



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

15 July 2013

Data are preliminary and subject to change

- **West Nile virus:** CDC reports 14 human cases for calendar year 2013; Army reports no cases.
- **WNV mosquito pools:** PHCR-North reports 1 positive pool from 1 location; PHCR-South reports no positive pools.
- **Lyme disease:** 34 cases of confirmed or probable Lyme disease were reported among Army beneficiaries.
- **Active tick surveillance:** PHCR-West identified no infected ticks.

**West Nile Virus (WNV)**

**United States**

- According to the CDC for week 27 (through 7 July 2013), noticeably fewer WNV cases have been reported this year than last year; by the end of week 27 in 2012, 267 WNV cases were reported compared to 14 this year.
- The majority of cases (64%, n=9) this year were classified as non-neuroinvasive; the remainder (36%, n=5) were neuroinvasive (i.e., meningitis or encephalitis).
- As of 9 July, 25 states and Washington, D.C. have reported WNV activity of some type (infections in humans, birds, or mosquitoes).
- Seven states (MS, TX, NV, CA, CO, TN, SD) reported human WNV cases; MS reported 43% of cases (n=6).
- Mississippi and California each reported one WNV fatality.



2013 WNV Human Cases <sup>β</sup>	
Population	Year to Date
United States	14
Army Cases <sup>±</sup> Confirmed and Probable	
Army AD <sup>‡</sup>	0
Army Non-AD <sup>†</sup>	0
2013 WNV Human Deaths	
United States	2
Army	0

**Cases in Army AD and Beneficiaries**

- In 2013, no confirmed or probable WNV infections in Army AD or beneficiaries have been reported. However, two individuals with potential WNV-related disease were identified through purchased care; as they are not confirmed or probable cases they are excluded from this report.
- No WNV fatalities have been reported among Army AD or beneficiaries this year.

**DoD Mosquito Surveillance from Army Laboratories**

- PHCR-North reports 1 positive pool from Fort McNair.
- PHCR-South reports no positive pools; PHCR-West did not report updates.

West Nile Virus Activity, by State and Army Public Health Command Region (PHCR), United States, 2013  
As of July 9, 2013



Mosquito Pool Testing	PHC Region	No. Positives in Reporting Period	No. Pools Tested in Reporting Period	YTD Positives (YTD Number Tested)
	North	1	165	1 (165)
	South	0	509	0 (509)

Sources: CDC and AIPH DRIS as of 9 July.

Note: Reporting location may differ from exposure location.

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

<sup>±</sup> Only Army AD and beneficiaries who have a Reportable Medical Event generated on their behalf and whose case status is verified as confirmed/probable are included in this report.

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

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

**Prevention and Control Activities**

- Mosquito activity peaks in the summer; expect mosquitoes to remain active until the first hard or killing frost.
- Preventive Medicine personnel should continue to stress the importance of eliminating mosquito breeding sites (standing water) around homes and workplaces, and using personal protective measures (use only EPA-registered insect repellents, preferably those containing DEET).

**Tick-borne Diseases**

- From 1 Jan.-9 July 2013, PHCR-North reported 41% and PHCR-Europe 32% of Army Lyme disease cases (n=34).
- The Lyme disease vector in the U.S. is *Ixodes scapularis* (*I. pacificus* in the Western U.S.). In spring and summer, when nymphal ticks are most active, bites may go unnoticed due to the small size of nymphal ticks.

**Human Tick Testing**

- Tick testing is species specific; different tick species are known to transmit different pathogens.
- Of 249 CONUS *Ixodes* ticks tested by the Human Tick Test Program, 28% (n=69) were positive for the Lyme disease pathogen *Borrelia burgdorferi*.
- In PHCR-Europe, 3 of 58 ticks tested positive for *Borelia* spp.; all three infected ticks were sent in from USAG Hohenfels.

Human Tick Test Kit Program No. Positive (No. Tested)	<i>A. phagocytophilum</i>	<i>B. microti</i>	<i>B. burgdorferi</i>	<i>E. chaffeensis</i>	<i>E. ewingii</i>	<i>E. muris</i> -like	<i>R. parkerii</i>	<i>R. rickettsii</i>
	11 (249)	6 (249)	69 (249)	7 (778)	16 (778)	0 (249)	2 (8)	0 (219)

**Active Tick Surveillance**

- PHCR-West's active tick surveillance (e.g., tick drags) identified zero infected ticks for all pathogens tested.

Active Tick Surveillance No. Positive (No. Tested)	PHC Region	<i>B. burgdorferi</i>	<i>E. chaffeensis</i>	<i>R. rickettsia</i>	<i>R. parkerii</i>
	West	0 (6)	0 (41)	0 (33)	0 (1)

2013 Lyme Disease Cases	
Population	Year to Date
United States <sup>β</sup>	6,199
Army Cases <sup>±</sup> Confirmed and Probable	
Army AD <sup>‡</sup>	14
Army Non-AD <sup>†</sup>	20
Regional Case Distribution	
PHCR-Europe	11
PHCR-North	14
PHCR-Pacific	3
PHCR-South	1
PHCR-West	1
Other/Unknown	4

Sources: CDC and AIPH DRIS.

Note: Reporting location may differ from exposure location.

<sup>β</sup> Provisional cases through 6 July.

<sup>±</sup> Cases reported through 9 July.

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

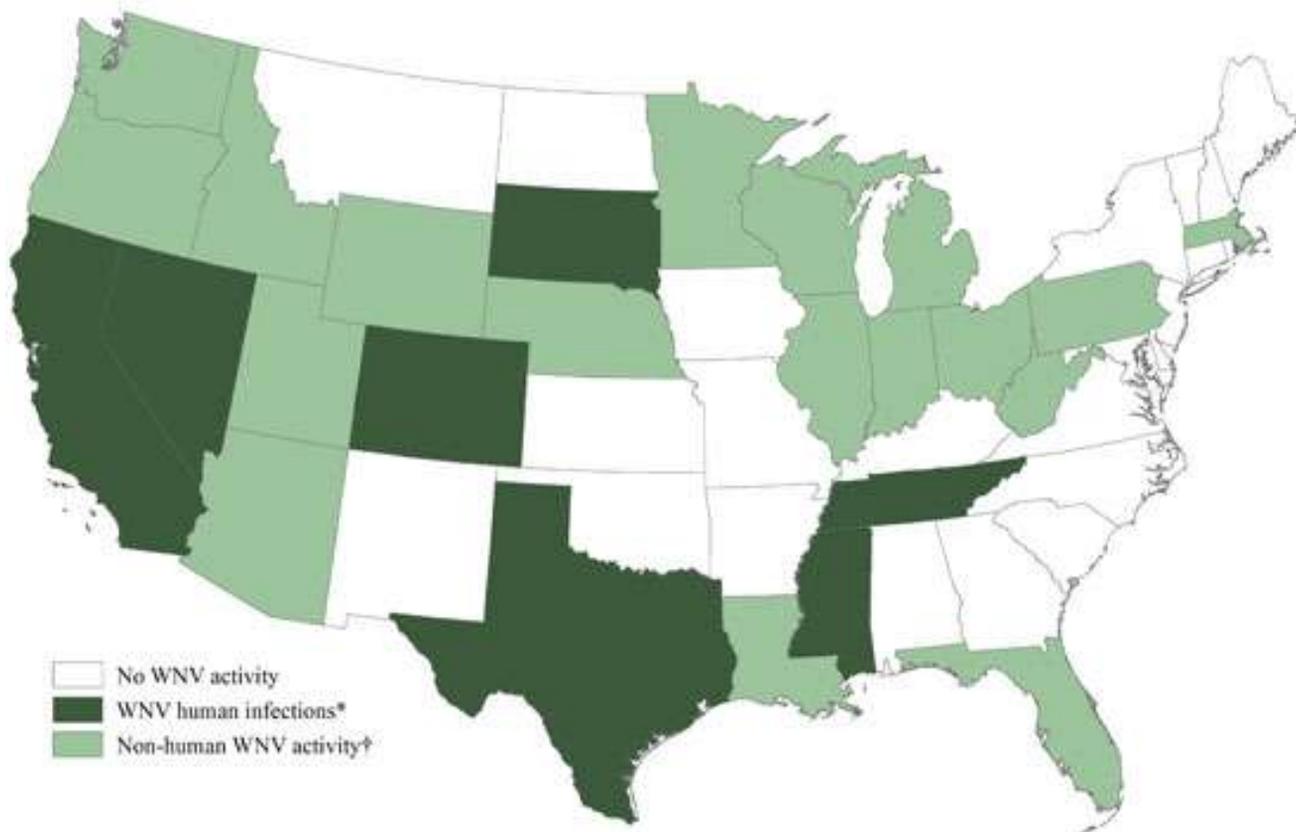
<sup>†</sup> Army-associated beneficiaries.

**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; DRIS Disease Reporting System Internet; Mosquito pool 1 to 50 mosquitoes; AD Active Duty

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

# West Nile Virus Activity by State – United States, 2013 (as of July 9, 2013)



\*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:

Non-human West Nile virus infections have been reported to CDC ArboNET from the following states: Arizona, California, Colorado, Florida, Idaho, Illinois, Indiana, Louisiana, Michigan, Mississippi, Nebraska, Ohio, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, Utah, Washington, West Virginia, and Wisconsin.

Human West Nile virus infections have been reported to CDC ArboNET from the following states: California, Mississippi, South Dakota, Tennessee, 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, 2013

As of July 9, 2013



Footnote: The map displays white areas that indicate no reported West Nile virus (WNV) activity, light blue areas represent any reported WNV activity\* within a state; dark blue circles represent WNV positive mosquito pools on military installations, and red squares represent the reporting location/installation of Army human cases (probable and/or confirmed). If West Nile virus infection is reported from any area of a state, that entire state is shaded light blue.

\*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.