



Florida Arbovirus Surveillance Week 39: September 25 – October 01, 2011

Arbovirus surveillance in Florida includes endemic mosquito-borne viruses such as 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 September 25 – October 01, 2011, the following arboviral activity was recorded in Florida:

DENV activity: One case each was acquired in Miami-Dade and Hillsborough counties. In 2011, there have been two locally acquired cases in Miami-Dade County, one in Martin County and one in Hillsborough County.

EEEV activity: Four sentinel chickens in Citrus, St. Johns and Walton counties tested positive for antibodies to EEEV. In 2011, positive samples from three equines, 24 sentinel chickens and 19 live wild birds have been received from 11 counties.

WNV activity: One new case of locally acquired WNV infection was reported in Duval County. Two equines WNV infections were reported from Duval and Leon counties. Sixteen sentinel chickens in Duval, Hillsborough, Leon, Nassau, Orange, Sarasota and Seminole counties tested positive for antibodies to WNV. In 2011, positive samples from 22 humans, 100 sentinel chickens, three equines and one live wild bird (flavivirus positive) have been received from 18 counties.

SLEV activity: Two sentinel chickens in Pinellas County tested positive for antibodies to SLEV. In 2011, positive samples from 22 sentinel chickens have been received from three counties.

HJV activity: Two sentinel chickens in Citrus County tested positive for antibodies to HJV. In 2011, positive samples from eight sentinel chickens have been received from four counties.

Advisories/Alerts: Duval County is under mosquito-borne illness alert. Hillsborough, Leon, Miami-Dade, Martin, Holmes and Pinellas counties are under mosquito-borne illness advisory. The Bahamas has also issued an alert due to high dengue activity:
<http://wwwnc.cdc.gov/travel/notices/outbreak-notice/dengue-bahamas.htm>

Year to Date Human Case Summary

West Nile Virus Infection Acquired in Florida: Nineteen human cases of WNV infection have been acquired in Florida in 2011 with onset in June (1), July (8) Aug (8) and Sept (2). Seventeen cases were exposed in Duval; 15 of these cases were Duval County residents, one was a Leon County resident, and one case was a New Jersey resident. Two additional cases were acquired in Leon (1) and Miami-Dade (1) counties. Three positive asymptomatic blood donors were reported in Duval County.

Dengue Acquired in Florida: In 2011, four cases of locally acquired dengue have been reported in Miami-Dade (January and August), Martin (July) and Hillsborough (September) counties.

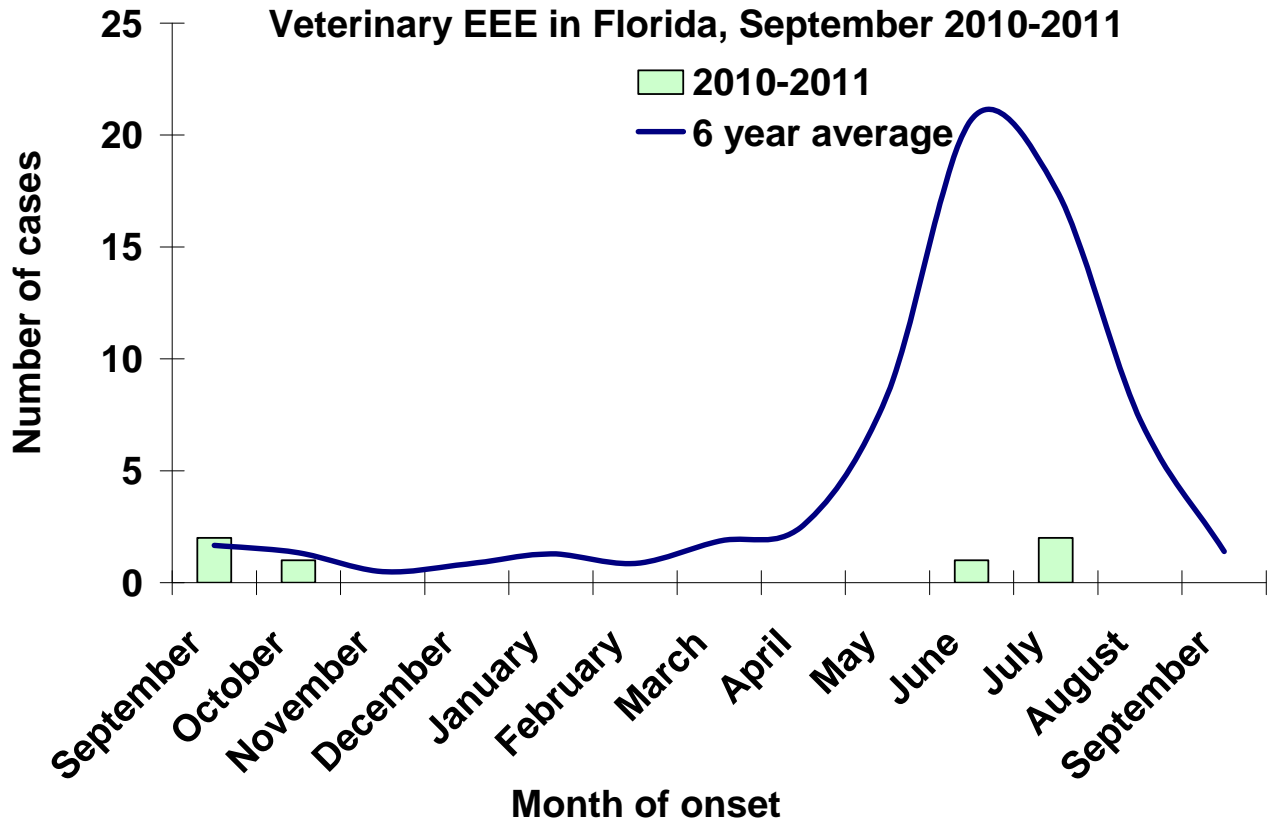
Imported Dengue: Thirty-seven cases of dengue with onset in 2011 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset.

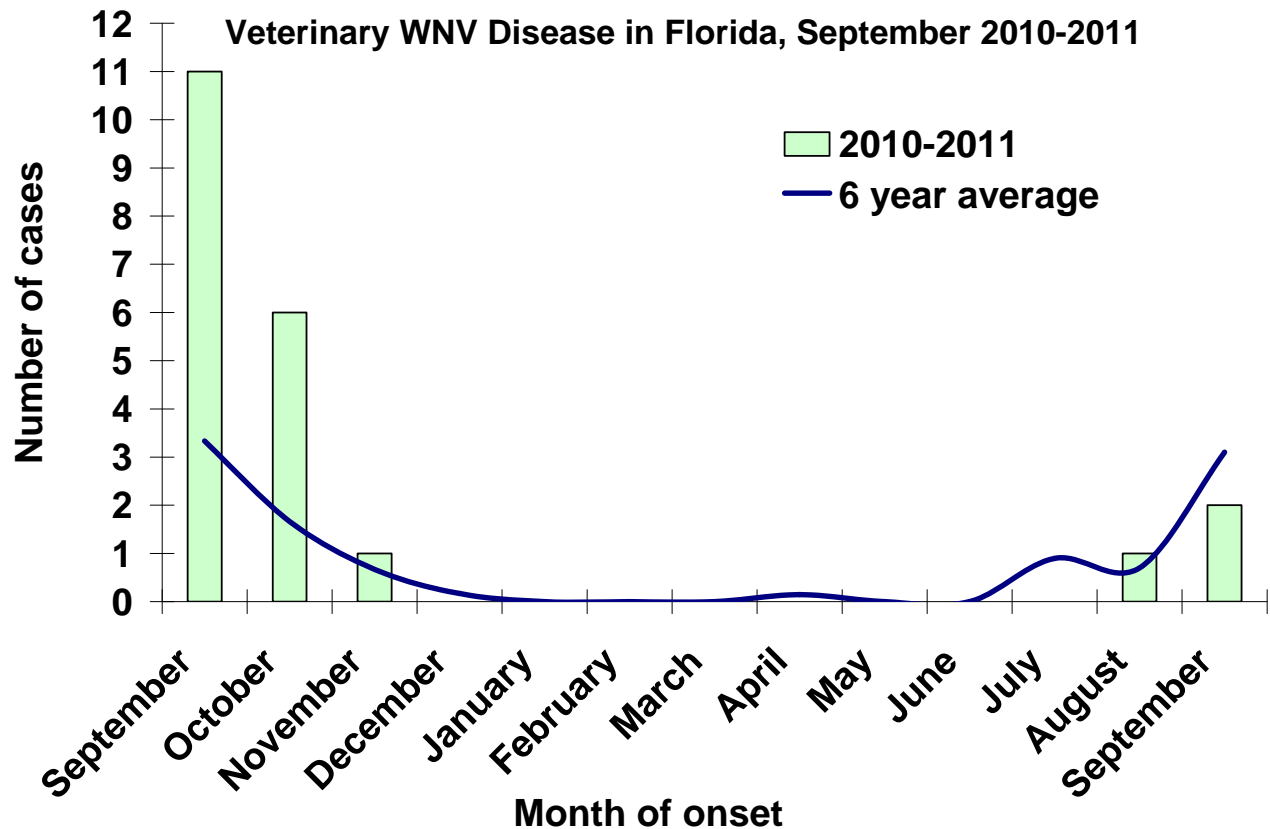
Countries of origin were Aruba, Bahamas (9), Bangladesh (2), Brazil (2), Colombia, Dominican Republic, Guyana, Haiti (2), India, Nicaragua, Panama (2), Puerto Rico (7), St. Lucia (2), Trinidad (3), Turks and Caicos Islands and Venezuela. Counties reporting cases were Broward (3), Flagler (2), Gulf, Hendry, Hillsborough, Marion, Martin, Miami-Dade (10), Orange (3), Palm Beach (8), Pasco, Pinellas, St. Johns (3) and Washington.

Imported Malaria: Seventy-three imported cases of malaria with onset in 2011 have been reported. Countries of origin were: Afghanistan (4), Brazil, Cameroon, East Timor, Ethiopia (2), Eritrea (2), Gabon, Ghana (4), Guinea Conakry, Guyana, Haiti (19), Honduras (3), India (13), Kenya, Liberia (2), Libya, Mali (2), Nigeria (6), New Guinea, Pakistan, Peru, Rwanda, Uganda (3) and Venezuela. Counties reporting cases were: Alachua (2), Brevard (4), Broward (9), Citrus, Collier (2), Duval (6), Escambia, Hillsborough (6), Indian River, Lee (4), Leon (2), Miami-Dade (15), Manatee (3), Okaloosa, Orange (4), Palm Beach (5), Pasco, Pinellas, Seminole, St. Johns and St. Lucie (3).

Veterinary Cases

One WNV positive case each was reported in Leon and Duval counties this week.



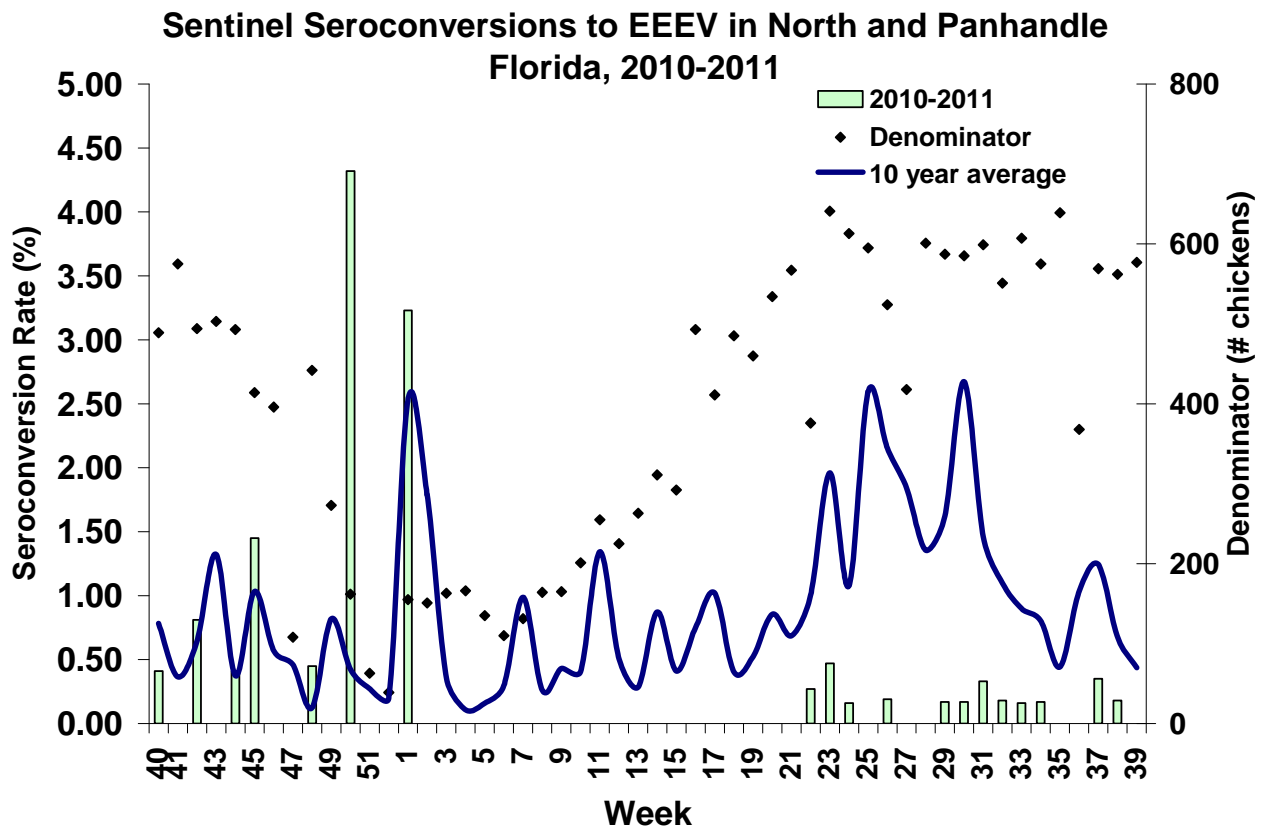


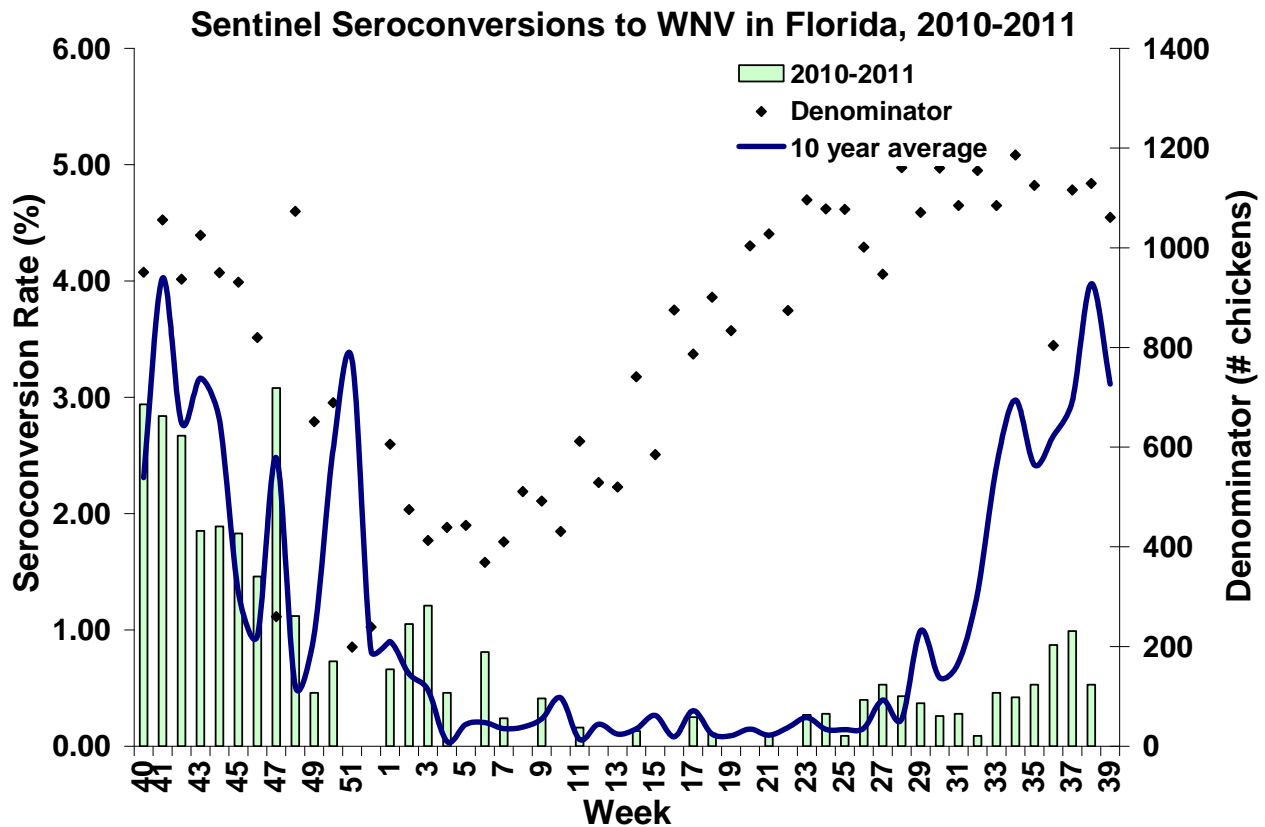
Sentinel Chickens

Sixteen sentinel chickens in Duval, Hillsborough, Leon, Nassau, Orange, Sarasota and Seminole counties tested positive for antibodies to WNV. Four sentinel chickens in Citrus, St. Johns and Walton counties tested positive for antibodies to EEEV. Two sentinel chickens in Pinellas County tested positive for antibodies to SLEV. Two sentinel chickens in Citrus County tested positive for antibodies to HJV. Seroconversion rates are calculated by week and include previously reported results.

County	Collection Date	Seroconversion Rates (%)				Week	County Totals YTD
		SLEV	WNV	EEEV	HJV		
Citrus	9/12/11			1.39	2.78	2 HJV, 1 EEEV	
Citrus	9/19/11			1.39		1 EEEV	3 EEEV, 2HJV, 3WNV
Duval	9/16/11		9.38			3 WNV	1 EEEV, 4 WNV
Hillsborough	9/13/11		2.63			2 WNV	17 WNV, 4 SLEV
Leon	9/6/11		13.89			5 WNV	
Leon	9/19/11		2.50			1 WNV	13 WNV
Nassau	9/19/11		5.56			2 WNV	1HJV, 4 WNV
Orange/Reedy	9/15/11		2.38			1 WNV	3 EEEV, 2HJV, 12 WNV

County	Collection Date	Seroconversion Rates (%)				Week	County Totals YTD
		SLEV	WNV	EEEV	HJV		
Pinellas	9/6/11	7.55				2 SLEV	17 SLEV, 3 WNV
Sarasota	9/19/11		2.67			2 WNV	12 WNV
Seminole	9/19/11		6.67			1 WNV	4 WNV
St Johns	9/12/11			1.67		1 EEEV	1 WNV, 2 EEEV
Walton (South)	9/19/11			1.39		1 EEEV	2 HJV, 1 EEEV





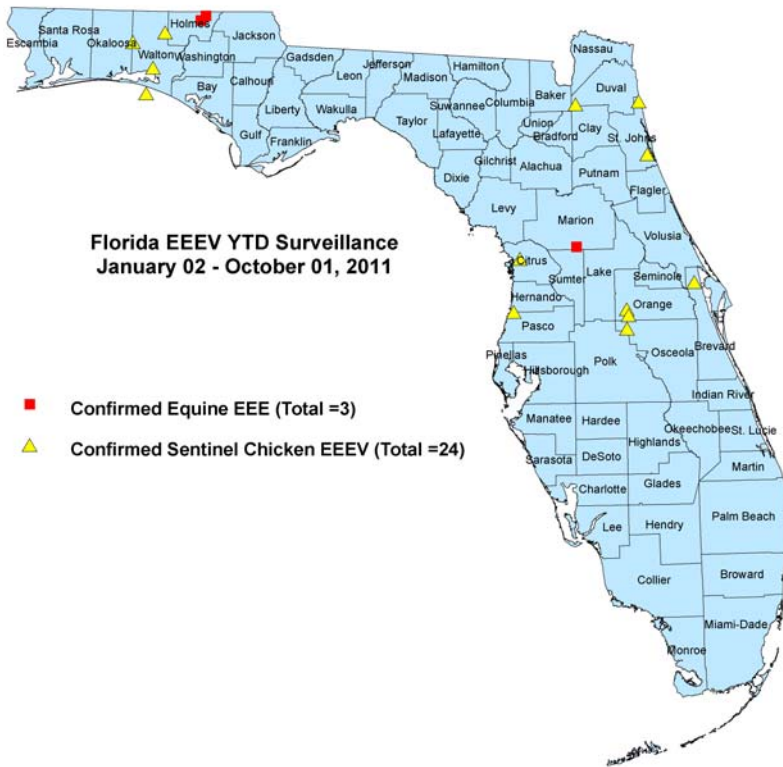
Live Wild Birds

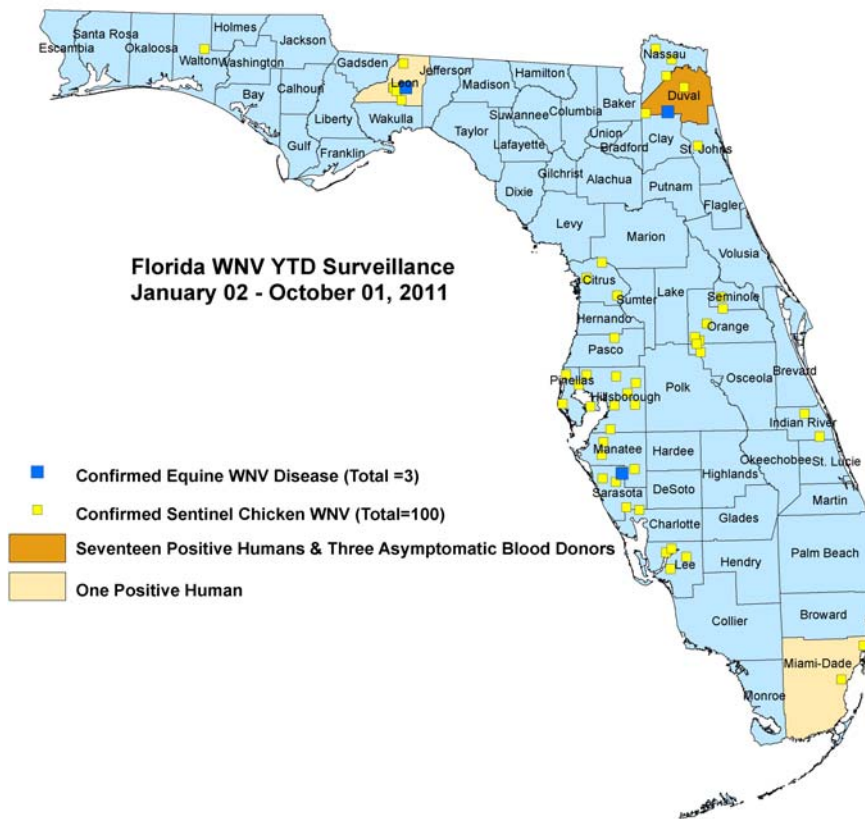
No positive live wild birds were reported this week.

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, 8 reports representing 22 dead birds were received from six counties. One was identified as jay and one as crow. None were identified as raptors. In 2011, two hundred and fifty-five reports representing a total of 751 dead birds (37 crows, 46 jays, 50 raptors, 618 others) were received from 43 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/

Maps





YTD Arbovirus Activity by County

County	Arbovirus Activity
Brevard	EEEV: 2 sentinels (5/20, 5/27)
Citrus	WNV: 3 sentinels (1/3, 1/11) EEEV: 3 sentinels (8/15, 9/12, 9/19) HJV: 2 sentinels (9/12)
Charlotte	WNV: 1 sentinel (7/1)
Dade	DENV: 2 humans (acquired in Miami; January and August) WNV: 1 human (acquired in Miami; August), 2 sentinels (1/18, 6/22)
Duval	EEEV: 1 sentinel (6/11) WNV: 20 humans including 3 asymptomatic blood donors [June (1), July (8), Aug (6), Sept (2)]; 4 sentinels (7/15, 9/16); 1 horse (9/21)
Hernando	WNV : 1 sentinel (8/1) EEEV: 1 sentinel (6/6)
Hillsborough	DENV : 1 human (acquired in Hillsborough County, September) WNV: 17 sentinels (1/4, 1/11, 1/18, 1/25, 2/9, 3/1, 7/19, 8/30, 9/13) SLEV: 4 sentinels (8/23)
Holmes	EEEV: 2 horses (7/3, 7/6)
Indian River	WNV: 2 sentinels (4/28, 8/18), SLEV: 1 sentinel (6/23)
Lee	WNV: 12 sentinels (6/13, 6/27, 7/11, 7/25, 8/20)
Leon	WNV: 1 human (August), 13 sentinels (8/23, 8/30, 9/6, 9/12, 9/19); 1 horse (9/11)
Manatee	WNV: 4 sentinels (4/4, 7/20, 8/31)
Marion	EEEV: 1 horse (6/21)
Martin	DENV: 1 human (acquired in Martin County; July)

Nassau	WNV: 4 sentinels (8/1,8/29, 9/19) HJV: 1 sentinel (5/23)
Okaloosa	WNV: 1 live wild bird (flavivirus positive, 1 blue jay 5/31) EEEV: 10 live wild birds (7 blue jays 1/10, 4/11, 4/25, 5/16, 5/19, 6/6, 6/8; 1 cardinal 1/ 11 and 2 brown thrashers 2/21, 4/20)
Orange	WNV: 16 sentinels (1/3, 1/18, 1/24, 7/7, 7/14, 7/ 28, 8/1, 8/11, 8/18,9/8,9/15) EEEV: 4 sentinels (6/2, 6/9, 6/27, 7/28) HJV: 2 sentinels (2/24, 7/7)
Pinellas	WNV: 3 sentinels (8/29, 9/12, 9/6) SLEV: 17 sentinels (7/18, 8/8, 8/22, 8/29, 9/6,9/12)
Santa Rosa	EEEV: 7 live wild birds (1 house sparrow 1/05 and 6 blue jays 3/1, 2/1, 4/12, 5/10, 5/18)
Sarasota	WNV: 12 sentinels (1/4, 2/14, 3/14, 4/25, 5/2, 6/27, 7/5, 7/18, 8/22, 9/12,9/19); 1 horse (8/12)
Seminole	WNV: 4 sentinels(6/7, 9/19)
St. Johns	WNV: 1 sentinel (9/12) EEEV: 2 sentinels (6/13, 9/12)
Walton	EEEV:11 sentinels (1/6, 7/18, 8/1, 8/8, 8/22, 9/19) ; 2 live wild birds (2 cardinals 1/14, 1/21) WNV: 1 sentinel (5/24) HJV: 3 sentinels (1/14, 4/18,5/2)

Acknowledgements and Data Sources

Contributors: Leena Anil, Ph.D., Danielle Stanek, DVM, and Carina Blackmore, DVM, Ph.D., DOH Bureau of Environmental Public Health Medicine; Lillian Stark, Ph.D. and Valerie Mock, DOH Bureau of Laboratories.

For more surveillance information, please see the DOH website at:
<http://www.doh.state.fl.us/Environment/medicine/arboviral/index.html>

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 determined by the Department of Agriculture and Consumer Services. Wild captured bird information is provided by the John A. Mulrennan Public Health Entomology Research and Education Center.