Florida Arbovirus Surveillance
Week 8: February 17 – 23, 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 February 17-23, 2013 the following arboviral activity was recorded in Florida:

All non-human arbovirus activity for 2012 has been accounted for. Imported dengue and malaria cases from 2012 are still being reported and are captured in the '2012/2013 Human Case Summary'. 2012 data will be summarized in the upcoming Annual Report.

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 human cases of EEEV infection were reported this week. No sentinel chickens tested positive for antibodies to EEEV this week. No horse cases of EEEV infection were reported this week. In 2013, positive samples from one human, three equine, and one sentinel chicken have been received from four counties.

WNV activity: No human cases of WNV infection were reported this week. No horse cases of WNV infection were reported this week. Eight sentinel chickens tested positive this week in Walton County for antibodies to WNV. In 2013, positive samples from nineteen sentinel chickens have been received from two counties.

SLEV activity: No sentinel chickens tested positive for antibodies to SLEV this week. In 2013, one positive sample has been received from one county.

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. Levy County is currently under a mosquito-borne illness advisory. No other counties are currently under mosquito-borne illness advisory or alert.

2012/2013 Human Case Summary*

EEEV Infection Acquired in Florida: One human case of EEEV infection with onset in January was reported in 2013 in a Levy County resident.

Imported Dengue:
2012: One hundred and fifty-five 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 Colombia, Cuba (30), Dominican Republic (19), Ecuador (4), El Salvador (2), Ghana, Guatemala, Guyana (2), Haiti (20), Honduras, India, Jamaica (27), Mexico (2), Nicaragua (2),

Panama, Philippines (2), Portugal, Puerto Rico (28), Sri Lanka, St. Vincent, Suriname, Trinidad (4), Turks & Caicos, Venezuela and Virgin Islands. Counties reporting cases were Brevard (4), Broward (24), Collier, Duval (2), Flagler, Hillsborough (8), Lake, Lee (3), Marion, Miami-Dade (59), Okaloosa, Orange (19), Osceola (5), Palm Beach (9), Pasco, Pinellas (4), Polk, Sarasota (2), Seminole (4), St. Johns, St. Lucie, and Volusia (3). Twelve of the cases were reported in non-Florida residents.

2013: Sixteen 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: The Caribbean, Columbia (2), Dominican Republic (2), Jamaica, Philippines, Puerto Rico (8), and Saint Martin. Counties reporting cases were: Broward (3), Clay, Lee, Miami-Dade (5), Orange (4), Osceola, and Palm Beach. Two of the cases were reported in non-Florida residents.

In 2012, Seventy-nine of the one hundred and fifty-five cases of dengue reported in Florida have been serotyped by PCR. In 2013, eleven of the sixteen cases of dengue reported in Florida have been serotyped by PCR. Additional serotyping and strain typing are being conducted.

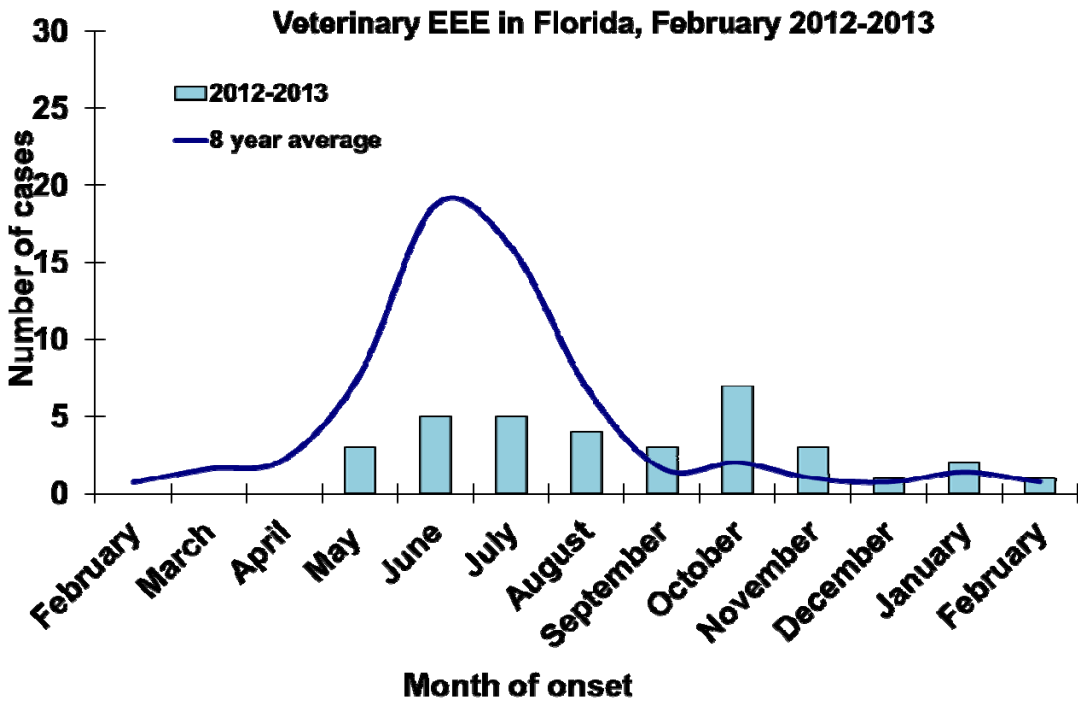
	# of cases per serotype - 2012	**# of cases per serotype - 2013**
DENV-1	48	7
DENV-2	6	0
DENV-3	1	1
DENV-4	24	3
	79	**11**

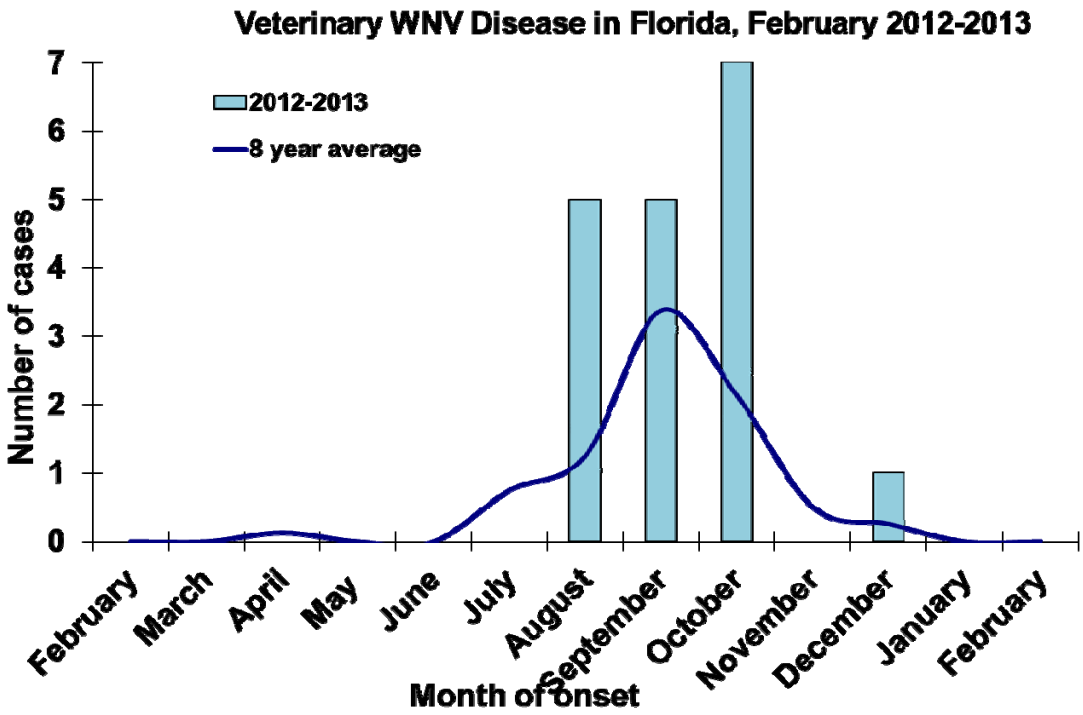
Imported Malaria - 2012: Sixty-five imported cases of malaria with onset in 2012 have been reported. Countries of origin were: Afghanistan (2), Cameroon, Central African Republic, Colombia, Congo, Costa Rica, Ethiopia (2), Ghana (6), Guyana (4), Haiti (11), Honduras (3), India (2), Ivory Coast (3), Kenya, 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 (6), Pinellas (3), Polk, Seminole, and Volusia (2). Seven of the cases were reported in non-Florida residents.

Imported Malaria - 2013: Seven cases of malaria with onset in 2013 have been reported. Countries of origin were: Guinea, Guyana, Haiti (3), Sierra Leone, and Solomon Islands. County reporting case was: Hillsborough, Miami-Dade (4), Palm Beach, and Orange.

Veterinary Cases

No horses tested positive for EEEV or WNV infection this week.



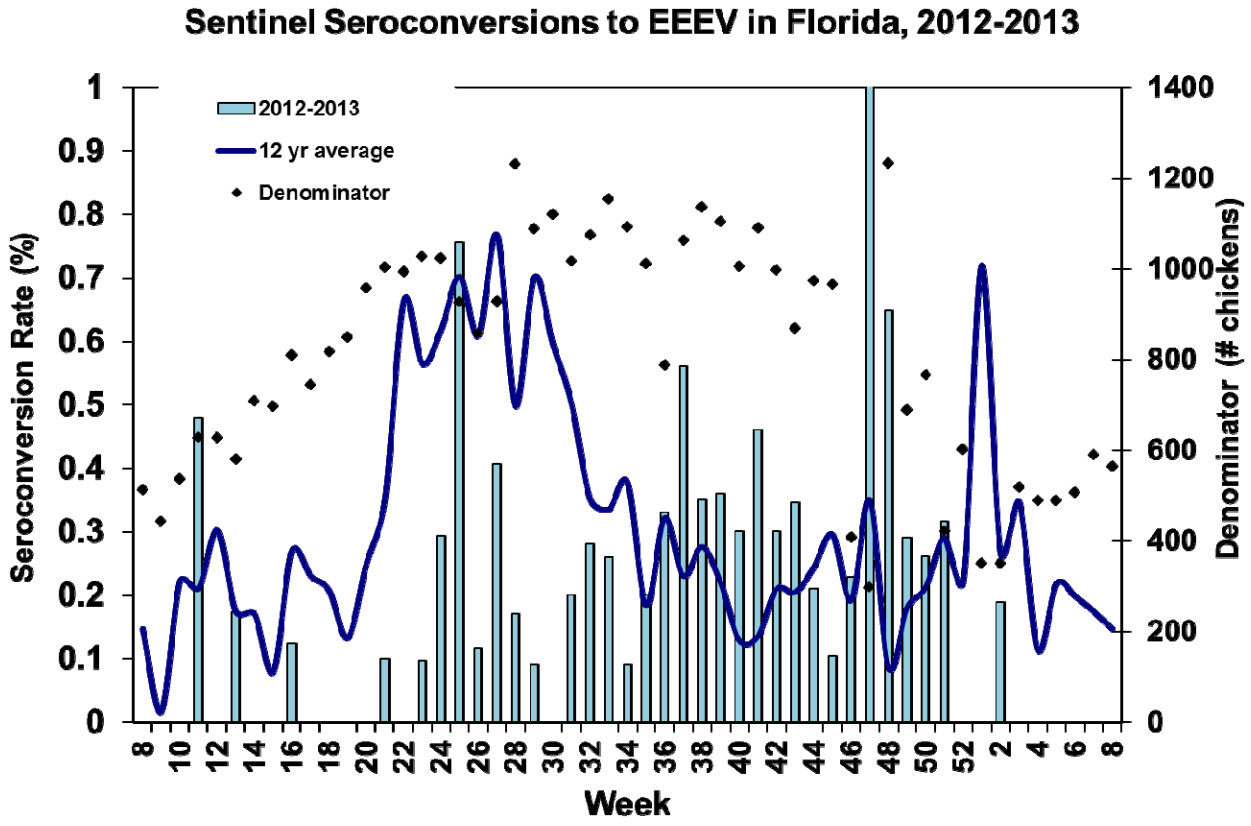


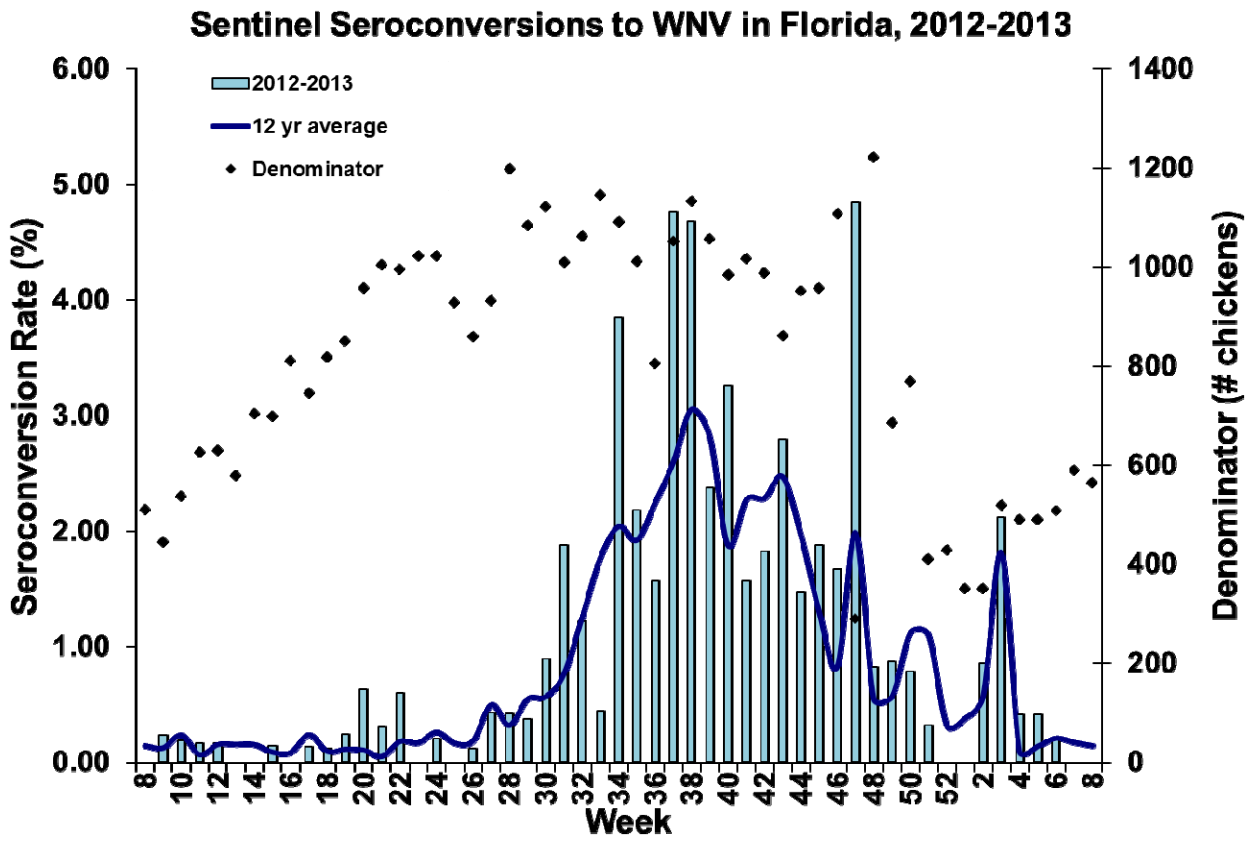
Sentinel Chickens

The table below is for the reporting of confirmatory laboratory results from this week. Some of the samples were collected at earlier dates. The date of collection is recorded for samples collected on that day along with the total number of positives and the corresponding seroconversion rate for the week the sample was collected.

Eight sentinel chickens tested positive this week in Walton County for antibodies to WNV.

		Seroconversion Rates (%)				County Totals	
County	Collection Date	SLEV	WNV	EEEV	HJV	Collection Week	YTD
Walton	1/15/2013		15.07			11 WNV	
	1/28/2013		1.52			1 WNV	16 WNV, 1 EEEV





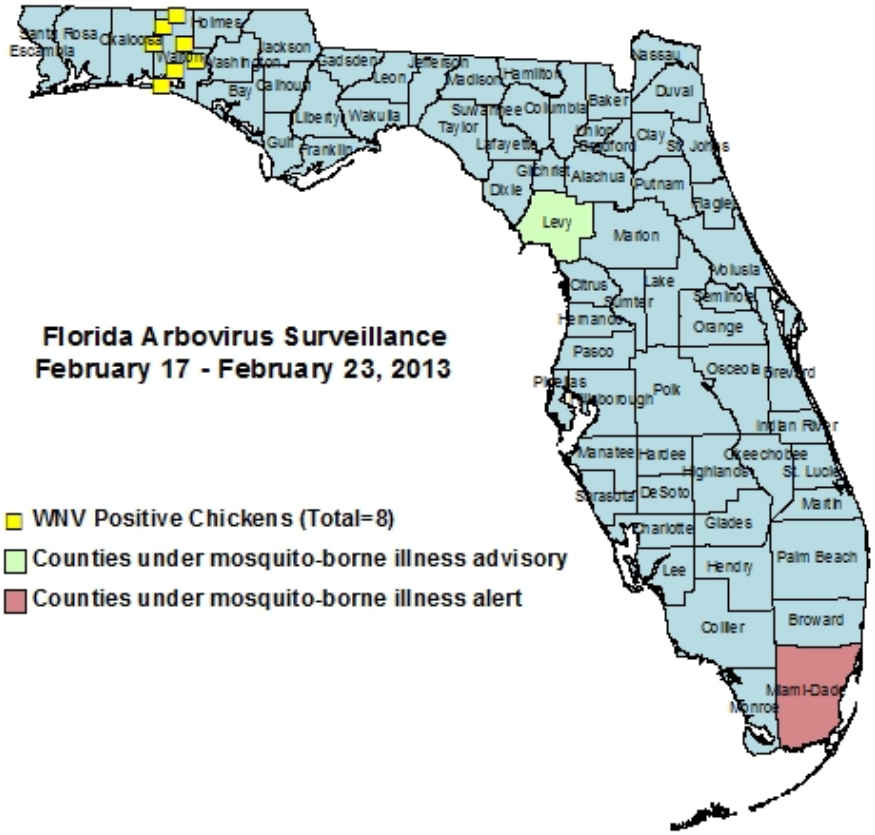
Dead Birds

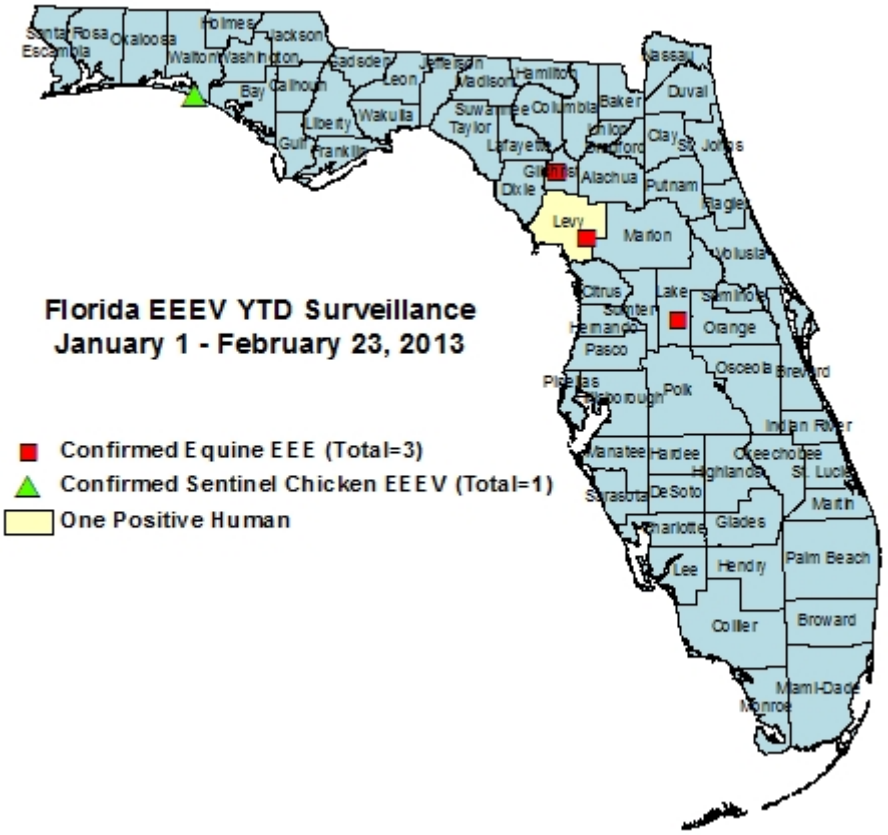
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 9 reports representing 11 dead birds, including 1 raptor were received from 8 counties.

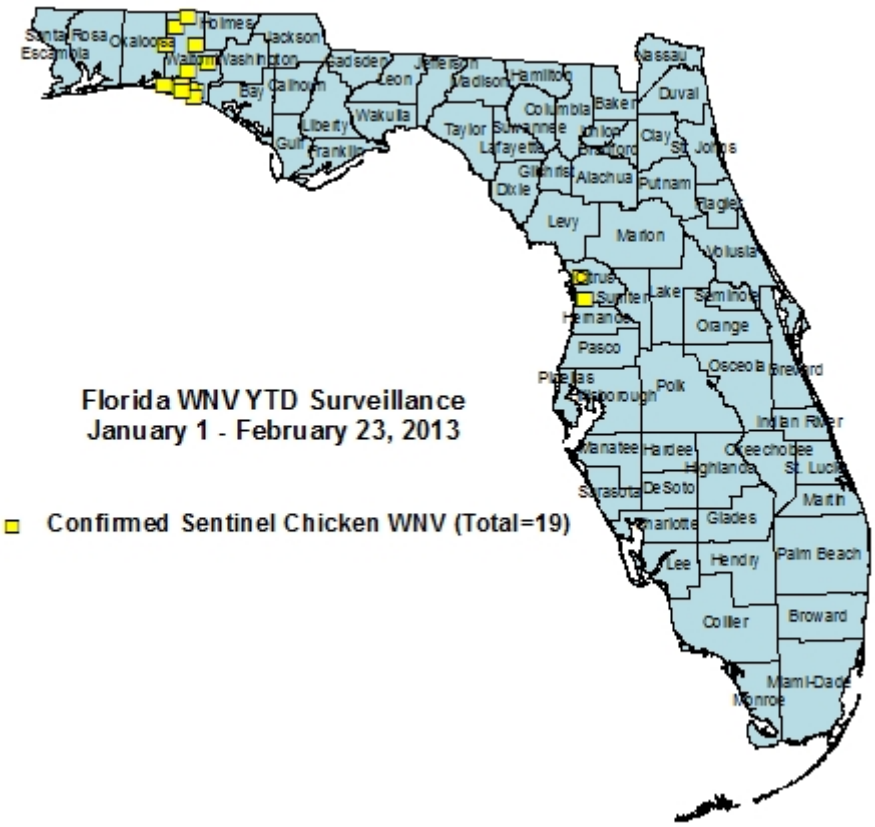
In 2013, 58 reports representing a total of 103 dead birds (0 crows, 0 jays, 13 raptors, 2 dove) were received from 26 of Florida's 67 counties. Please note that FWC collects reports of birds that have died from a variety of causes, not only arboviruses. Dead birds should be reported to www.myfwc.com/bird/

County	Total Dead Birds	Crows	Jays	Raptors	Dove
Brevard	3	0	0	0	0
Dade	1	0	0	0	0
Duval	2	0	0	0	0
Leon	3	0	0	1	0
Marion	1	0	0	0	0
Nassau	1	0	0	0	0
Volusia	1	0	0	0	0
Walton	1	0	0	0	0

Maps


Florida Arbovirus Surveillance
February 17 - February 23, 2013
WNV Positive Chickens (Total=8)
Counties under mosquito-borne illness advisory
Counties under mosquito-borne illness alert
Santa Rosa
Escambia
Okaloosa
Holmes
Walton
Washington
Jackson
Bay
Calhoun
Gadsden
Leon
Jefferson
Madison
Hamilton
Nassau
Duval
Baker
Liberty
Wakulla
Suwannee
Columbia
Taylor
Union
Bradford
Clay
St. Johns
Gulf
Franklin
Lafayette
Gilchrist
Alachua
Putnam
Dixie
Levy
Flagler
Marion
Volusia
Citrus
Lake
Sumter
Seminole
Hernando
Orange
Pasco
Osceola
Brevard
Pinellas
Hillsborough
Polk
Indian River
Manatee
Hardee
Okeechobee
Highlands
St. Lucie
Sarasota
DeSoto
Martin
Charlotte
Glades
Lee
Hendry
Palm Beach
Collier
Broward
Miami-Dade
Monroe


Florida EEEV YTD Surveillance
January 1 - February 23, 2013
Confirmed Equine EEE (Total=3)
Confirmed Sentinel Chicken EEEV (Total=1)
One Positive Human
Santa Rosa
Escambia
Okaloosa
Holmes
Walton
Washington
Jackson
Bay
Calhoun
Gadsden
Leon
Jefferson
Madison
Hamilton
Nassau
Duval
Baker
Liberty
Wakulla
Suwannee
Columbia
Taylor
Union
Bradford
Clay
St. Johns
Gulf
Franklin
Lafayette
Gilchrist
Alachua
Putnam
Dixie
Levy
Flagler
Marion
Volusia
Citrus
Lake
Sumter
Seminole
Hernando
Orange
Pasco
Osceola
Brevard
Pinellas
Hillsborough
Polk
Indian River
Manatee
Hardee
Okeechobee
Highlands
St. Lucie
Sarasota
DeSoto
Martin
Charlotte
Glades
Lee
Hendry
Palm Beach
Collier
Broward
Miami-Dade
Monroe



2013 Arbovirus Activity by County

County	Arbovirus Activity
Citrus	WNV: 3 sentinels (1/21, 1/28) SLEV: 1 sentinel (1/21)
Gilchrist	EEEV: 1 horse (2/6)
Lake	EEEV: 1 horse (1/30)
Levy	EEEV : 1 human (January) ; 1 horse (1/7)
Walton	EEEV : 1 sentinel (1/7) WNV : 16 sentinels (1/7, 1/14, 1/15,1/23, 1/28)

Acknowledgements and Data Sources

Contributors: Stephanie Moody-Geissler, MPH, Shaiasia Itwaru-Womack, Danielle Stanek, DVM, and Carina Blackmore, DVM, Ph.D., DOH Bureau of Epidemiology; Holly Hughes, Ph.D. and Valerie Mock, DOH Bureau of Public Health Laboratories.

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.