



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

8 September 2014

Data are preliminary and subject to change

- **West Nile Virus:** 399 cases and 16 deaths have been reported this WNV season; no acute Army WNV cases have been reported in 2014.
- **Chikungunya Virus:** As of 2 September, 4 travel-related cases of Chikungunya in Army beneficiaries have been reported to date in 2014.
- **Rocky Mountain Spotted Fever (RMSF):** 12 cases of RMSF have been reported in Army beneficiaries; 1 AD case reported duty-related exposure.

West Nile Virus (WNV)

United States

- Nationally, 399 WNV cases and 16 deaths have been reported through 2 September 2014; since the previous report, case numbers increased by 90% and deaths more than doubled.
- Together, California, Texas, Louisiana, and Arizona report 62% of cases and 81% of deaths.
- All continental states, excluding Maine, New Hampshire, North Carolina, and Kentucky, report WNV activity of some type (infections in humans, animals, or mosquitoes).



WNV Human Cases ^β		
Population	Reporting Period ^γ	Cum. 2014
United States	189	399
Army Cases [±]		
Confirmed and Probable		
Army AD [‡]	0	0
Army Non-AD	0	0
WNV Human Deaths		
United States	9	16
Army	0	0

Cases in Army AD and Other Beneficiaries

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

DoD Army Laboratory Mosquito Surveillance

- Since the last report, PHCR-West tested 60 pools, 4 of which were positive for WNV.
- As of August 26, PHCR-North tested 572 pools, 53 of which were positive for WNV.
- PHCR-South relocated and is resuming testing.

WNV Mosquito Pool Testing	PHC Region	Reporting Period ^γ	Year to Date 2014
		No. Positive (No. Tested)	No. Positive (No. Tested)
	North	18 (28)	53 (572)
	South	No Report	0 (332)
	West	4 (60)	4 (112)

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

Source: Official Communication

Sources: CDC & DRSI as of 2 SEP 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, over 67,000 new locally-acquired cases were reported from the Caribbean, primarily from the Dominican Republic (n=59,280).
- No additional deaths were identified since the previous report.
- Since the previous report, 100 additional imported cases and 3 new locally acquired cases in the continental U.S. (all in Florida), were reported.
- Since the previous report, 1 additional Army case was reported. As of 2 September, 4 total Army cases (imported) were reported in 2014: 1 Active Duty, 1 retiree, and 2 dependents. In all cases, exposure occurred during non-duty related Caribbean travel (Dominican Republic, Haiti, and Puerto Rico).
- On 29 August, the Pan American Health Organization/WHO issued an [alert](#) to member countries that have the vector mosquito (*Aedes aegypti*) to increase efforts to reduce mosquito population densities and breeding sites.



Chikungunya Cases in the Americas			
Location [†]	Locally Acquired ^γ	Imported [£]	Deaths
Caribbean Islands	648,047	80	37
Central & South America	10,413	122	0
North America	7	749	0
Total	658,467	951	37
Army Cases [±]			
Army AD [‡]	0	1	0
Army Non-AD	0	3	0

Sources: PAHO DEC 2013-29 AUG 2014. CDC & DRSI as of 2 SEP 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 3 September:
 - ⇒ 83 cases of Lyme Disease (LD) in Army beneficiaries have been reported. Of these cases, 34 cases are AD, 6 of whom reported duty-related exposure.
 - ⇒ 12 cases of Rocky Mountain Spotted Fever (RMSF) have been reported in Army beneficiaries. Two of these cases are AD, one of which reported duty-related exposure.
- The length of time it takes for ticks to cause infection in human hosts varies. It may take hours or even days. Therefore, frequent tick-checks should be employed and if found, ticks should be promptly removed to help prevent contracting tick-borne diseases.

Human Tick Testing

- Since the last report, PHCR-Europe tested 7 tick specimens; 3 were positive for *Borrelia spp.*
- As of September 3, approximately 30% of ticks sent to the CONUS Tick Testing Program tested positive for the Lyme disease pathogen *B. burgdorferi*.

Human Tick Test Program	A. phagocytophilum	B. microti	B. burgdorferi	E. chaffeensis	E. ewingii	E. muris-like	R. parkeri	R. rickettsii
YTD No. Positive (YTD No. Tested)	12 (375)	6 (375)	103 (375)	10 (2223)	54 (2223)	4 (375)	3 (7)	0 (554)

Note: CONUS data only.

Lyme Disease-specific Resources For Health Care Providers

- [Two-tiered Testing Decision Tree](#) slide outlines diagnostic steps for LD.
- [Video guidance](#) for distinguishing LD and Southern Tick-Associated Rash Illness (STARI).

For the General Public

- [Lyme Disease: What you need to know](#) — an in-depth guide providing information about Lyme disease, its prevention, and treatment options.
- Communication Tool Kit: Includes prevention [fact sheets](#) in English and Spanish with specific guidance for pregnant women and parents.

Resources: CDC CHIKV • USAPHC Tick Fact Sheet • 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 September 2, 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:

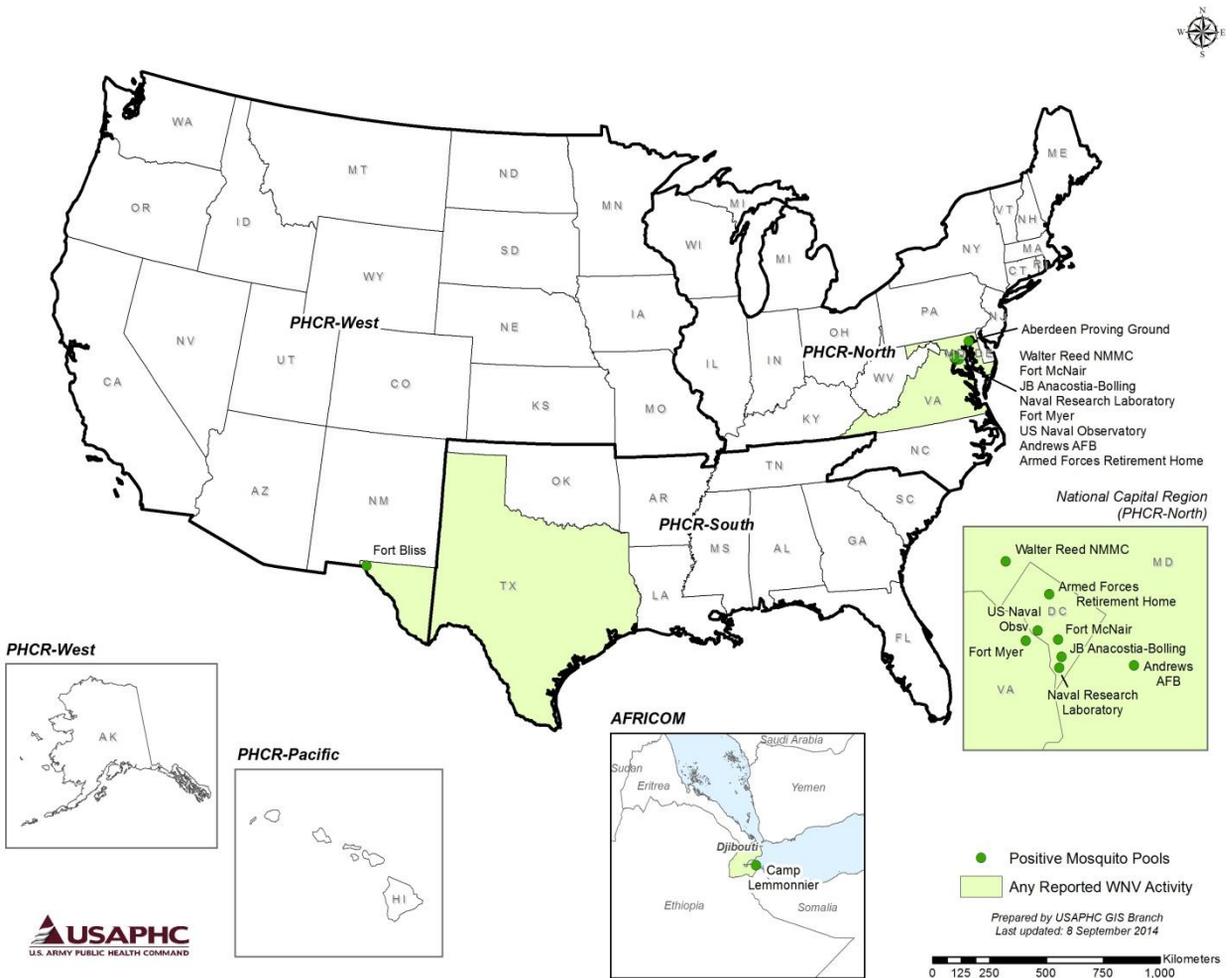
WNV infections in **mosquitoes, birds, sentinel animals, or veterinary animals** have been reported to CDC ArboNET from the following states: Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Louisiana, Maryland, Massachusetts, Michigan,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

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 September 8, 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.



Pan American Health Organization



World Health Organization
REGIONAL OFFICE FOR THE AMERICAS

Countries/territories with autochthonous transmission or imported cases of Chikungunya in the Americas, EW 34, 2014

Legend

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

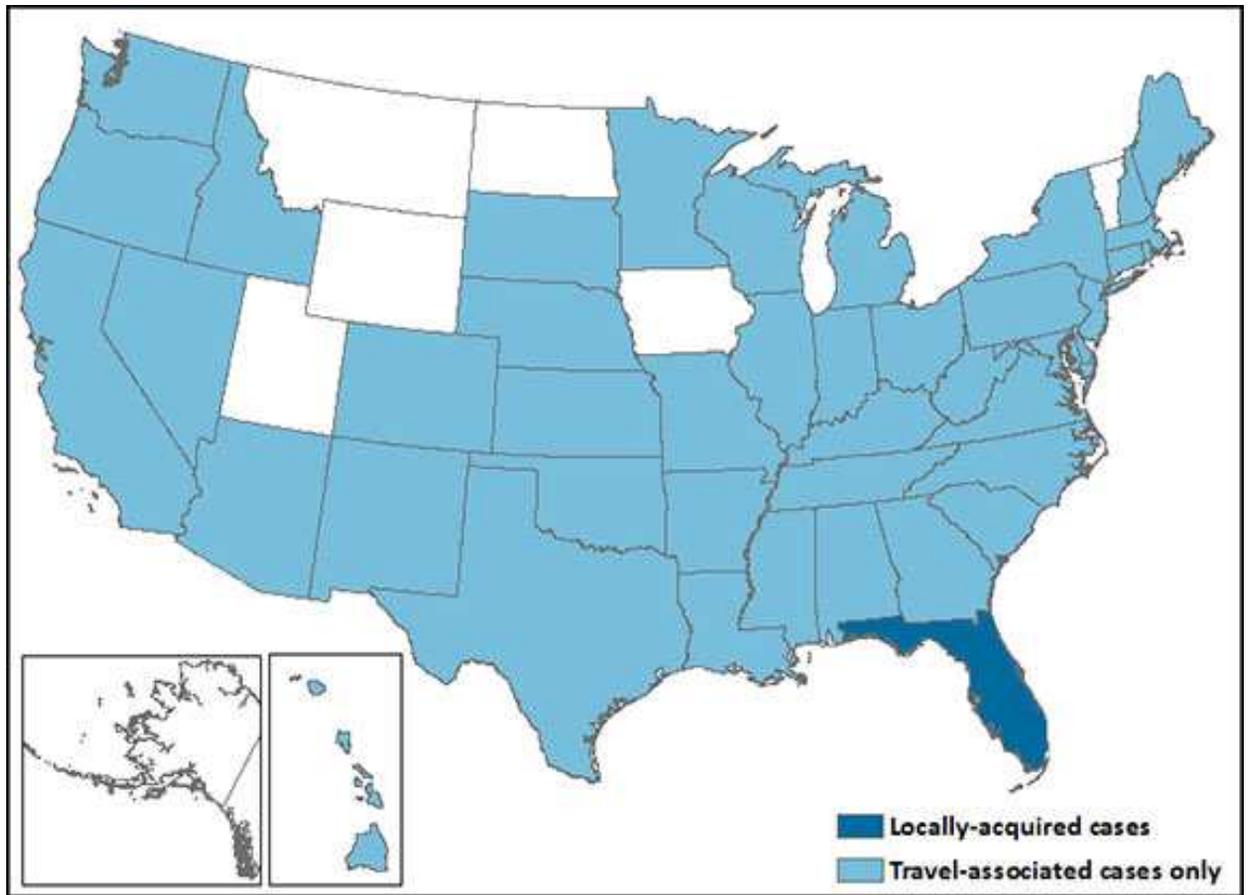


Data source: PAHO/WHO. Number of reported cases of Chikungunya Fever in the Americas <http://www.paho.org/chikungunya>

Map production: PAHO/CHAI/IRVARO

* 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 September 2, 2014)



*Chikungunya is not a nationally notifiable disease.

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