the District of Columbia with reported WNV human infections (i.e., disease cases or viremic blood donors) and two additional states with reported WNV activity in non-human species only (i.e., veterinary cases, mosquito pools, dead birds, or sentinel animals) [Figure 1].

**Figure 1. West Nile virus (WNV) activity reported to ArboNET, by state — United States, 2017 (as of October 3, 2017)**



\*WNV human disease cases or presumptive viremic blood donors. Presumptive viremic blood donors have a positive screening test which has not necessarily been confirmed.

†WNV veterinary disease cases, or infections in mosquitoes, birds, or sentinel animals



Reported WNV disease cases

To date, 1,175 human WNV disease cases have been reported from 431 counties in 44 states and the District of Columbia [**Table 1**]. Dates of illness onset for cases ranged from March–September [**Figure 2**].

Of these, 741 (63%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 434 (37%) were classified as non-neuroinvasive disease [**Figure 3**].

Presumptive viremic donors (PVDs)

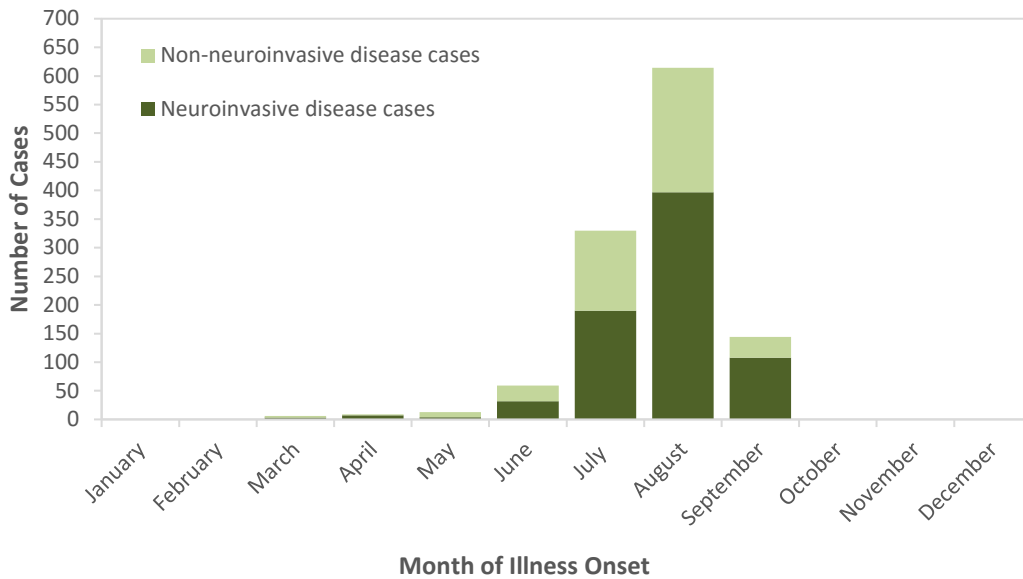
Overall, 174 WNV PVDs have been reported from 31 states [**Table 1**].

**Table 1. West Nile virus infections in humans reported to ArboNET, 2017**

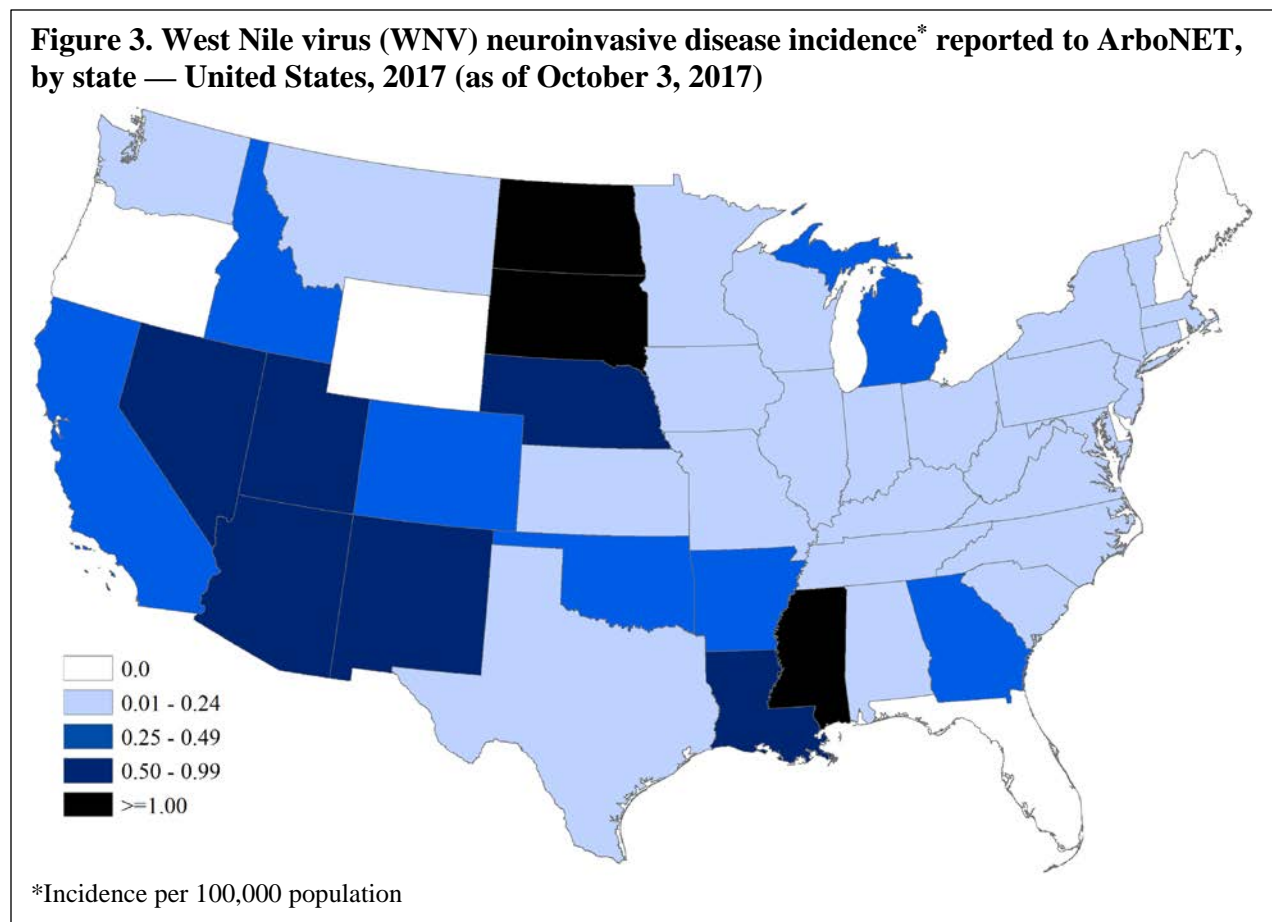
State	Human disease cases reported to CDC*				Presumptive viremic blood donors
	Neuroinvasive	Non-neuroinvasive	Total	Deaths	
Alabama	1	0	1	0	0
Arizona	51	12	63	5	13
Arkansas	11	3	14	3	6
California	165	46	211	8	28
Colorado	17	26	43	2	3
Connecticut	2	1	3	0	0
District of Columbia	0	1	1	0	0
Florida	0	0	0	0	1
Georgia	27	4	31	5	6
Idaho	6	5	11	0	0
Illinois	32	9	41	0	0
Indiana	12	4	16	3	6
Iowa	5	2	7	2	5
Kansas	5	9	14	0	3
Kentucky	4	1	5	0	0
Louisiana	29	8	37	3	2
Maryland	3	0	3	0	0
Massachusetts	1	0	1	0	0
Michigan	28	7	35	0	9
Minnesota	9	14	23	1	19
Mississippi	42	15	57	2	3
Missouri	13	0	13	0	0
Montana	2	7	9	0	3
Nebraska	13	39	52	0	14
Nevada	22	27	49	2	2
New Jersey	3	1	4	0	0
New Mexico	17	8	25	1	2
New York	18	6	24	0	2
North Carolina	1	0	1	0	0
North Dakota	16	41	57	1	1
Ohio	13	8	21	1	8
Oklahoma	16	9	25	2	5
Oregon	0	5	5	1	0
Pennsylvania	7	5	12	1	0
Rhode Island	0	1	1	0	1
South Carolina	8	2	10	2	2
South Dakota	25	42	67	3	2
Tennessee	10	6	16	1	2
Texas	56	36	92	3	12
Utah	29	19	48	3	4
Vermont	1	0	1	0	1
Virginia	7	1	8	0	3
Washington	4	1	5	0	1
West Virginia	1	0	1	0	0
Wisconsin	9	2	11	1	5
Wyoming	0	1	1	0	0
<b>Totals</b>	<b>741</b>	<b>434</b>	<b>1,175</b>	<b>56</b>	<b>174</b>

\*Includes confirmed and probable cases

**Figure 2. West Nile virus disease cases reported to ArboNET, by month of onset — United States, 2017 (As of October 3, 2017)**



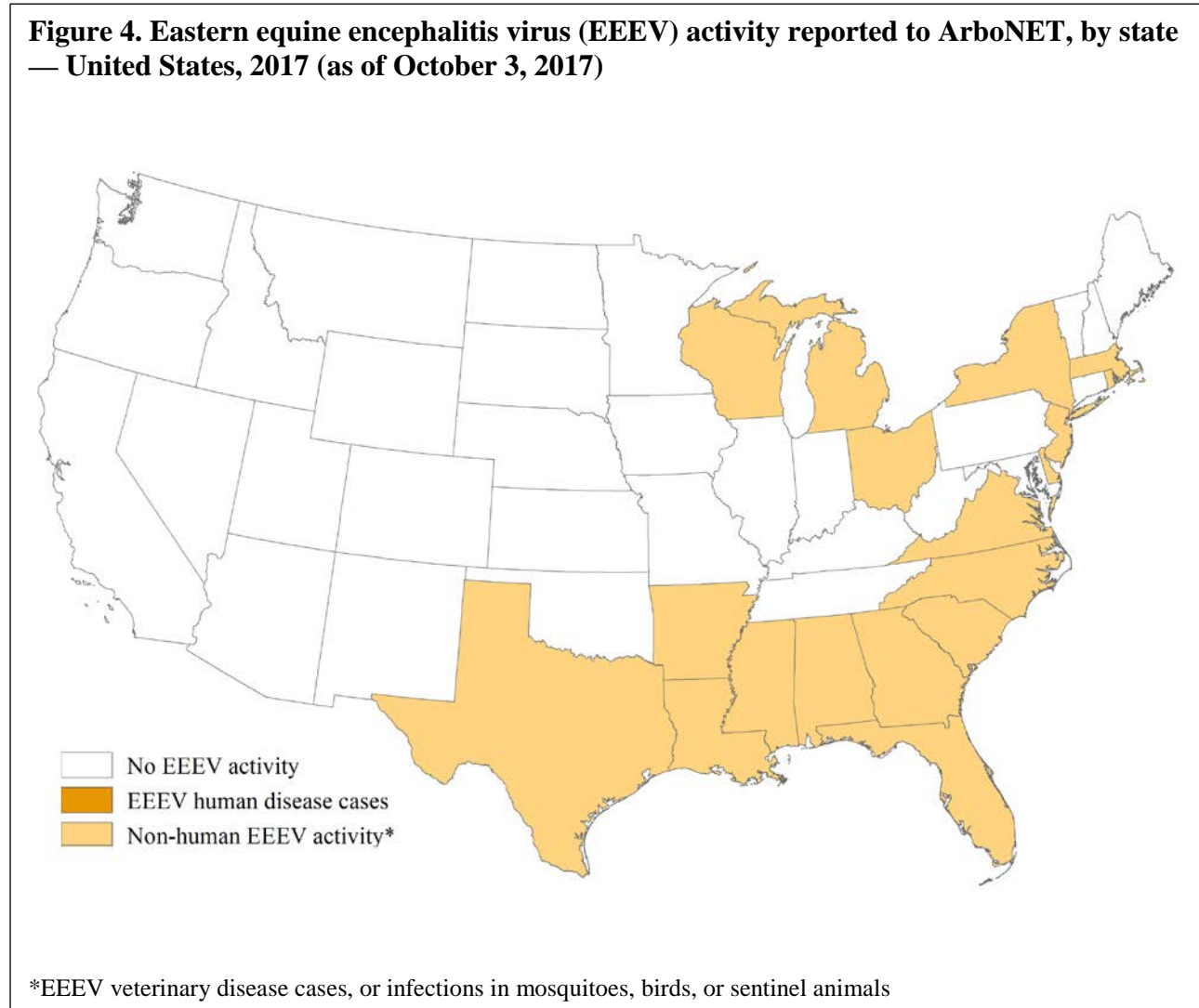
**Figure 3. West Nile virus (WNV) neuroinvasive disease incidence\* reported to ArboNET, by state — United States, 2017 (as of October 3, 2017)**



**Eastern equine encephalitis virus (EEEV) activity in 2017**

As of October 3<sup>rd</sup>, 62 counties in 18 states reported EEEV activity in non-human species to ArboNET for 2017 [Figure 4]. To date, no human cases of EEEV disease have been reported.

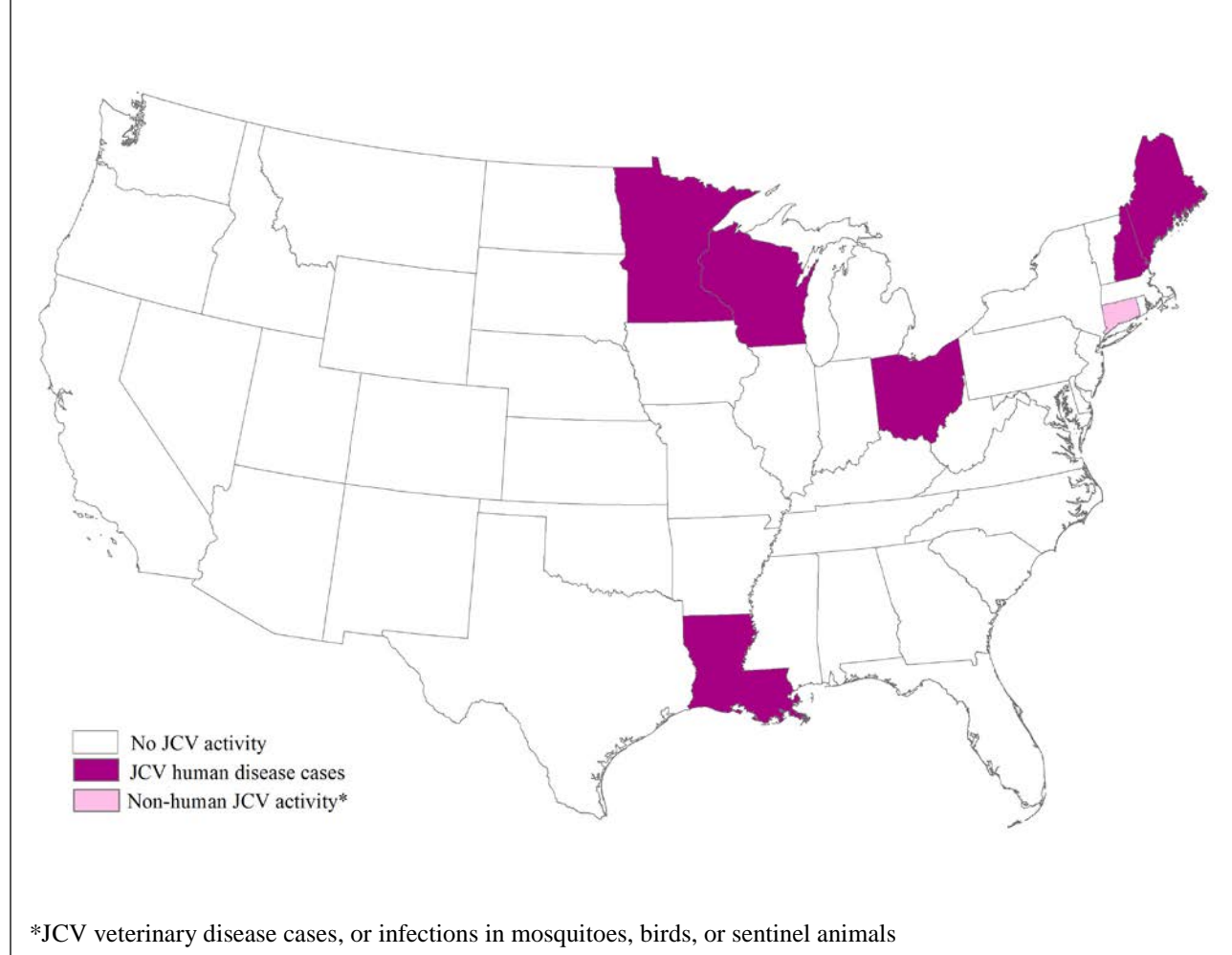
**Figure 4. Eastern equine encephalitis virus (EEEV) activity reported to ArboNET, by state — United States, 2017 (as of October 3, 2017)**



**Jamestown Canyon virus (JCV) activity in 2017**

As of October 3<sup>rd</sup>, 33 counties in six states have reported human cases of JCV disease to ArboNET for 2017 [Figure 5 and Table 2]. Seven counties in Connecticut reported JCV activity in non-human species only.

**Figure 5. Jamestown Canyon virus (JCV) activity reported to ArboNET, by state — United States, 2017 (as of October 3, 2017)**



**Table 2. Jamestown canyon virus human disease cases reported to ArboNET, United States, 2017**

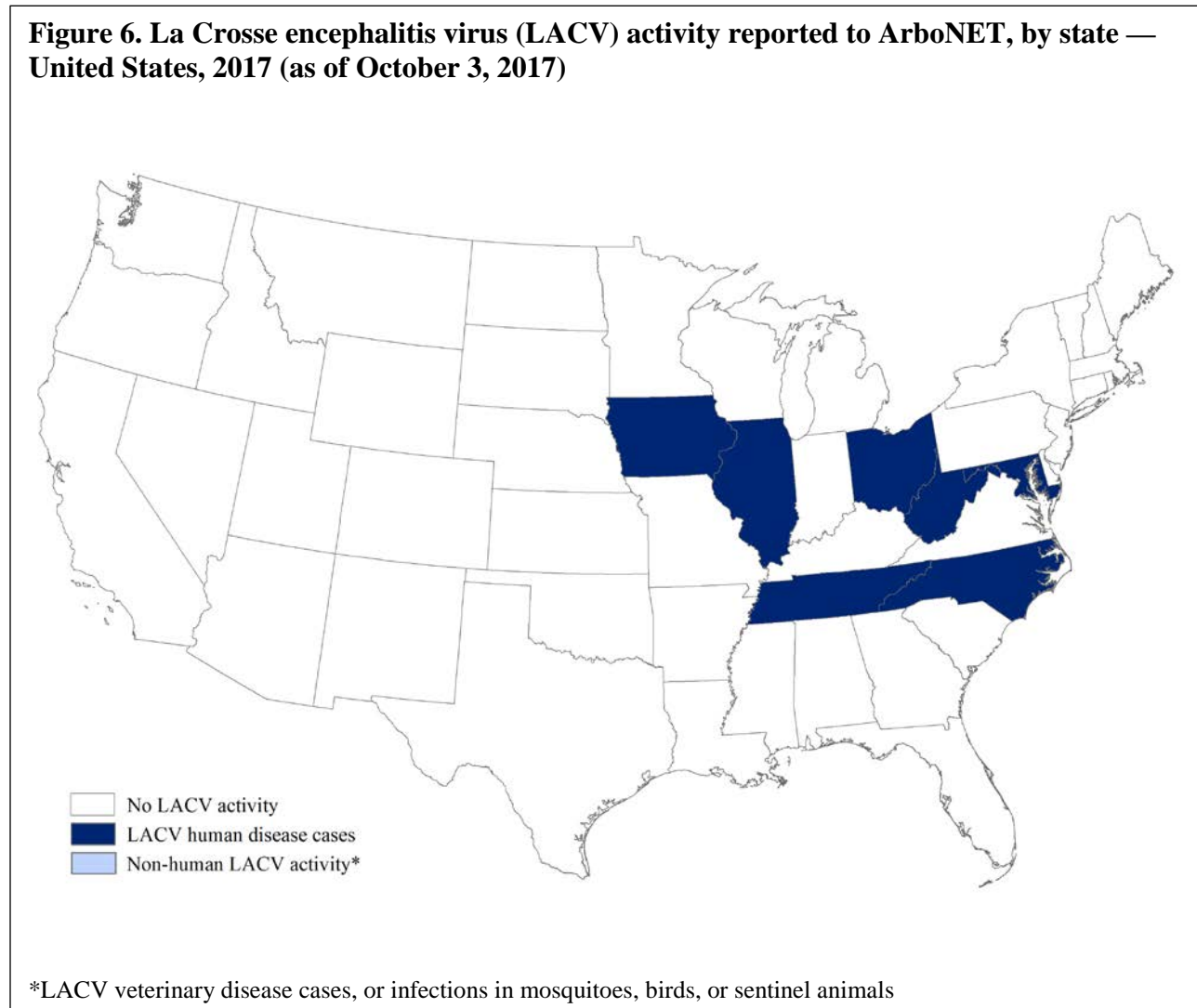
	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Louisiana	1	0	1	0
Maine	1	1	2	0
Minnesota	8	6	14	0
New Hampshire	0	2	2	0
Ohio	1	0	1	0
Wisconsin	12	7	19	1
<b>Totals</b>	<b>23</b>	<b>16</b>	<b>39</b>	<b>1</b>

\*Includes confirmed and probable cases.

**La Crosse encephalitis virus (LACV) activity in 2017**

As of October 3<sup>rd</sup>, 22 counties in seven states have reported human cases of LACV disease to ArboNET for 2017 [Figure 6 and Table 3].

**Figure 6. La Crosse encephalitis virus (LACV) activity reported to ArboNET, by state — United States, 2017 (as of October 3, 2017)**



**Table 3. La Crosse encephalitis virus human disease cases reported to ArboNET, United States, 2017**

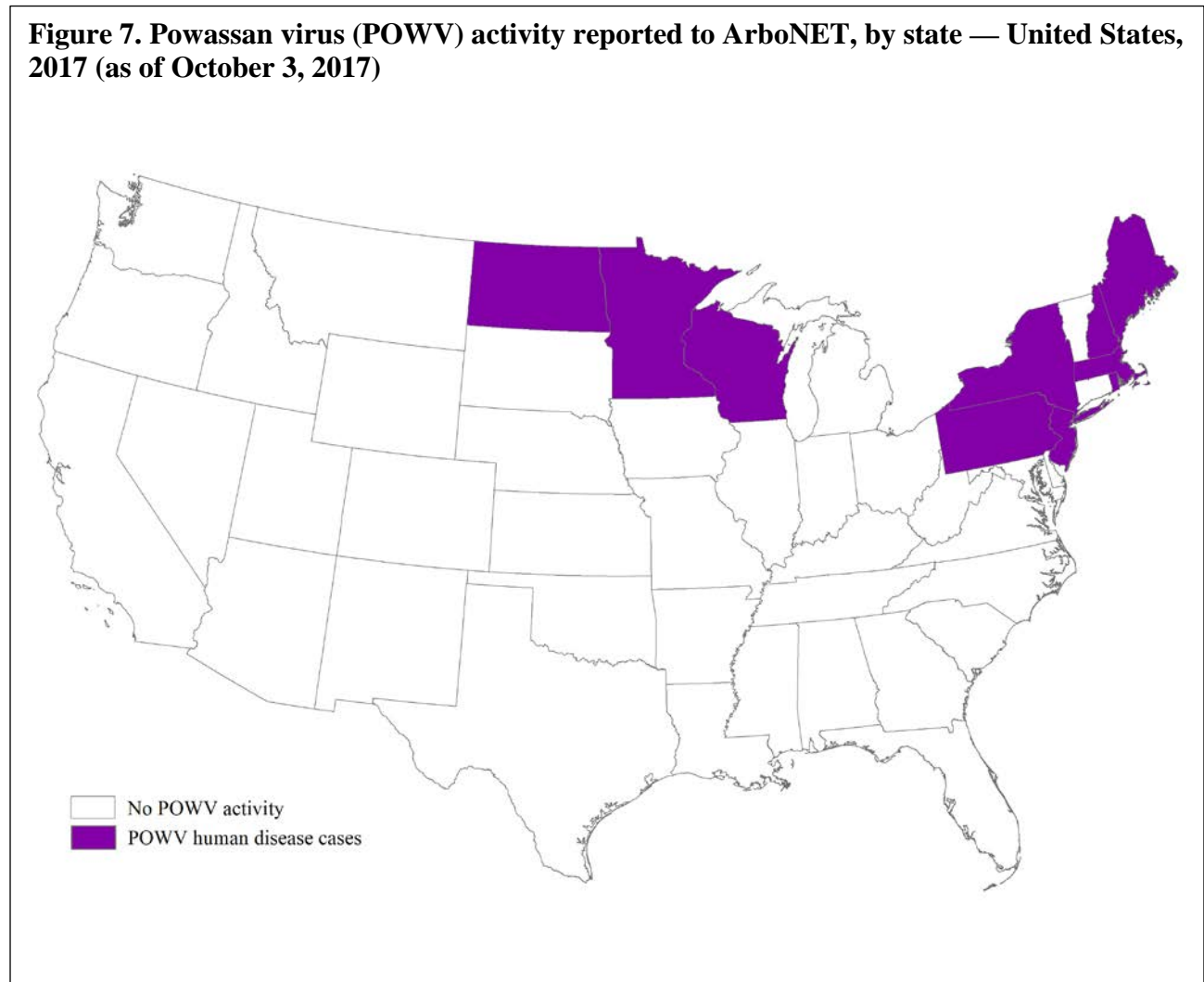
	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Illinois	1	0	1	0
Iowa	1	0	1	0
Maryland	1	0	1	0
North Carolina	5	1	6	0
Ohio	5	0	5	0
Tennessee	11	0	11	0
West Virginia	4	0	4	0
<b>Totals</b>	<b>28</b>	<b>1</b>	<b>29</b>	<b>0</b>

\*Includes confirmed and probable cases.

**Powassan virus (POWV) activity in 2017**

As of October 3<sup>rd</sup>, 17 counties in 10 states have reported human cases of POWV disease to ArboNET for 2017 [Figure 7 and Table 4].

**Figure 7. Powassan virus (POWV) activity reported to ArboNET, by state — United States, 2017 (as of October 3, 2017)**



**Table 4. Powassan virus human disease cases reported to ArboNET, United States, 2017**

	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Maine	3	0	3	0
Massachusetts	2	0	2	0
Minnesota	5	1	6	0
New Hampshire	1	0	1	0
New Jersey	3	0	3	0
New York	2	1	3	1
North Dakota	1	0	1	0
Pennsylvania	2	0	2	0
Rhode Island	1	0	1	1
Wisconsin	1	0	1	0
<b>Totals</b>	<b>21</b>	<b>2</b>	<b>23</b>	<b>2</b>

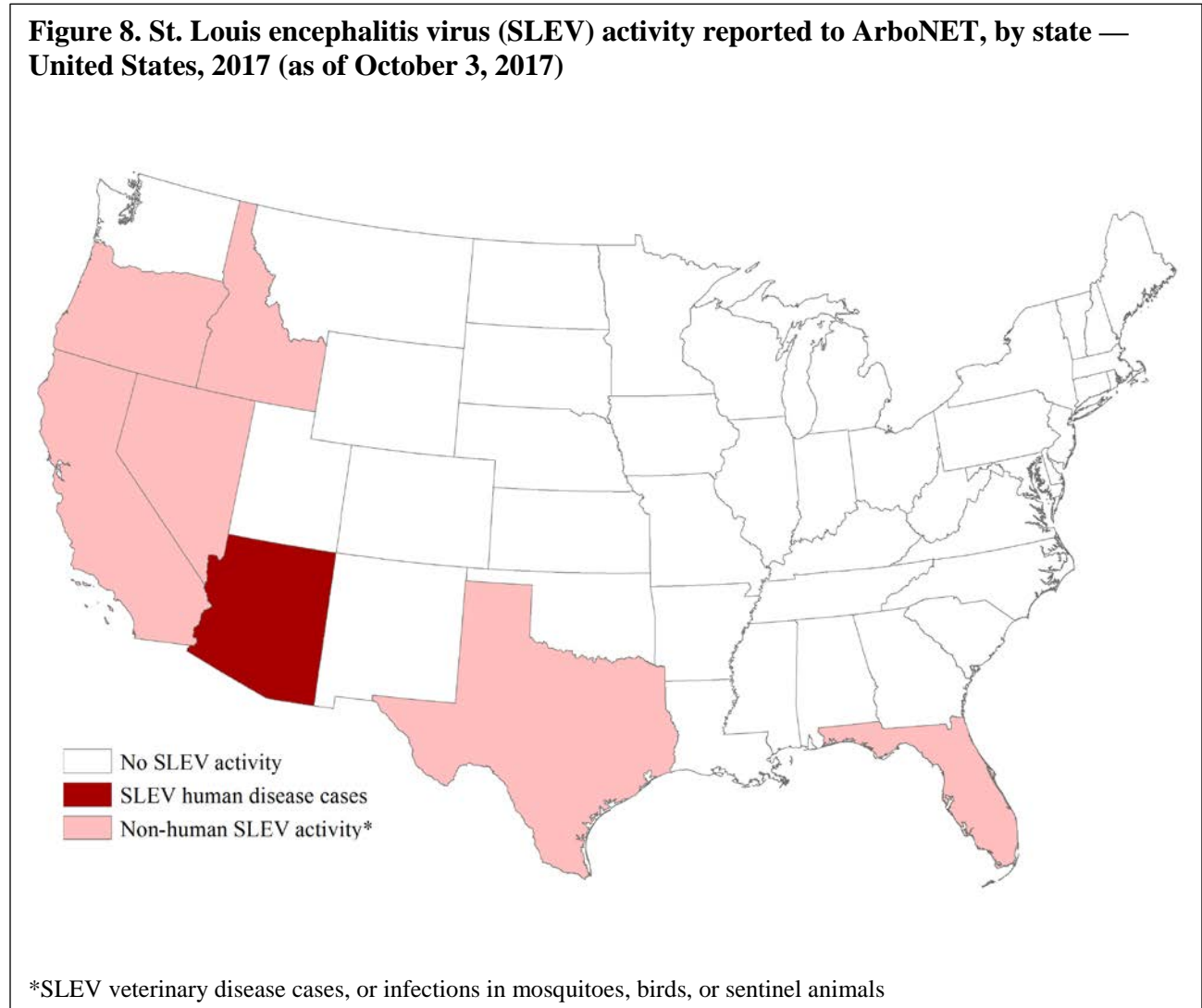
\*Includes confirmed and probable cases.



**St. Louis encephalitis virus (SLEV) activity in 2017**

As of October 3<sup>rd</sup>, two counties in Arizona have reported human cases of SLEV disease to ArboNET for 2017 [Figure 8 and Table 5]. Additionally, 24 counties in six other states reported SLEV activity in non-human species only.

**Figure 8. St. Louis encephalitis virus (SLEV) activity reported to ArboNET, by state — United States, 2017 (as of October 3, 2017)**



**Table 5. St. Louis encephalitis virus human disease cases reported to ArboNET, United States, 2017**

	Neuroinvasive disease cases	Non-neuroinvasive disease cases	Total cases*	Deaths
Arizona	1	1	2	0
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>0</b>

\*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:  
<http://wwwn.cdc.gov/nndss/conditions/arboviral-diseases-neuroinvasive-and-non-neuroinvasive/case-definition/2015/>
- U.S. Geological Survey (USGS):  
<http://diseasemaps.usgs.gov/mapviewer/>
- AABB (American Association of Blood Banks):  
[www.aabb.org/programs/biovigilance/Pages/wnv.aspx](http://www.aabb.org/programs/biovigilance/Pages/wnv.aspx)