



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

7 October 2014

Data are preliminary and subject to change

- **West Nile Virus:** 1,177 cases and 43 deaths reported to CDC from 43 states and Washington, D.C.
- **Chikungunya:** No new areas report cases. Total regional cases increased by 4.6% since the last report. Puerto Rico reports 3 deaths.
- **Malaria:** As of 30 September, 26 malaria infections were reported in Army associated personnel.
- **PHCR-South:** PHCR-South tested 785 mosquito pools for West Nile Virus; 1 positive pool was found in Lackland Air Force Base, Texas.

West Nile Virus (WNV)

- From 1 January through 30 September 2014, 1,177 WNV cases and 43 deaths were reported, an increase of 62% (+452) and 72% (+18), respectively, since the previous report.
- More than half of all cases continue to be reported from just 3 states: California (n=374), Texas (n=155), and Louisiana (n=102). Together these states report 44% (n=19) of all deaths.
- To date, no acute WNV infections have been reported in Army personnel in 2014.



WNV Human Cases ^β	
Population	Cum. 2014
United States	1,177
Army Cases Confirmed and Probable	
Army AD [‡]	0
Army Non-AD	0
WNV Human Deaths	
United States	43
Army	0

Source: CDC & DRSI as of 30 SEP 2014.
^β Confirmed and probable.
[‡] AD, recruits, cadets.

DoD Mosquito Surveillance from Army Laboratories

- Since the last report, PHCR-North tested 121 pools, 7 of which were positive for WNV.
- Of the 506 pools PHCR-South tested for West Nile Virus since the last report, 1 was positive. The 25 *Culex quinquefasciatus* mosquitoes in the positive pool were collected from Lackland Air Force Base in San Antonio, Texas. The mosquitoes were collected in a gravid trap set next to a tidal pond.
- Since the last report, PHCR-West tested 33 pools for West Nile Virus. 6 positive pools were detected, all at Ft. Bliss.

WNV Mosquito Pool Testing	PHC Region	Reporting Period [‡]	Year to Date 2014
		No. Positive (No. Tested)	No. Positive (No. Tested)
	North	7 (121)	83 (987)
	South	1 (506)	1 (785)
	West	6 (33)	12 (180)

Source: Official Communication

[‡] Absolute difference between last published report and this week's year to date number.

Chikungunya (CHIKV)

- From December 2013 through 26 September 2014, almost 750,000 locally-acquired CHIKV cases have been reported from the Americas.
- Five deaths occurred since the previous report, including 3 from Puerto Rico. Of 118 total deaths, 99% (n=117) are reported by Caribbean Island countries/territories.
- As of 30 September, 11 CHIKV infections were acquired in the continental U.S. (an increase of 2), all from Florida.
- Since the previous report, 28 additional Army cases have been reported. A total of 8 travel-related Army cases have been reported; all were associated with non-duty related travel (Puerto Rico, Dominican Republic, Guyana, Haiti, Jamaica, Samoa). An additional 25 locally-acquired cases from Fort Buchanan were reported on 3 October; the majority of these cases (88%) had symptom onset in September or October 2014.



Chikungunya Cases in the Americas			
Location [†]	Locally Acquired [‡]	Imported [‡]	Deaths
Caribbean Islands	718,542	89	117
Central & South America	29,168	198	1
North America	11	1,198	0
Total	747,721	1,485	118
Army Cases [‡]			
Army AD [‡]	6	2	0
Army Non-AD	19	6	0

Sources: (2014) PAHO 26 SEP, CDC 30 SEP, DRSI 7 OCT.
[†] Caribbean Islands include Puerto Rico & U.S. Virgin Islands; Central & South America includes continental countries only.
[‡] Includes suspect & confirmed cases; [‡] Confirmed imported cases.
[‡] Only cases whose case status is verified as confirmed/probable.
[‡] Army AD: Active Duty, recruits, cadets.

Malaria

- In the United States from 1 January through 27 September 2014, 1,082 provisional cases of malaria were reported to the CDC.
- As of 30 September, 26 malaria infections in Army associated personnel with confirmed or probable case status were reported through DRSi.
- 15 AD were exposed in Asia (Korea-11, Afghanistan-2, Cambodia-1, Thailand-1). 8 AD and 2 non-AD were exposed in Africa, and 1 AD had missing data.
- Incomplete implementation of preventive measures was noted for some cases.

Time Period	US Cases	Army Cases by Status		Army Cases by Exposure Location		
	United States ^β	Army AD [‡]	Army Non-AD	Asia	Africa	UNK
Reporting Period [‡]	18	0	0	0	0	0
Cum. 2014	1,082	24	2	15 [§]	10	1

Sources: CDC and AIPH DRSi as of 27 SEP 2014.
[‡] Cases reported in week 39 (21-27 SEP 2014).
[‡] Active duty, recruits, cadets. [§] Includes 2 AD cases from Afghanistan.

Human Tick Testing

- Although *Borrelia burgdorferi*, the causative agent of Lyme disease, and *Rickettsia parkeri*, causative agent of Tidewater spotted fever, were the most frequently identified pathogens among ticks sent to the CONUS Human Tick Test Program in 2014, lone star ticks (*Amblyomma americanum*), the vector for ehrlichiosis, were the most commonly submitted tick species.

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 (380)	6 (380)	109 (380)	15 (2348)	65 (2348)	4 (380)	3 (7)	0 (589)

Note: CONUS data only.

Resources: CDC CHIKV • CDC Malaria • 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

West Nile Virus Activity by State – United States, 2014 (as of September 30, 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:

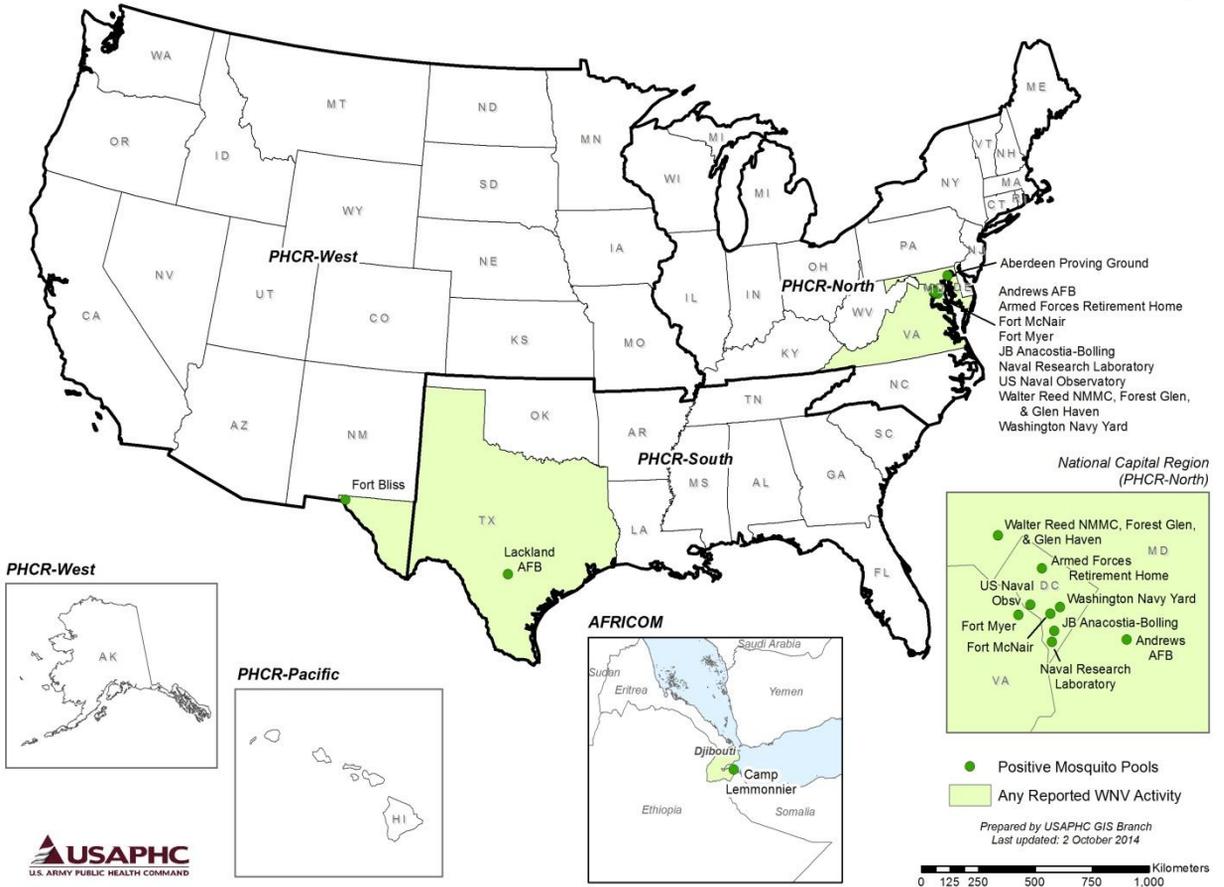
WNV infections in **mosquitoes, birds, sentinel animals, or veterinary animals** have been reported to CDC ArboNET from the following states: Alabama, Arizona, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, 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: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, District of Columbia, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, Washington, West Virginia, 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 October 1, 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.

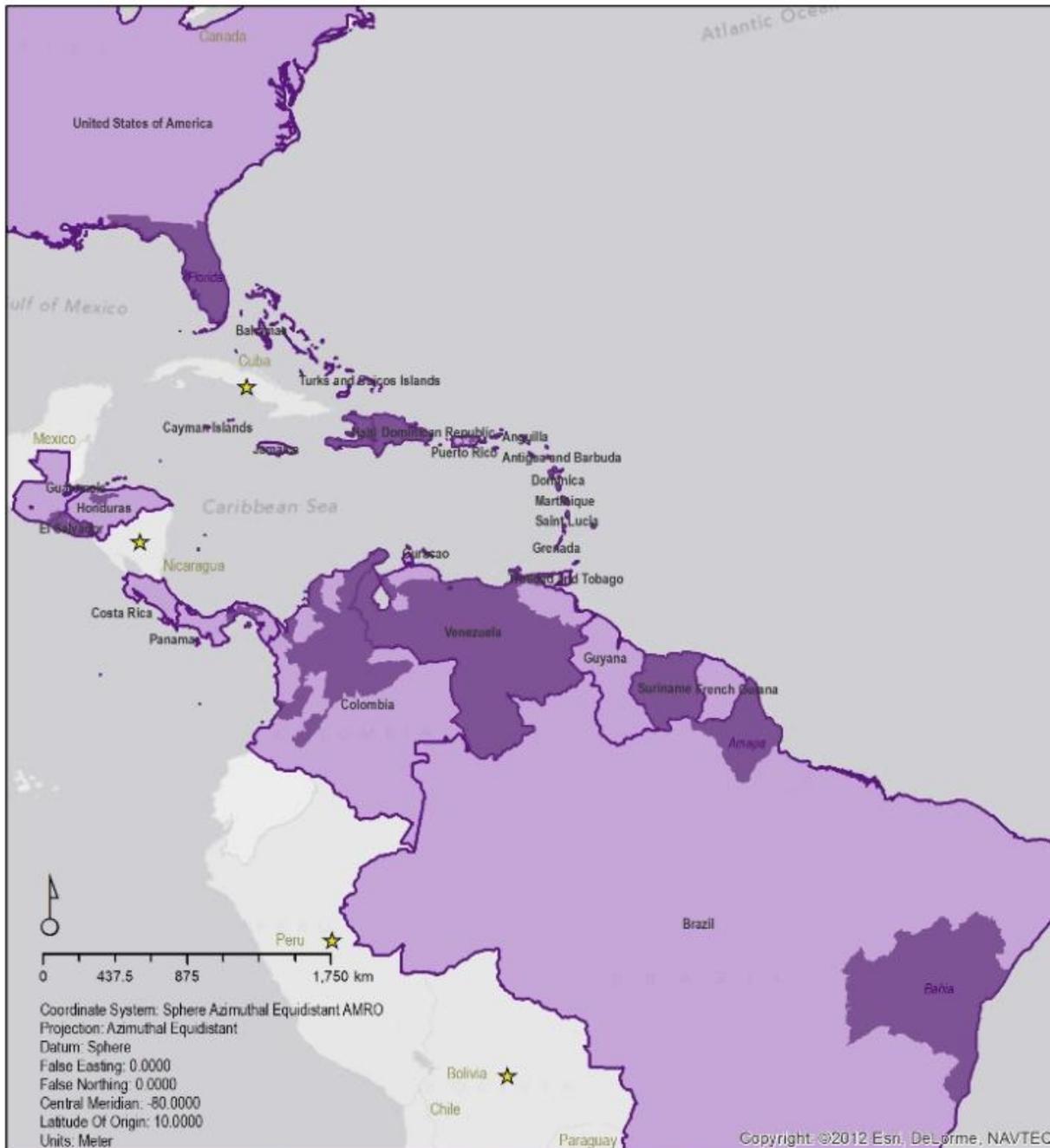
*Includes WNV Army human disease cases (probable and/or confirmed) and infections in mosquito pools on military installations.

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 39, 2014

Legend

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

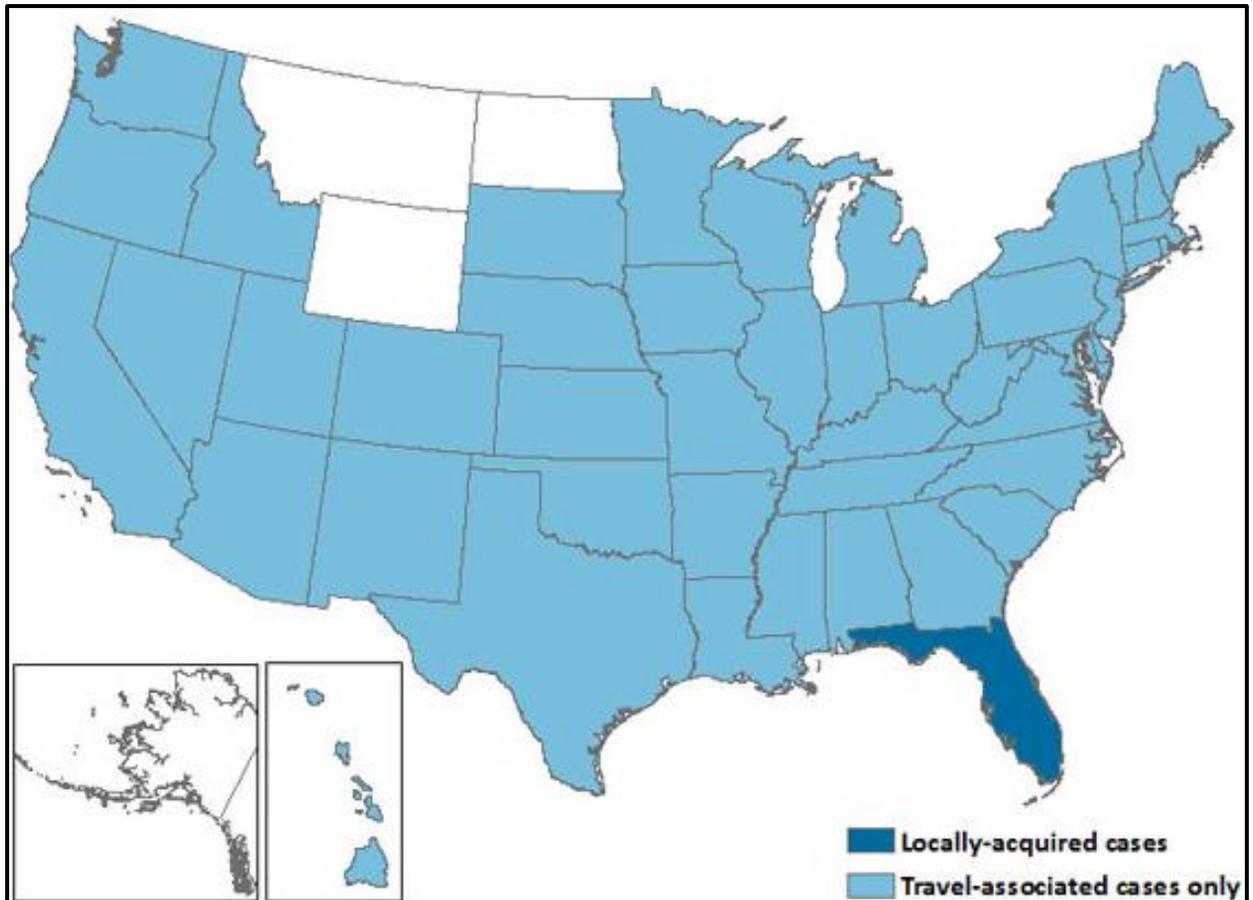


Data source: PAHO/WHO. Number of reported cases of Chikungunya Fever in the Americas
<http://www.paho.org/chikungunya>

Map production: PAHO/CHAIR/ARO

* 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 30, 2014)



*Chikungunya is not a nationally notifiable disease.

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