



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

22 August 2014

Data are preliminary and subject to change

- **West Nile Virus:** 210 WNV cases and 7 deaths have been reported; no acute Army WNV cases have been reported in 2014.
- **West Nile Virus Mosquito Pools:** PHCR-Europe reported 1 new positive pool; the mosquitoes were collected from CP Lemonnier, Djibouti.
- **Chikungunya Virus:** The Caribbean Islands continue to report the majority of total cases (99%); Army reports 3 imported cases in 2014.
- **PHCR-West:** Since the last report, PHCR-West tested 9 ticks that were positive for *Ehrlichia chaffeensis*.

West Nile Virus (WNV)

United States

- Nationally, 210 WNV cases and 7 deaths have been reported through 19 August 2014; since the previous report, both case numbers and deaths have more than doubled.
- California (n=57), Louisiana (n=34), and Texas (n=30) together report 58% of all cases.
- Since the previous report, 4 additional states (43 total plus Washington D.C.) report WNV activity of some type (infections in humans, animals, or mosquitoes).

Cases in Army AD and Other Beneficiaries

- No confirmed acute WNV infections have been reported in Army beneficiaries.



WNV Human Cases ^β		
Population	Reporting Period ^γ	Cum. 2014
United States	128	210
Army Cases [±] Confirmed and Probable		
Army AD [‡]	0	0
Army Non-AD	0	0
WNV Human Deaths		
United States	3	7
Army	0	0

DoD Army Laboratory Mosquito Surveillance

- PHCR-Europe tested 4,737 *Culex spp.* mosquitoes in 947 pools and 1 pool tested positive for WNV. PHCR-West tested 22 pools, all negative for WNV.
- 915 *Aedes spp.* mosquitoes were tested in 183 pools and 5 pools tested positive for dengue.
- 44 *Anopheles spp.* mosquitoes were tested in 37 pools and 3 pools tested positive for Malaria spp. All mosquitoes were collected from Camp Lemonnier, Djibouti, Africa.

WNV Mosquito Pool Testing	PHC Region	Reporting Period ^γ	Year to Date 2014
		No. Positive (No. Tested)	No. Positive (No. Tested)
	North	0 (0)	35 (544)
	South	No Report	0 (332)
	West	0 (22)	0 (52)

Source: Official Communication

^γ Absolute difference between last published report and this week's year to date number.

Sources: CDC & DRSI as of 19 AUG 2014.

Note: Reporting location may differ from exposure location.

^β Confirmed and probable neuroinvasive and non-neuroinvasive cases.

^γ Difference between last published and this week's cumulative 2014 value.

[±] Only cases whose case status is verified as confirmed/probable.

[‡] Active duty, recruits, cadets.

Chikungunya (CHIKV)

- Since the last report, 73,027 additional locally-acquired CHIKV cases have been reported from the Americas; almost all (97%) from the Caribbean.
- All CHIKV deaths (37 total, 5 new) are from the Caribbean Islands.
- Since the previous report, 156 additional imported cases, but no new locally acquired cases in the continental U.S., were identified.
- As of 19 AUG, 3 total Army cases (imported) have been reported in 2014: 1 Active Duty, 1 retiree, and 1 dependent. In all cases, exposure occurred during non-duty related Caribbean travel (Dominican Republic, Haiti, and Puerto Rico).
- Army Entomological Sciences Program is providing Public Health Command Regions with additional mosquito surveillance capabilities, including pre-staging appropriate mosquito traps. Vector control information is available at: [Armed Forces Pest Management Board](#).



Chikungunya Cases in the Americas			
Location [†]	Locally Acquired ^γ	Imported [‡]	Deaths
Caribbean Islands	580,333	59	37
Central & South America	5,461	110	0
North America	4	649	0
Total	585,798	818	37
Army Cases [±]			
Army AD [‡]	0	1	0
Army Non-AD	0	2	0

Sources: PAHO DEC 2013-15 AUG 2014. CDC & DRSI as of 19 AUG 2014

[†] Caribbean Islands include Puerto Rico & U.S. Virgin Islands; Central & South America includes continental countries only.

^γ Includes suspect & confirmed cases; [‡] Confirmed imported cases.

[±] Only cases whose case status is verified as confirmed/probable.

[‡] Army AD: Active Duty, recruits, cadets.

Tick-borne Diseases

- As of 20 August, 79 cases of Lyme Disease (LD) in Army beneficiaries have been reported compared to 56 cases during the same time period in 2013.
- Of the 79 LD cases, 31 (39%) cases are AD, 5 of whom reported duty-related exposure.
- Since the last report, PHCR-West has tested 212 tick specimens. 9 ticks tested positive for *Ehrlichia chaffeensis*. None tested positive for *Rickettsia rickettsii*, the causative agent of Rocky Mountain Spotted Fever (RMSF).

Reported Cases of Lyme Disease—United States, 2012



Human Tick Testing

- As of 15 August, PHCR-Europe has tested 173 tick specimens. 2 tested positive for *Borellia spp.*, 1 tested positive for *Anaplasma phagocytophilum*, and 1 was positive for tick-borne encephalitis (TBE).
- Of the ticks sent to the CONUS Human Tick Test Program, 103/362 (28%) ticks tested positive for the causative agent of Lyme Disease (*B. burgdorferi*). 60% of ticks (3/5) tested positive for *Rickettsia parkeri*, a tick-borne species of *Rickettsia* that is included in the category "Spotted Fever group Rickettsia".

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 (362)	6 (362)	103 (362)	9 (1992)	50 (1992)	3 (362)	3 (5)	0 (488)

Note: CONUS data only.

Lyme Disease Cases			
Population	Reporting Period ^γ	Cum. 2014	Cum. 2013
United States ^β	403	13,573	23,274
Army Cases [±] Confirmed and Probable			
Army AD [‡]	11	31	21
Army Non-AD [†]	4	48	35
Regional Case Distribution			
PHCR-Europe	2	8	17
PHCR-North	7	37	27
PHCR-Pacific	0	1	0
PHCR-South	4	9	4
PHCR-West	2	11	2
Other/Unknown	0	13	6

Sources: CDC and AIPH DRSI.

Note: Reporting location may differ from exposure location.

^β Provisional cases through 9 August.

^γ Cases reported in the most recent EpiWeek (week 32).

[±] Cases reported through 20 August.

[‡] Active duty, recruits, cadets.

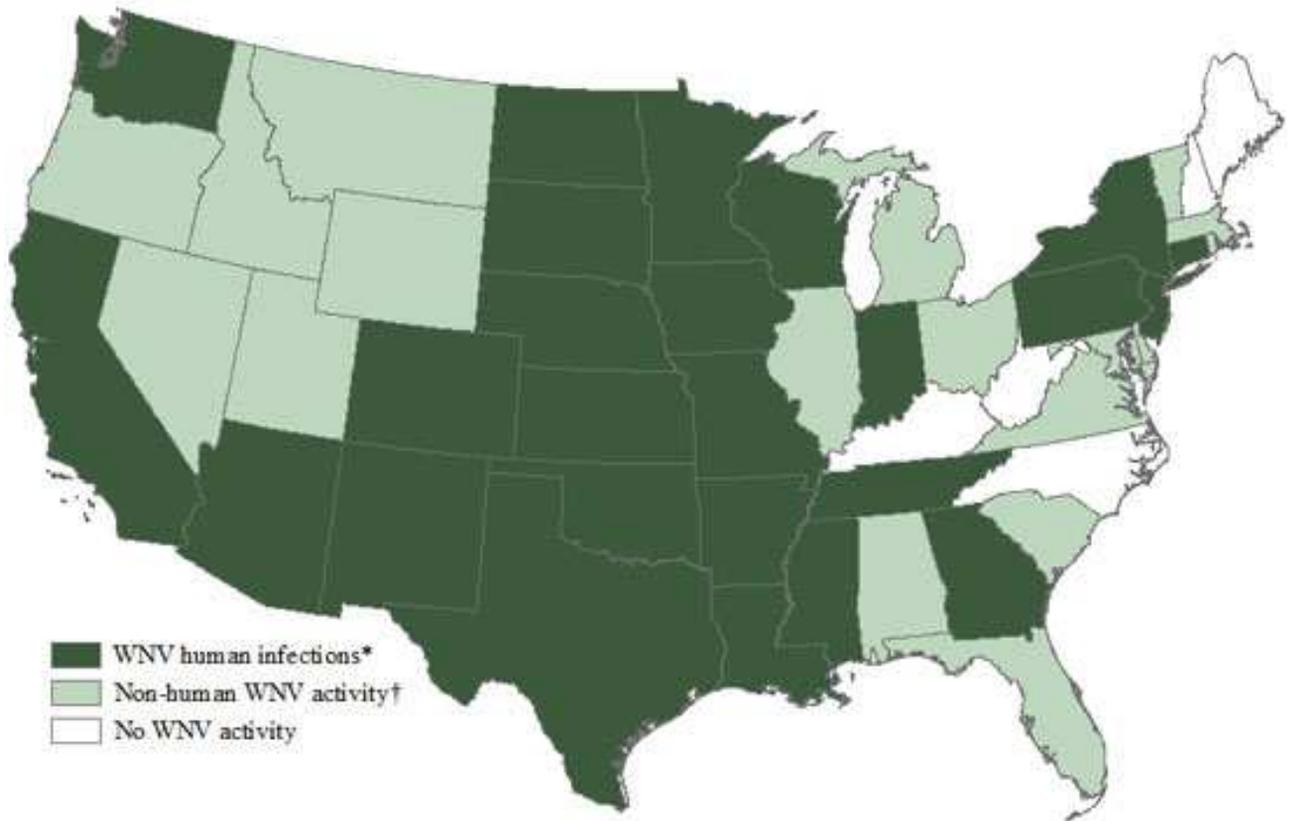
[†] Army-associated beneficiaries.

Resources: CDC CHIKV • 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 1-50 mosquitoes; PHCR Public Health Command Region

Contact us: [USAPHC Disease Epidemiology](#) or 410-417-2377

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West Nile Virus Activity by State – United States, 2014 (as of August 19, 2014)



*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:

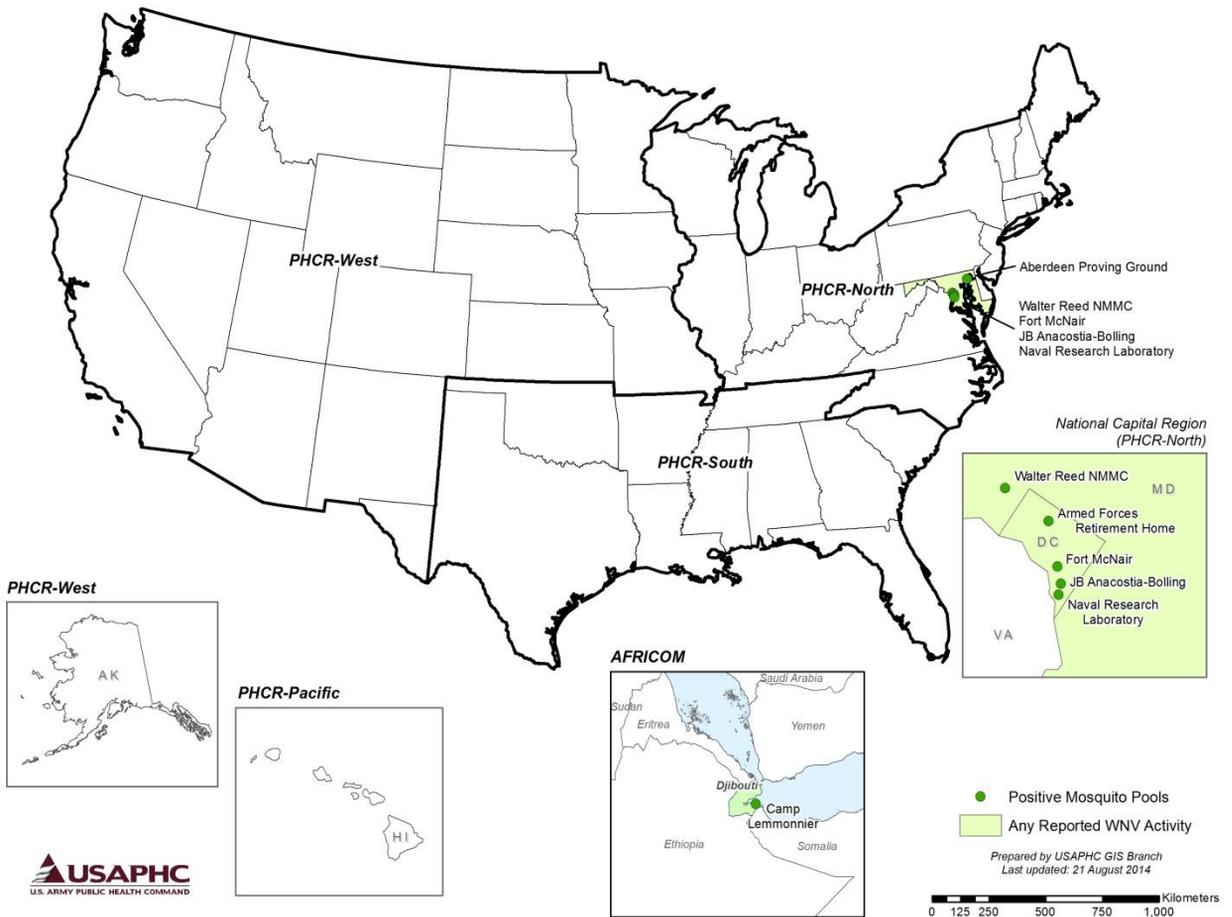
WNV infections in **mosquitoes, birds, sentinel animals, or veterinary animals** have been reported to CDC ArboNET from the following states: Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, Wisconsin, and Wyoming.

West Nile virus infections in **humans** have been reported to CDC ArboNET from the following states: Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Georgia, Indiana, Iowa, Kansas, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, New Jersey, New Mexico, New York, North Dakota, Oklahoma, Pennsylvania, South Dakota, Tennessee, Texas, Washington and Wisconsin.

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, 2014

As of August 15, 2014



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.

Countries/territories with autochthonous transmission or imported cases of Chikungunya in the Americas, EW 33, 2014

Legend

- Countries/Territories with autochthonous transmission
- Sub-national areas with confirmed autochthonous transmission
- Countries/Territories with imported cases but no autochthonous transmission



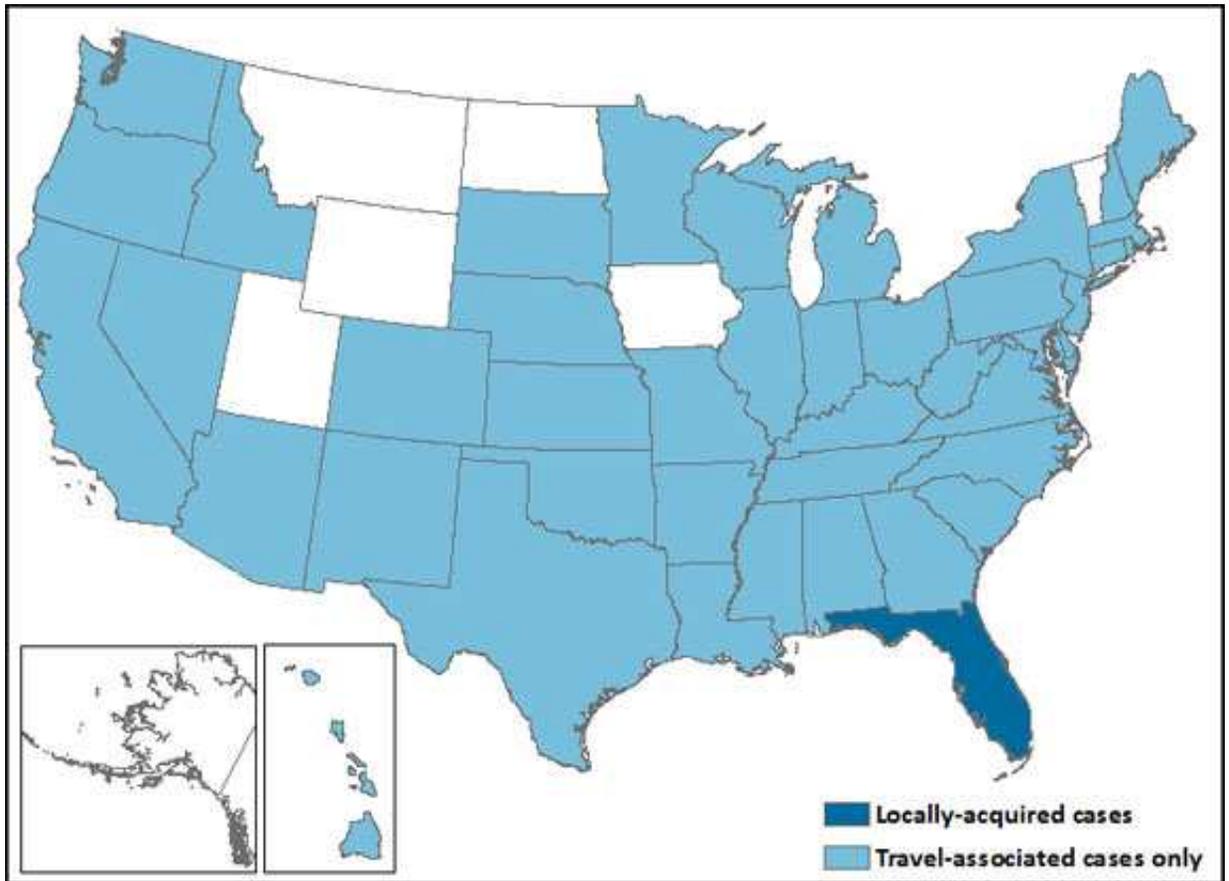
Data source: PAHO/WHO. Number of reported cases of Chikungunya Fever in the Americas <http://www.paho.org/chikungunya>

Map production: PAHO/CHAIRVARO



* Note: Entire countries have been shaded on the map though there is no evidence of country-wide virus presence

Chikungunya virus disease cases reported* by state – United States, 2014 (as of August 19, 2014)

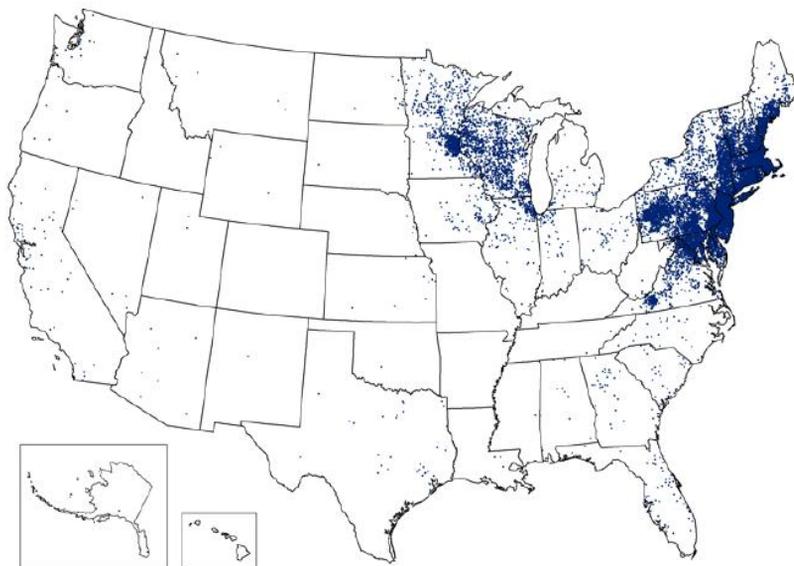


*Chikungunya is not a nationally notifiable disease.

Source: <http://www.cdc.gov/chikungunya/geo/united-states.html>

Reported Cases of Lyme Disease—United States, 2012

One dot is placed randomly within the county of residence for each confirmed case. Though Lyme disease cases have been reported in nearly every state, cases are reported based on the county of residence, not necessarily the county of infection.



1 dot placed randomly within county of residence for each confirmed case

National Center for Emerging and Zoonotic Infectious Diseases

Division of Vector Borne Diseases | Bacterial Diseases Branch



This figure shows the reported cases of Lyme Disease in the United States in 2012. Lyme disease is the 7th most commonly reported Nationally Notifiable disease nationwide. Of all vectorborne diseases, Lyme is the most commonly reported; however, 95% of cases in 2011 were reported from only 13 states in the Midwest, Mid-Atlantic and Northeastern regions of the US. These states include Connecticut, Delaware, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, New Jersey, New York, Pennsylvania, Vermont, Virginia and Wisconsin.

Source: Lyme Disease Data. Centers for Disease Control and Prevention. Last updated December 6, 2013. Available at: <http://www.cdc.gov/lyme/stats/index.html>.