



United States Army Public Health Command  
**Army Vector-borne Disease Report**

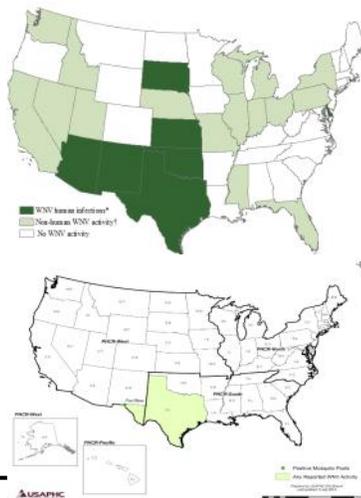
13 July 2015

Data are preliminary and subject to change

- **West Nile Virus:** 10 cases have been reported to the CDC from 7 states; no cases have been reported among Army beneficiaries.
- **PHCR-North:** Of 576 *Ixodes scapularis* ticks tested, 83 were positive for *Borrelia burgdorferi*, the causative agent of Lyme disease, and 6 were positive for *B. miyamotoi*, which produces symptoms similar to tick-borne relapsing fever.

**West Nile Virus United States**

- From the beginning of the year through 7 July 2015, ten human WNV cases have been reported to the CDC. No fatal cases were reported.
- Two of the 10 cases were classified as neuroinvasive (i.e., meningitis or encephalitis); the remaining 8 were non-neuroinvasive.
- As of 7 July, 23 states report WNV activity of some type (infections in humans, birds, or mosquitoes).
- States reporting human WNV cases are: Arizona, Delaware, Kansas, New Mexico, Oklahoma, South Dakota and Texas.



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Source: Official Communication

**Cases in Army AD and Other Beneficiaries**

- No confirmed or probable WNV cases have been reported in Army AD and beneficiaries in 2015.

**DoD Mosquito Surveillance from Army Laboratories**

- PHCR-North and South report no West Nile Virus positive mosquito pools.
- PHCR-West reported one WNV positive pool of *Culex tarsalis* mosquitoes from Fort Bliss, Texas.
- Four public health regional commands are able to test for chikungunya virus and WNV in mosquito pools.
- PHCR-South tested pools of *Aedes albopictus* for chikungunya virus and WNV. All mosquito pools tested negative for both viruses.

WNV Mosquito Pool Testing	PHC Region	Reporting Period <sup>¥</sup>	Year to Date 2015	¥ Absolute difference between last published report and this week's year to date number.
		No. Positive (No. Tested)	No. Positive (No. Tested)	
	North	0 (92)	0 (132)	
	South	0 (60)	0 (186)	
	West	1 (40)	1 (45)	

WNV Human Cases <sup>β</sup>			
Population	Reporting Period <sup>¥</sup>	Cum. 2015	Cum. 2014 <sup>^</sup>
United States	10	10	54
Army Cases <sup>±</sup> Confirmed and Probable			
Army AD <sup>‡</sup>	0	0	1
Army Non-AD <sup>†</sup>	0	0	0
WNV Human Deaths			
United States	0	0	1
Army	0	0	0

Sources: CDC 7 July 2015, DRSI 8 July 2015

location.

<sup>β</sup> Confirmed and probable neuroinvasive and non-neuroinvasive cases.

<sup>¥</sup> Difference between last published and this week's cumulative 2015 value.

<sup>±</sup> Only cases whose case status is verified as confirmed/probable.

<sup>‡</sup> Active duty, recruits, cadets.

<sup>^</sup> Cumulative through 28 June 2014.

**DRSi Surveillance**

- 28 cases of Lyme disease have been reported in Army AD and beneficiaries compared to 45 cases during the same time period in 2014.
  - Of the 28 cases, 9 (32%) were AD, one of whom reported duty-related exposure.

**Army Tick Testing**

- PHCR-North tested 576 *Ixodes scapularis* ticks for *Borrelia burgdorferi*, the pathogen that causes Lyme disease, and *B. miyamotoi*, which produces symptoms typical of tick-borne relapsing fever. 83 ticks tested positive for *B. burgdorferi* and 6 tested positive for *B. miyamotoi*. The positive ticks were collected from Fort A.P. Hill, VA, USMA West Point, NY, and Fort Drum, NY.
- As of 7 July, PHCR-West tested 84 *I. pacificus* ticks for *B. burgdorferi*; all pathogens tested negative.
- Of 170 *Ixodes* ticks tested by the Human Tick Test Program, 44% (n=57) were positive for the Lyme disease pathogen *B. burgdorferi*.

Human Tick Test Program	<i>A. phagocytophilum</i>	<i>B. microti</i>	<i>B. burgdorferi</i>	<i>E. chaffeensis</i>	<i>E. ewingii</i>	<i>E. muris-like</i>	<i>R. parkeri</i>	<i>R. rickettsii</i>
YTD No. Positive (YTD No. Tested)	10(170)	2(170)	57(170)	7(584)	7(712)	0(170)	0(0)	0 (132)

Note: CONUS data only.

**Research**

- A recent study published in the Journal of Clinical Microbiology provides evidence that lone star ticks (*Amblyomma americanum*) are highly unlikely to transmit the pathogen that causes Lyme disease. You can read the article [here](#).

**Resources:** CDC WNV • CDC Tickborne Diseases • Human Tick Test Program • USAPHC WNV Fact Sheet • Army Vector-borne Disease Reports • USAPHC

**Key:** CDC Centers for Disease Control and Prevention; DRSi Disease Reporting System Internet; Mosquito pool 1 to 50 mosquitoes; AD Active Duty

Contact us: USAPHC Disease Epidemiology or 410-417-2377

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Lyme Disease Cases			
Population	Reporting Period <sup>¥</sup>	Cum. 2015	Cum. 2014
United States <sup>β</sup>	331	7,068	8,843
Army Cases <sup>±</sup> Confirmed and Probable			
Army AD <sup>‡</sup>	2	9	16
Army Non-AD <sup>†</sup>	4	19	29
Regional Case Distribution			
PHCR-Europe	1	2	4
PHCR-North	2	14	26
PHCR-Pacific	0	1	1
PHCR-South	0	2	4
PHCR-West	2	3	7
Other/Unknown	1	6	3

Sources: CDC and AIPH DRSI.

Note: Reporting location may differ from exposure location.

<sup>β</sup> Provisional cases through 27 June.

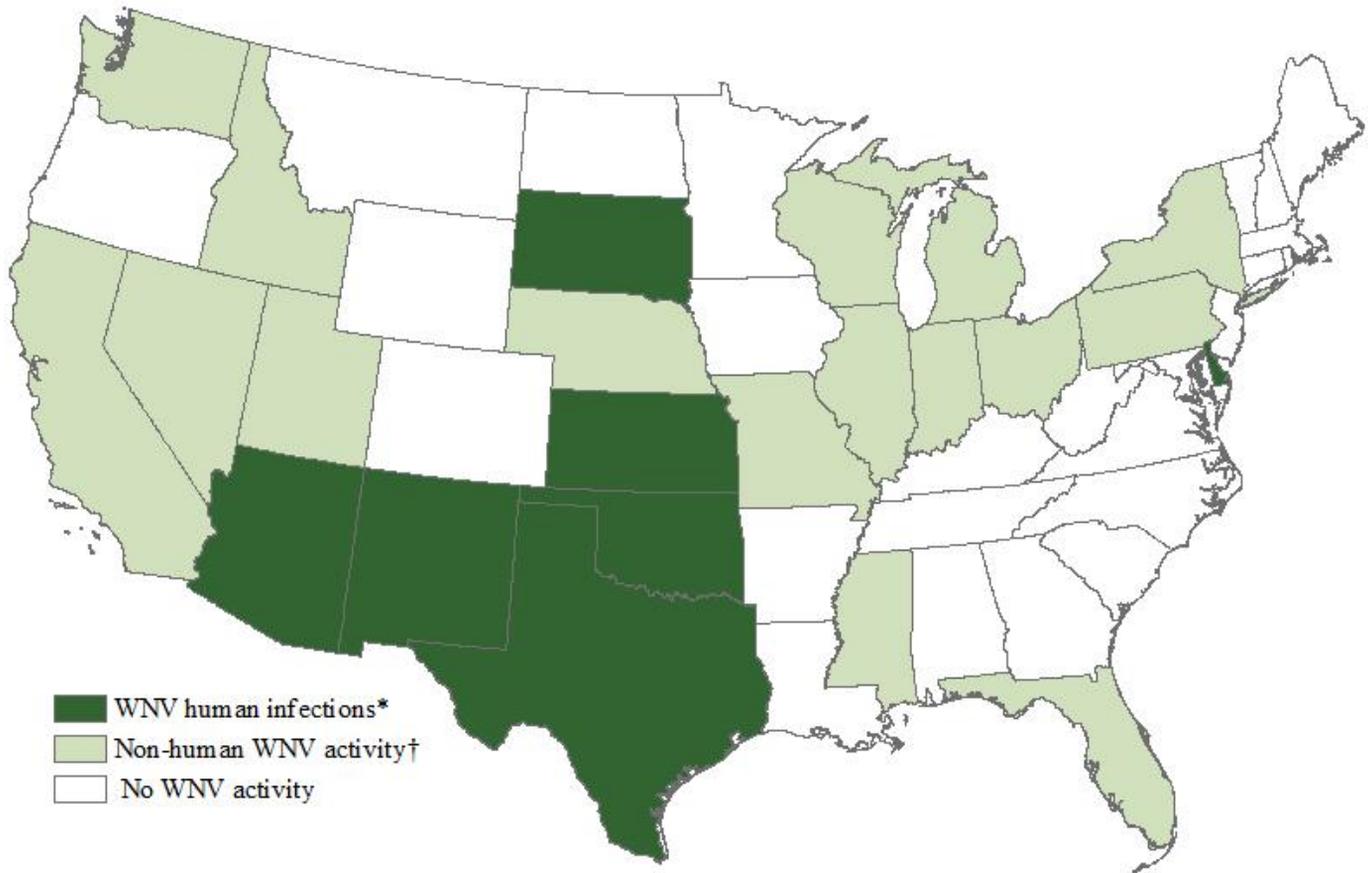
<sup>¥</sup> CDC cases reported in the most recent EpiWeek (week 25) and DRSI cases reported during 24 June - 7 July 2015.

<sup>±</sup> Cases reported through 7 July.

<sup>‡</sup> Active duty, recruits, cadets.

<sup>†</sup> Army-associated beneficiaries.

# West Nile Virus Activity by State – United States, 2015 (as of July 7, 2015)



\*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.

## Data table:

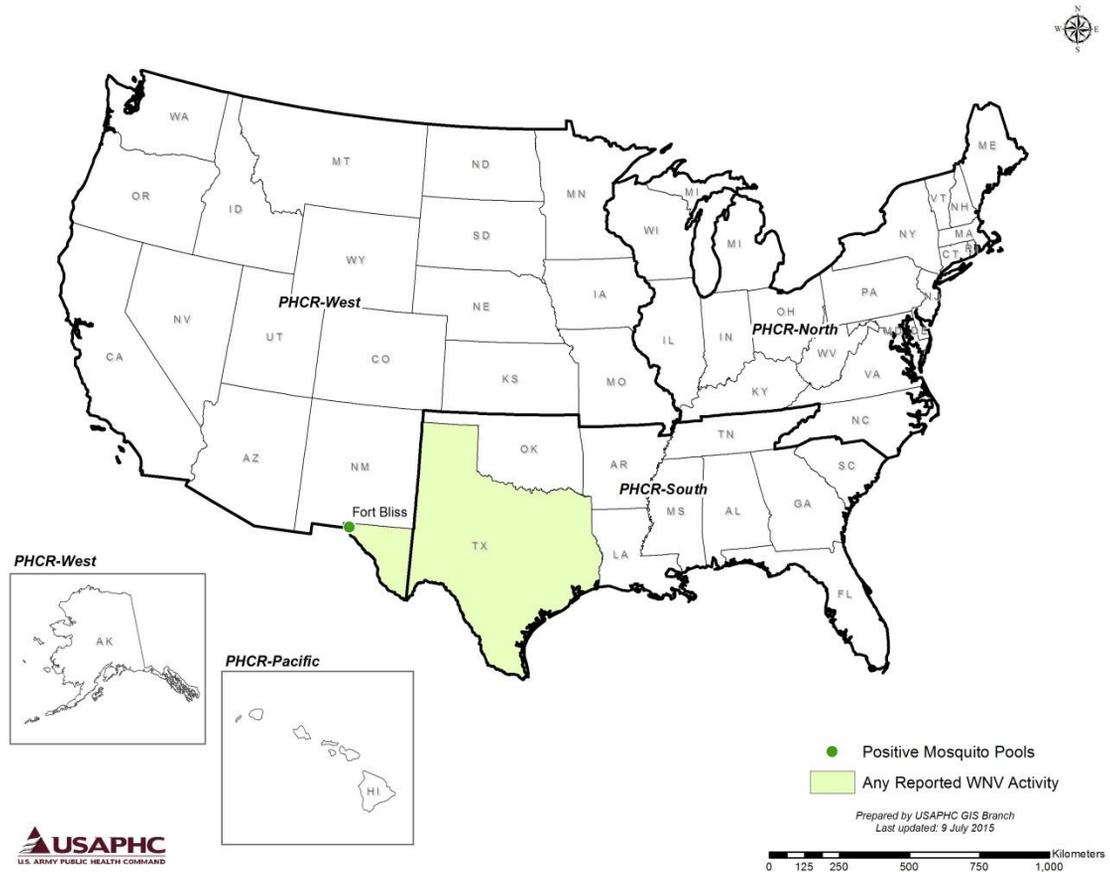
WNV infections in **mosquitoes, birds, sentinel animals, or veterinary animals** have been reported to CDC ArboNET from the following states: California, Florida, Idaho, Illinois, Indiana, Michigan, Mississippi, Missouri, Nebraska, Nevada, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Utah, Washington, and Wisconsin.

West Nile virus infections in **humans** have been reported to CDC ArboNET from the following states: Arizona, Delaware, Kansas, New Mexico, Oklahoma, South Dakota, and Texas.

Source: <http://www.cdc.gov/westnile/statsMaps/preliminaryMapsData/activitystatedate.html>

# West Nile Virus Activity, by State and Army Public Health Command Region (PHCR), United States, 2015

As of July 7, 2015



Footnote: The map displays white areas that indicate no reported West Nile virus (WNV) activity. Light green areas represent any reported WNV activity\* within a state and dark green circles represent WNV positive mosquito pools on military installations. If West Nile virus infection is reported from any area of a state, that entire state is shaded light green.

\*Includes WNV Army human disease cases (probable and/or confirmed) and infections in mosquito pools on military installations.

Prepared by: US Army Public Health Command Geographic Information Systems Branch.