



Florida Arbovirus Surveillance Week 3: January 13 – January 19, 2013

Arbovirus surveillance in Florida includes endemic mosquito-borne viruses West Nile virus (WNV), Eastern equine encephalitis virus (EEEV), St. Louis encephalitis virus (SLEV), and Highlands J virus (HJV) and exotic viruses such as dengue virus (DENV) and California encephalitis group viruses (CEV). Malaria, a non-viral mosquito-borne disease is also included. During the period of January 13 – January 19, 2013 the following arboviral activity was recorded in Florida:

This week's report includes both 2012 and 2013 cases and positive samples but all were reported in 2013.

DENV activity: No cases of locally acquired dengue were reported this week. No locally acquired dengue cases have been reported in 2013.

EEEV activity: No sentinel chickens tested positive this week for antibodies to EEEV. One horse case of EEEV infection was reported in Levy County this week. In 2013, one equine has been received from one county.

WNV activity: No human cases of WNV infection were reported this week. No horse cases of WNV infection were reported this week. No sentinel chickens tested positive this week for antibodies to WNV. In 2013, no positive samples have been received.

SLEV activity: No sentinel chickens tested positive this week for antibodies to SLEV. In 2013, no positive samples have been received.

HJV activity: No sentinel chickens tested positive for antibodies to HJV this week. In 2013, no positive samples have been received.

Advisories/Alerts: Miami-Dade County is currently under mosquito-borne illness alert. Osceola County is currently under mosquito-borne illness advisory. No other counties are currently under mosquito-borne illness advisory or alert.

2013 Human Case Summary*

Imported Dengue:

2012: One hundred and forty-eight cases of dengue with onset in 2012 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset. Countries of origin were Brazil, Colombia, Cuba (29), Dominican Republic (18), Ecuador (4), El Salvador (2), Ghana, Guatemala, Guyana (2), Haiti (19), Honduras, India, Jamaica (27), Mexico (2), Nicaragua (2), Panama, Philippines (2), Portugal, Puerto Rico (23), South Africa, Sri Lanka, St. Vincent, Suriname, Trinidad (4), Turks & Caicos, and Virgin Islands. Counties reporting cases were Brevard (3), Broward (24), Collier, Duval (3), Flagler, Hillsborough (8), Lee (3), Marion, Miami-Dade (55), Okaloosa, Orange (19), Osceola (5), Palm Beach (9), Pinellas (4), Polk (1), Sarasota (2), Seminole (4), St. Johns, St. Lucie, and Volusia (2). Eleven of the cases were reported in non-Florida residents.

2013: Two cases of dengue with onset in 2013 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset. Countries of origin were: Columbia and

Dominican Republic. Counties reporting cases were: Clay and Orange. One of the cases was reported in a non-Florida resident.

Seventy-four of the one hundred and forty-eight cases of dengue reported in Florida have been serotyped by PCR. Additional serotyping and strain typing are being conducted.

	# of cases per serotype - 2012	# of cases per serotype - 2013
DENV-1	45	
DENV-2	5	
DENV-3	1	
DENV-4	23	
	74	0

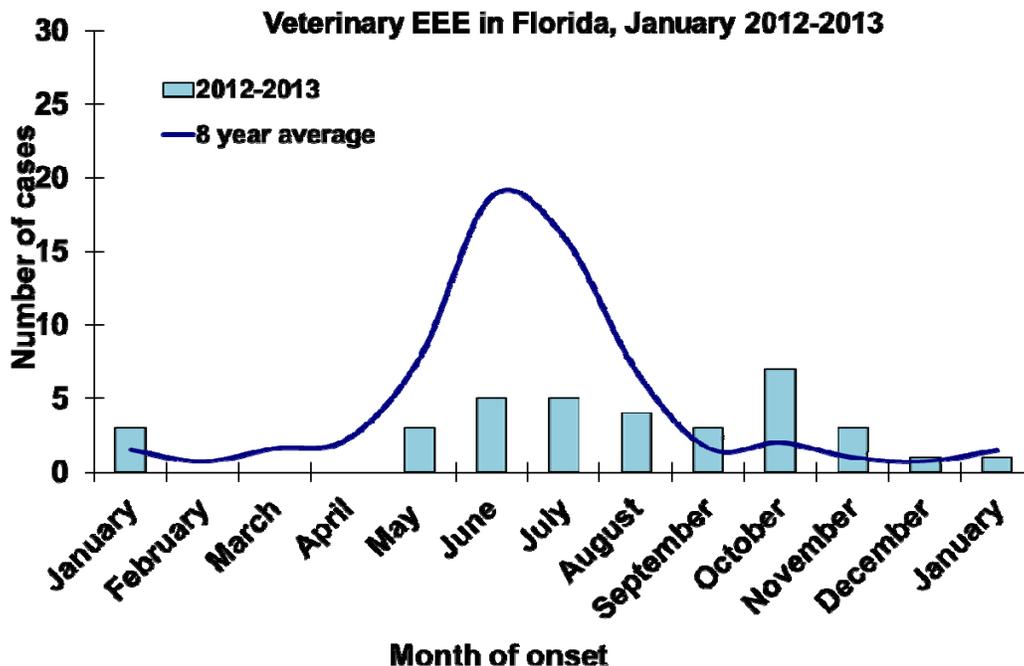
Imported Malaria - 2012: Sixty-three imported cases of malaria with onset in 2012 have been reported. Countries of origin were: Afghanistan (2), Cameroon, Central African Republic, Colombia, Congo, Costa Rica, Ethiopia (2), Ghana (6), Guyana (2), Haiti (11), Honduras (3), India (2), Ivory Coast (3), Kenya, Liberia (3), Nigeria (10), Pakistan, Peru, Sierra Leone (2), South Africa, Sub Saharan Africa, Sudan, Togo, Uganda, Zambia, and multiple or unspecified African countries (3). Counties reporting cases were: Alachua (2), Brevard, Broward (9), Charlotte, Duval (8), Escambia, Hillsborough (7), Lake (2), Leon, Manatee, Marion, Martin, Miami-Dade (9), Orange (6), Osceola (2), Palm Beach (4), Pinellas (3), Polk, Seminole, and Volusia (2). Six of the cases were reported in non-Florida residents.

Imported Malaria - 2013: One case of malaria with onset in 2013 has been reported. Country of origin was: Guinea. County reporting case was: Miami-Dade.

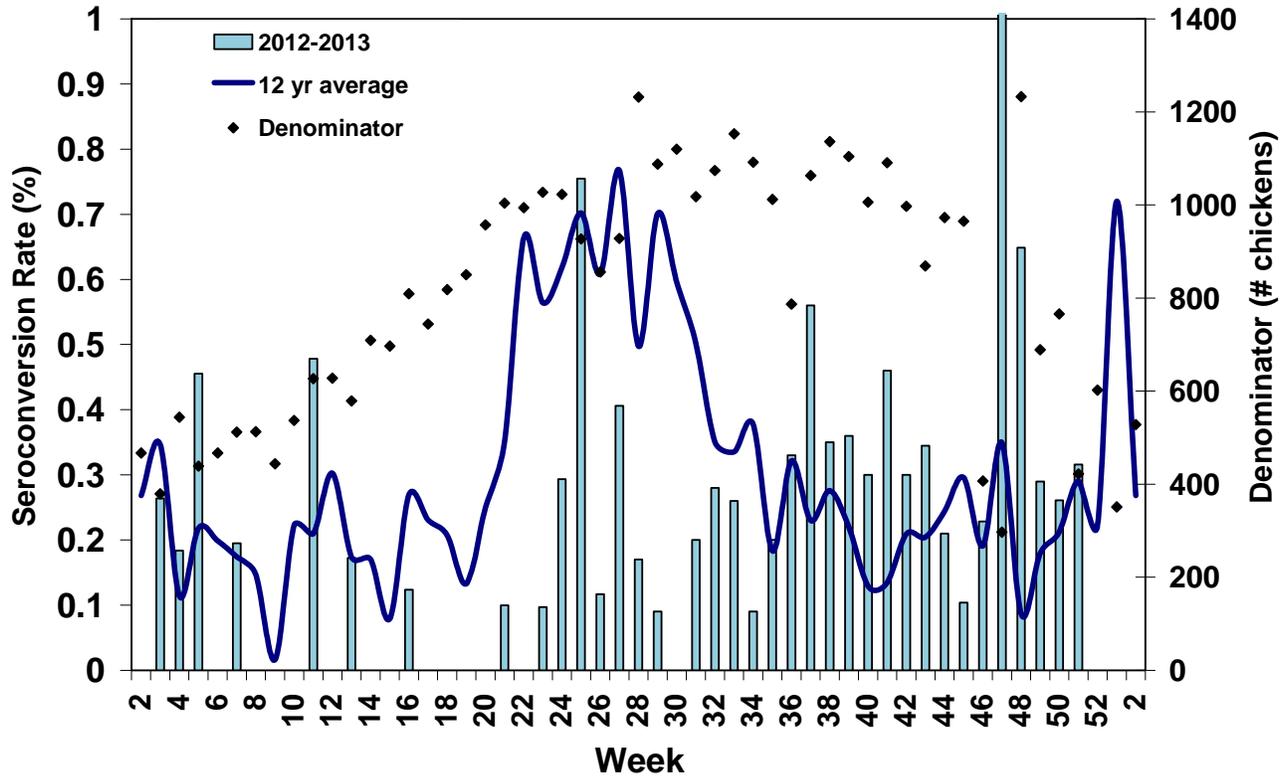
Veterinary Cases

One horse in Levy County tested positive for EEEV this week.

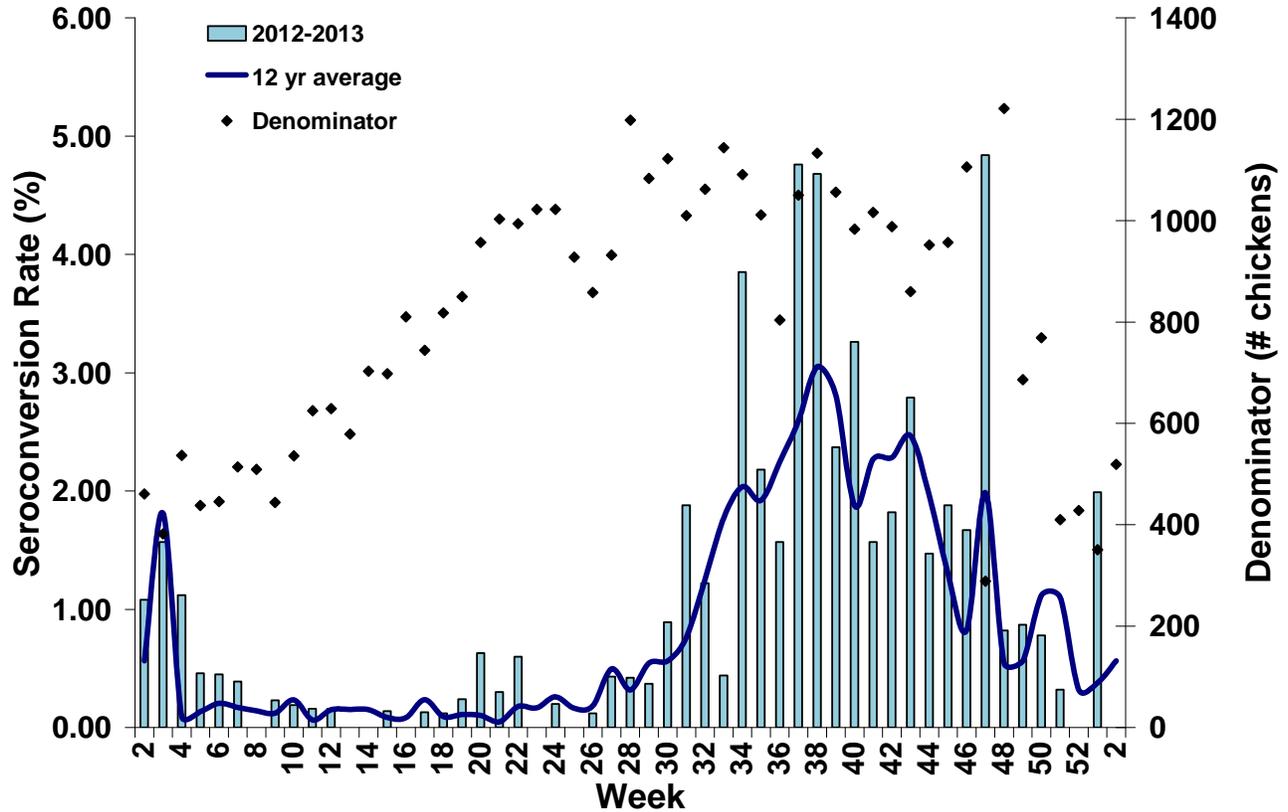
County	Onset Date	Species	Virus	Status	County YTD
Levy	01/07/13	Equine	EEEV	Euthanized	1 EEEV



Sentinel Seroconversions to EEEV in Florida, 2012-2013



Sentinel Seroconversions to WNV in Florida, 2012-2013



Dead Birds

The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 9 reports representing 9 dead birds, including 2 raptors were received from 6 counties. In 2012, 542 reports representing a total of 1446 dead birds (70 crows, 41 jays, 77 raptors, 62 dove) were received from 56 of Florida's 67 counties. In 2013, 13 reports representing a total of 14 dead birds (0 crows, 0 jays, 4 raptors, 0 dove) were received from 9 of Florida's 67 counties. Please note that FWC collects reports of birds that have died from a variety of causes, not only arboviruses. Dead birds should be reported to www.myfwc.com/bird/

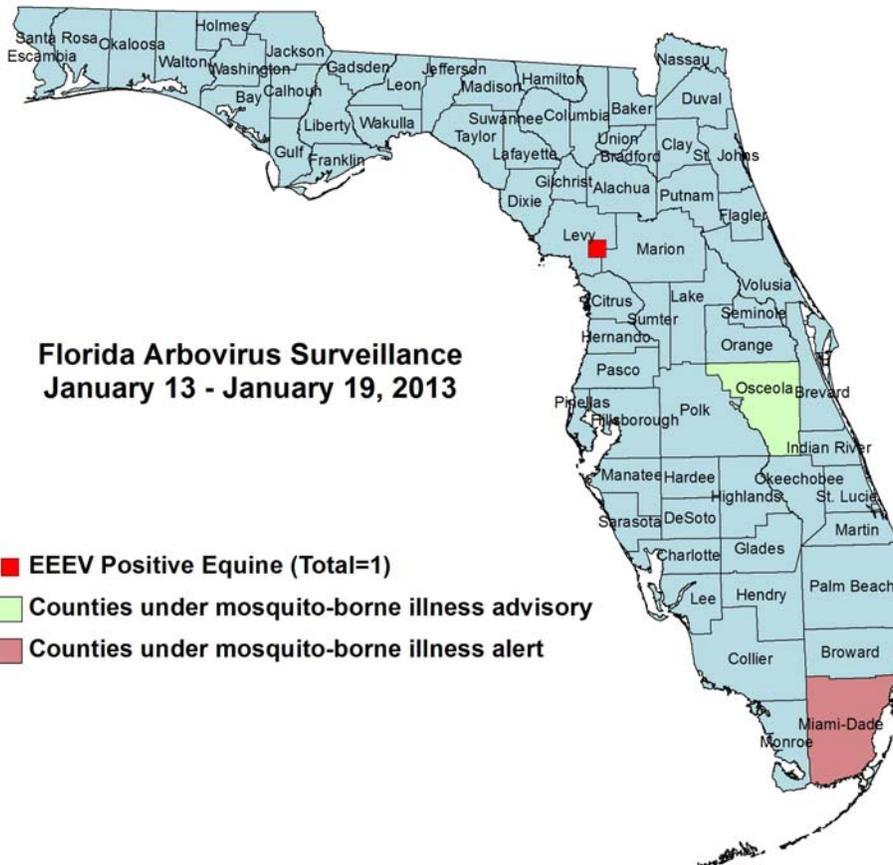
2012

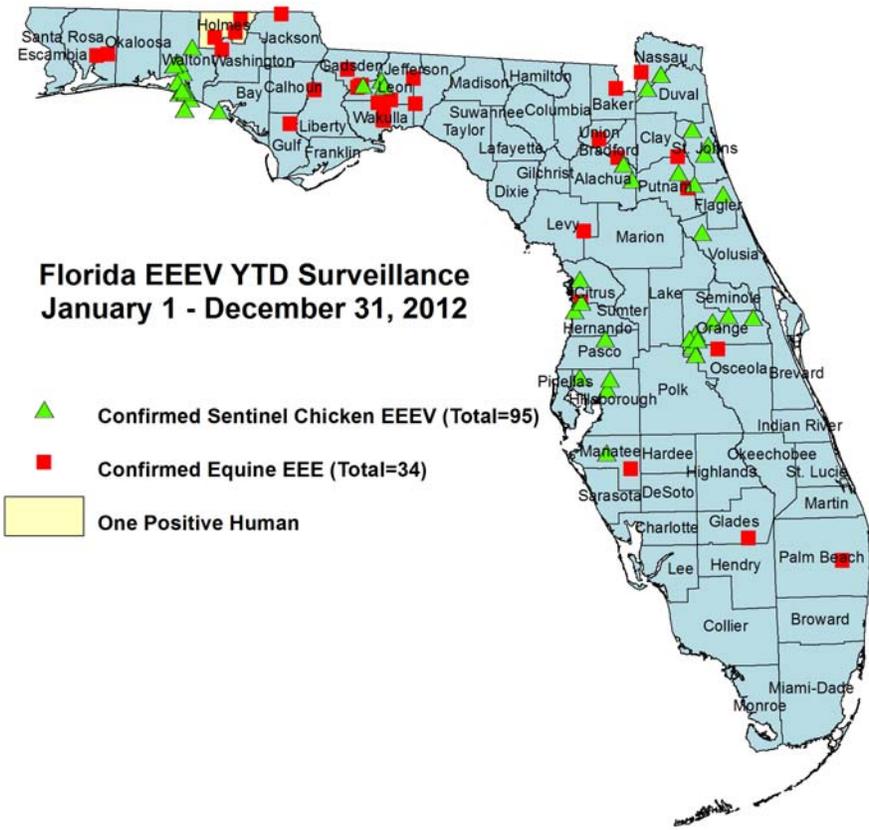
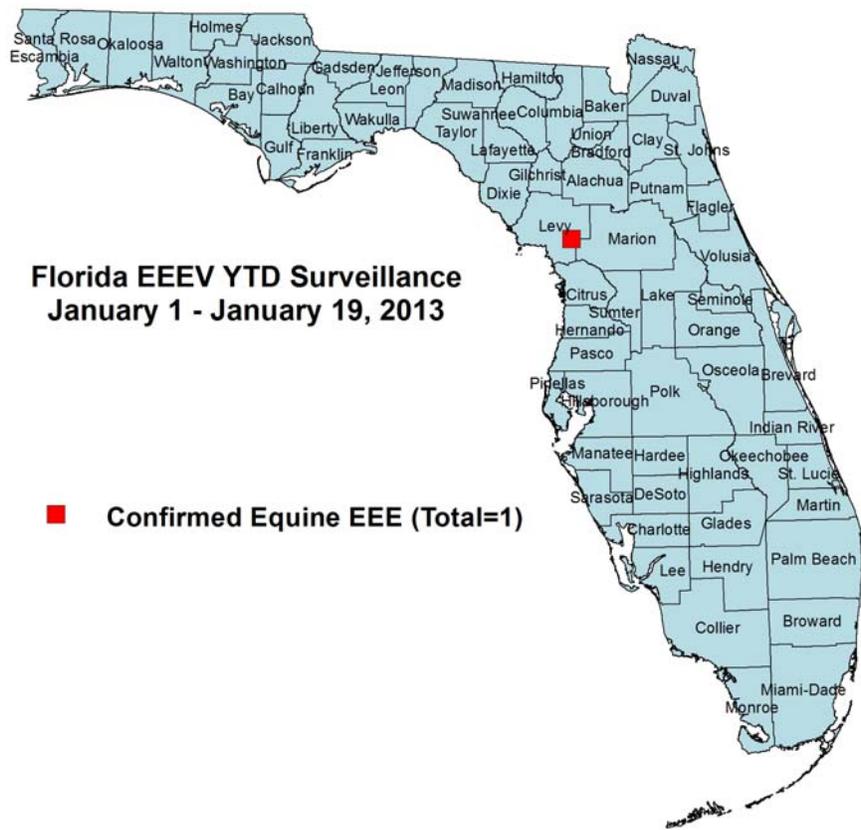
County	Total Dead Birds	Crows	Jays	Raptors
Pasco	1	0	0	0

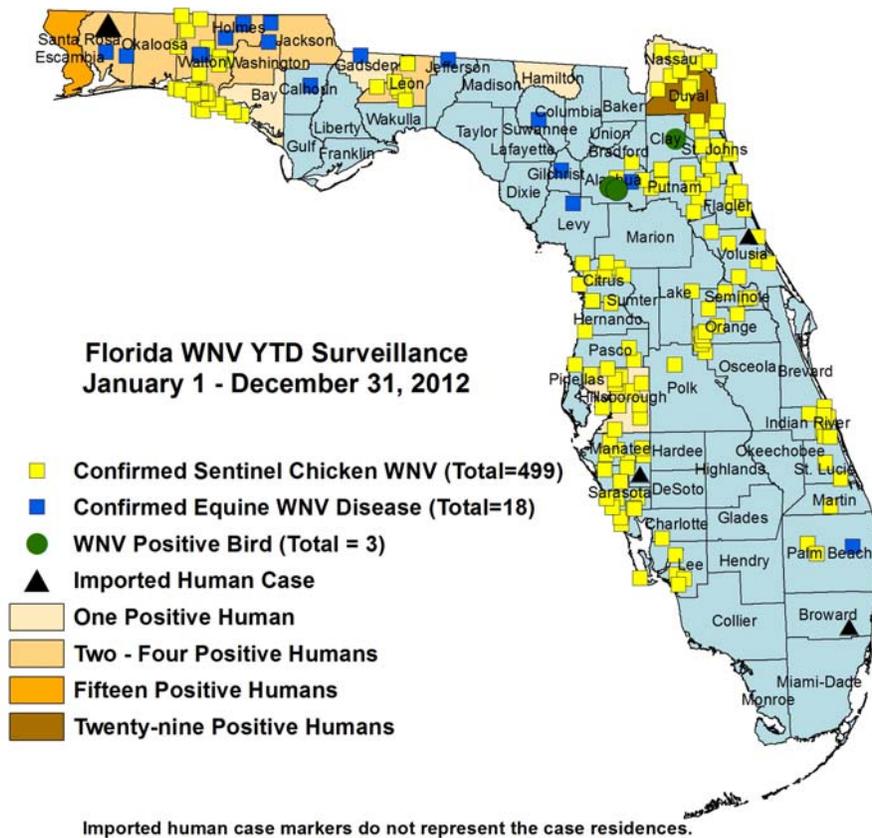
2013

County	Total Dead Birds	Crows	Jays	Raptors
Hillsborough	1	0	0	0
Lee	1	0	0	0
Pasco	1	0	0	0
Pinellas	2	0	0	0
Sarasota	2	0	0	2
Orange	1	0	0	0

Maps







2013 Arbovirus Activity by County

County	Arbovirus Activity
Levy	EEEV : 1 horse (1/7)

2012 Arbovirus Activity by County

County	Arbovirus Activity
Alachua	EEEV : 1 horse (7/27) ; 3 sentinels (7/9, 9/18, 10/8) WNV : 1 horse (9/11) ; 5 sentinels (9/17, 9/18, 10/8, 10/15), 2 wild birds (10/7) HJV : 2 sentinels (9/18, 10/8)
Bay	EEEV : 1 sentinel (7/10) WNV : 1 human (September) ; 25 sentinels (7/24, 7/31, 8/7, 8/14, 8/21, 9/4, 9/11, 9/18, 10/2, 10/23, 10/30, 11/14, 11/27, 12/18) ; 2 mosquito pools (9/6, 9/11) HJV : 1 sentinel (5/29) SLEV : 1 mosquito pool (10/2)
Baker	EEEV : 1 horse (6/21)
Brevard	SLEV : 1 sentinel (8/29)
Calhoun	WNV : 1 horse (12/8)
Charlotte	WNV : 4 sentinels (9/7, 9/14, 9/28) SLEV : 3 sentinels (10/19, 11/2)
Citrus	EEEV : 4 sentinels (1/30, 10/8, 11/26, 12/17), 1 horse (11/5) WNV: 16 sentinels (5/29, 8/27, 9/17, 9/24, 10/15, 10/22, 11/13, 11/26, 12/10) HJV: 1 sentinel (1/3)
Clay	EEEV: 1 horse (10/14) WNV: 1 goose
DeSoto	SLEV: 1 pigeon
Duval	WNV: 29 humans (4 June, 7 July, 11 August, 3 September, 4 October); 29 sentinels (7/30,

County	Arbovirus Activity
	8/3, 8/13, 8/20, 8/23, 8/28, 9/10, 9/13, 9/17, 10/1, 10/18, 10/22, 11/5, 11/7, 11/13); 2 mosquito pools (8/7, 8/8)
Escambia	WNV: 15 humans (2 July, 8 August, 5 September)
Flagler	EEEV: 2 sentinels (8/6, 9/24) WNV: 11 sentinels (9/4, 10/1, 10/9, 10/22, 10/29, 11/13, 11/19, 11/26, 12/3) HJV: 2 sentinels (7/30, 8/27) Flavi: 1 Sentinel (12/3)
Gadsden	WNV: 1 human (August); 1 horse (10/14) EEEV: 1 horse (10/31)
Gilchrist	WNV: 1 horse (10/12)
Glades	EEEV: 2 horses (6/25, 7/14)
Gulf	EEEV: 1 horse (8/21)
Hamilton	WNV: 1 human (September)
Hernando	EEEV: 2 sentinels (10/1, 10/22) WNV: 2 sentinels (1/23, 9/17)
Hillsborough	EEEV : 4 sentinels (2/14, 3/13, 4/17) WNV: 1 human (August); 24 sentinels (1/3, 1/17, 1/24, 1/31, 2/14, 3/6, 6/12, 8/28, 9/18, 9/25, 10/30, 12/11, 12/31) SLEV: 11 sentinels (1/3, 8/28, 10/9, 10/16, 10/30, 11/6)
Holmes	EEEV : 1 human (June); 3 horses (5/21, 6/25, 11/2) WNV : 3 human (2 October, November) ; 3 horses (8/11, 8/23, 9/26)
Indian River	WNV: 17 sentinels (5/24, 8/9, 8/30, 9/13, 9/20, 9/27, 11/8, 11/15)
Jackson	EEEV: 1 horse (9/9) WNV: 2 human (September), 1 horse (10/9)
Jefferson	EEEV: 1 horse (8/6) WNV: 1 horse (10/25)
Lee	WNV: 6 sentinels (1/24, 9/17, 9/18, 10/9, 10/23, 11/5) SLEV: 30 sentinels (3/7, 8/30, 9/4, 9/10, 9/17, 9/18, 10/1, 10/2, 10/8, 10/9, 10/15, 10/22, 10/23, 10/29, 10/30, 11/5, 11/12, 11/20, 12/3, 12/4) Flavi: 1 sentinel (12/4)
Leon	EEEV : 5 horses (8/21, 8/30, 9/3, 9/4, 10/4), 10 sentinels (8/13, 8/28, 9/22, 10/22, 10/29, 11/5, 11/13, 11/26) WNV : 2 humans (August, October), 37 sentinels (9/17, 9/22, 10/2, 10/15, 10/22, 10/29, 11/5, 11/13, 11/19) HJV : 6 sentinels (8/28, 9/4, 9/11, 10/2, 12/10)
Levy	EEEV: 2 horses (1/2) WNV : 1 horse (9/3)
Liberty	EEEV: 1 horse (10/19)
Manatee	EEEV: 1 horse (6/14); 1 sentinel (9/11) WNV: 8 sentinels (2/1, 3/14, 5/30, 8/15, 9/19, 9/25, 10/10) SLEV: 4 sentinels (9/19, 9/25, 10/1, 10/16)
Martin	WNV: 1 sentinel (9/14) SLEV: 4 sentinels (9/28, 10/5, 10/18)
Miami-Dade	Dengue: 2 humans (August, October)
Nassau	EEEV : 1 horse (7/18) ; 9 sentinels (6/16, 6/23, 9/8, 9/14, 9/28, 10/15) WNV : 1 human (October) ; 36 sentinels (8/6, 8/25, 8/31, 9/8, 9/10, 9/14, 9/20, 9/28, 10/1) HJV : 6 sentinels (7/13, 8/18, 8/31, 9/14, 9/28)
Okaloosa	WNV : 3 humans (2 August, 1 September)
Orange	EEEV : 27 sentinels (1/5, 1/9, 1/19, 1/23, 2/6, 3/15, 3/29, 5/21, 6/14, 7/2, 8/8, 8/13, 8/20, 9/10, 9/27, 10/1, 10/4, 10/8, 10/25, 11/15, 11/20, 11/26, 11/29, 12/6) WNV: 20 sentinels (1/9, 1/12, 1/19, 1/25, 3/1, 7/26, 9/13, 9/17, 9/19, 10/22, 10/29, 11/29, 12/3, 12/10) SLEV: 3 sentinels (10/1)
Osceola	EEEV : 1 horse (7/25) Dengue : 1 human (October)

County	Arbovirus Activity
Palm Beach	EEEV : 1 horse (6/20) WNV : 1 horse (8/29), 3 sentinels (8/27, 9/17, 10/15) SLEV : 11 sentinels (7/23, 8/20, 8/27, 9/17, 10/22)
Pasco	WNV : 2 sentinels (5/29, 9/19)
Polk	WNV : 4 sentinels (9/5, 9/18, 10/2)
Putnam	EEEV : 1 horse (1/1) ; 3 sentinels (7/20, 8/3, 10/9) WNV : 19 sentinels (9/18, 9/25, 10/2 10/9, 10/16, 10/23) SLEV : 1 sentinel (10/2)
Santa Rosa	EEEV : 2 horses (5/11, 11/1) WNV : 3 humans (2 August, 1 September) ; 2 horses (8/23, 8/29)
Sarasota	WNV: 23 sentinels (1/9, 2/6, 3/19, 5/7, 5/14, 7/9, 7/16, 7/27, 8/3, 8/24, 8/31, 9/14, 9/17, 9/24, 10/19, 11/9, 12/31) SLEV: 13 sentinels (7/2, 9/7, 10/1, 10/19, 10/26, 11/2, 11/9, 11/16) HJV: 1 sentinel (9/7) Flavi: 1 sentinel (8/31)
Seminole	WNV : 3 sentinels (8/7, 9/25) Dengue: 1 human (September)
St. Johns	EEEV : 7 sentinels (9/2, 9/11, 9/18, 10/8, 10/29, 11/27) WNV : 61 sentinels (5/14, 5/22, 5/29, 8/5, 8/20, 8/27, 9/2, 9/11, 9/18, 9/28, 10/8, 10/15, 10/22, 11/5, 11/13, 11/19, 12/10) HJV : 2 sentinels (4/30, 7/3)
St. Lucie	WNV : 2 sentinels (9/14, 10/8) SLEV : 3 sentinels (10/8, 10/22)
Suwannee	WNV : 2 asymptomatic blood donors (October) 2 horses (10/15, 10/18)
Union	EEEV : 1 horse (5/12)
Volusia	WNV : 7 sentinels (5/29, 6/25, 9/17, 11/5, 11/19, 12/31) EEEV : 1 sentinel (11/19)
Wakulla	EEEV : 4 horses (10/9, 10/21, 10/22, 12/15)
Walton	WNV : 4 humans (2 September, October, November) ; 2 horses (9/29, 10/16); 133 sentinels (4/9, 4/23, 4/30, 7/2, 7/3, 7/9, 7/10,7/16, 7/23, 7/30, 8/7, 8/13, 8/21, 9/6, 9/10, 9/17, 9/18, 9/24, 10/1, 10/8, 10/15, 10/22, 10/29, 11/5, 11/19 11/26, 12/4, 12/10, 12/17) EEEV : 21 sentinels (6/4, 6/18, 6/25, 7/2, 7/30, 9/6, 9/10, 10/15, 11/19, 11/26, 12/4, 12/10, 12/17) HJV : 7 sentinels (5/14, 6/11, 6/18, 7/16, 7/23, 9/6, 10/1) Flavi : 2 sentinels (11/26)
Washington	EEEV : 1 horse (7/1) WNV : 2 human (September, October), 1 horse (9/19)

Acknowledgements and Data Sources

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For more surveillance information, please see the DOH website at:

<http://www.doh.state.fl.us/Environment/medicine/arboviral/index.html>

For arbovirus surveillance information for the United States, please see the Centers for Disease Control and Prevention website at:

<http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm>

*Case tallies included in the weekly Florida arbovirus surveillance report include confirmed and probable cases for EEE, WNV infection, SLE, dengue, and malaria. In addition, dengue and malaria tallies may also include suspect cases. Case definitions being used in Florida are consistent with national criteria provided by the

Council of State and Territorial Epidemiologists (CSTE) and may be viewed at:

http://www.doh.state.fl.us/Disease_ctrl/epi/surv/CaseDefinitions/2012CaseDef_FINAL.pdf

Case tallies reported by CDC do not include suspect cases and cases are reported by patient state of residence rather than where the exposure occurred.

Data is provided by county health departments, Department of Health Laboratories, Department of Agriculture and Consumer Services, mosquito control agencies, Florida Fish and Wildlife Conservation Commission, medical providers and veterinarians. Equine cases are provided by the Department of Agriculture and Consumer Services.