

Florida Arbovirus Surveillance

Week 27: July 4-10, 2010

Arbovirus surveillance in Florida includes endemic 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). During the period July 4-10, 2010, the following arboviral activity was recorded in Florida:

DENV activity: Two locally-acquired cases of dengue were reported this week in Key West residents. In 2010, there have been 14 locally-acquired cases associated with Key West (Monroe County).

EEEV activity: Four EEEV-confirmed positive horses were reported in Miami-Dade, Lake, and Collier counties. Nine sentinel chickens from Citrus, Flagler, Leon, Orange, and Volusia counties tested positive for antibodies to EEEV. In 2010, positive samples from 36 equines, 58 sentinel chickens, 15 live wild birds, and three mosquito pools have been received from 32 of Florida's 67 counties.

WNV activity: Seven sentinel chickens from Hillsborough and Walton counties tested positive for antibodies to WNV. In 2010, positive samples from 54 sentinel chickens and one live wild bird (flavivirus positive) have been received from six counties.

HJV activity: Two sentinel chickens from Orange and Citrus counties tested positive for antibodies to HJV. In 2010, positive samples from 19 sentinel chickens have been received from seven counties.

Advisories/Alerts: Monroe County is currently under a mosquito-borne disease alert. Polk, Lake, and Jackson counties issued mosquito-borne illness advisories this week in response to EEEV positive horses. Walton, Volusia, Clay, Hillsborough, Osceola, Miami-Dade, Collier, and Glades counties are also currently under mosquito-borne illness advisories.

Year to Date Human Case Summary

Acquired in Florida: Fourteen cases of dengue have been reported as acquired in Key West in 2010. Of these, 11 are Key West residents, two are residents of other Florida counties, and one resides out of state. Onset dates ranged from March 17 to June 12, 2010.

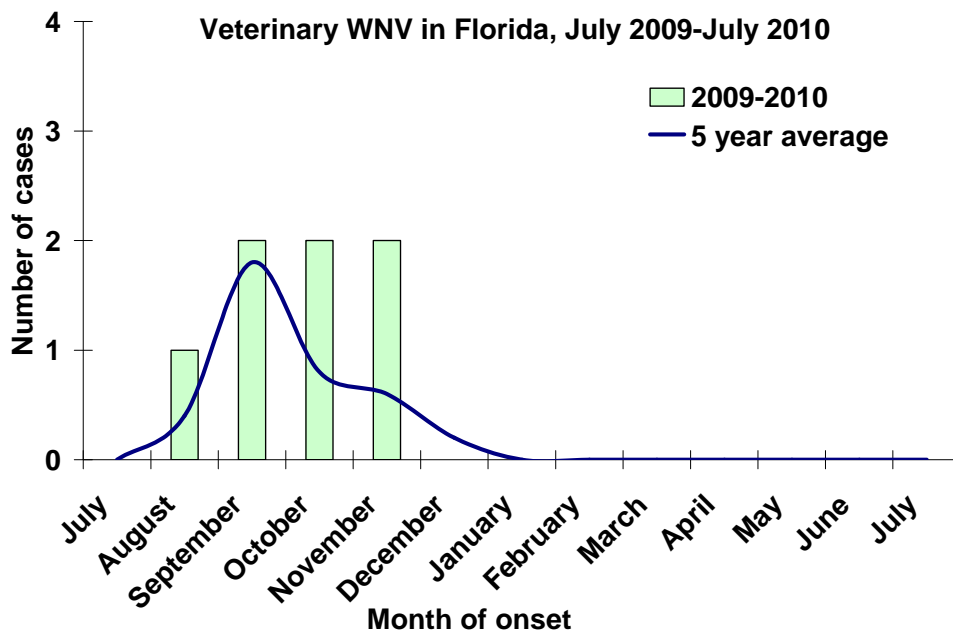
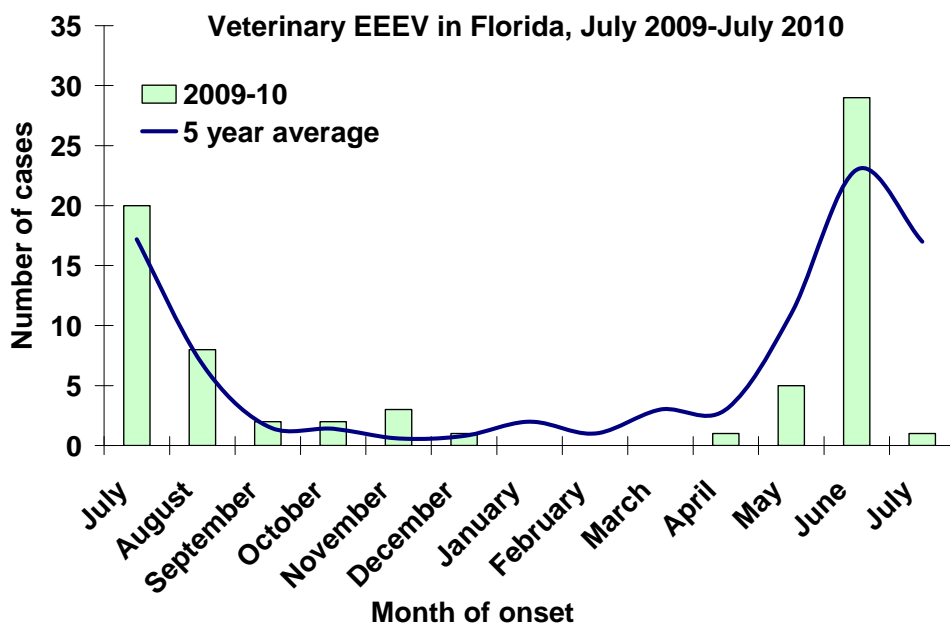
Imported: Twenty-six cases of dengue with onset in 2010 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset. Countries of origin included Brazil, Colombia (3), Costa Rica (2), Dominican Republic (3), Haiti (3), Jamaica, Nicaragua, Philippines, Puerto Rico (7), Venezuela (3), and Malaysia/Dubai/Bangladesh (slash indicates travel to more than one country).

Fifty-four imported cases of malaria with onset in 2010 have been reported. Countries of origin included Angola, Dominican Republic, Ghana, Guyana, Haiti (38), Honduras (3), India, Nigeria (4), Philippines, Uganda, West Africa, and Zambia/South Africa.

Veterinary Cases

Four horses in Lake, Collier, and Miami-Dade counties tested positive for EEEV this week. One of the positive horses reported last week in Clay County with onset 06/16/2010 is actually located in Bradford County. In 2010, 36 EEEV-positive horses have been reported from 19 counties.

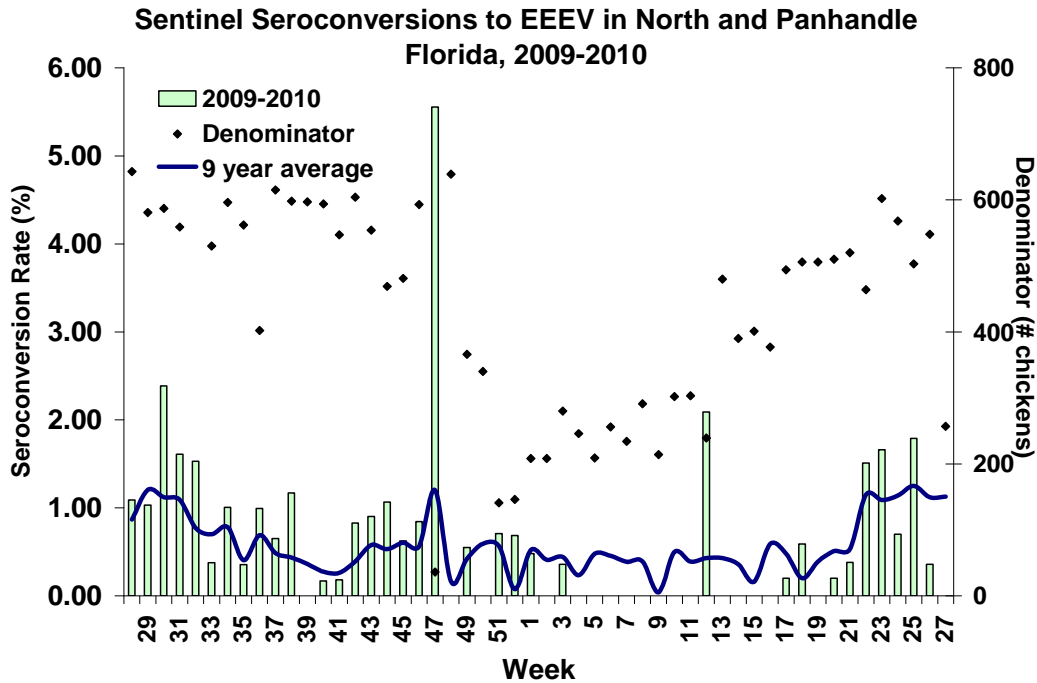
County	Onset Date	Species	Virus	Status	County YTD
Lake	07/04/2010	Equine	EEE	Euthanized	3
	06/29/2010	Equine	EEE	Dead	
Collier	06/29/2010	Equine	EEE	Dead	3
Miami-Dade	06/07/2010	Equine	EEE	Euthanized	3

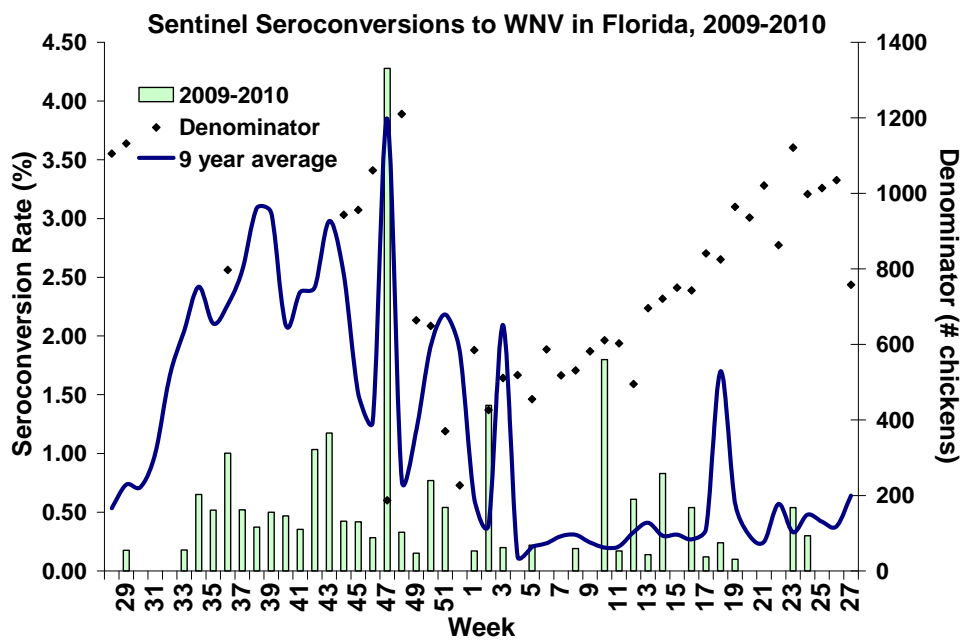
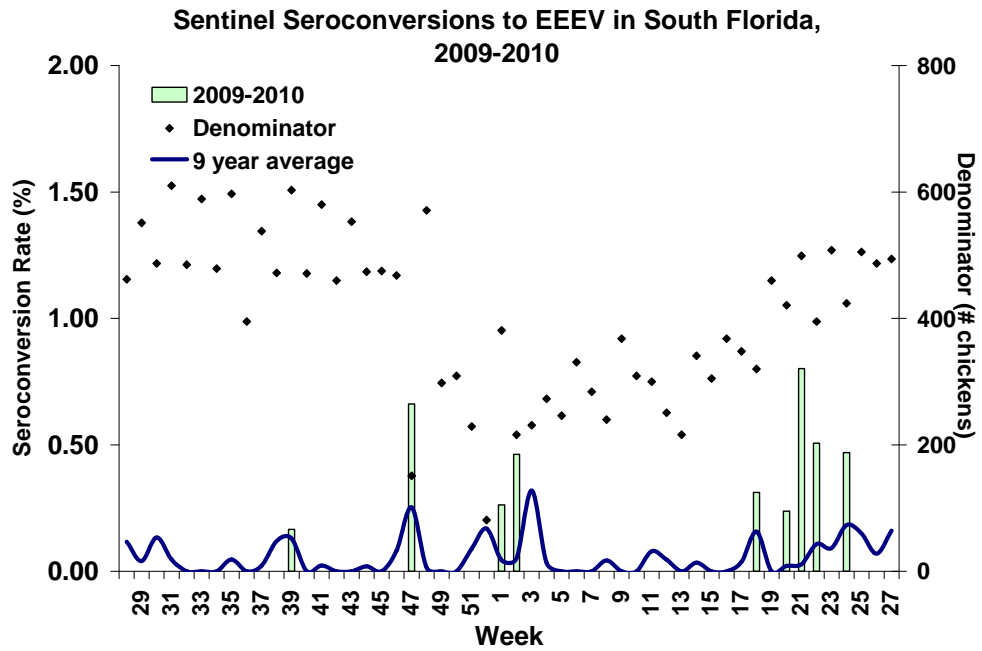


Sentinel Chickens

There were nine seroconversions to EEEV in sentinel chickens from Citrus, Flagler, Leon, Orange, and Volusia counties, seven to WNV in Hillsborough and Walton counties, and two to HJV in Citrus and Orange Counties this week. Seroconversion rates are calculated by week and include previously reported results.

County	Collection Date	Seroconversion Rates (%)				County Totals	
		SLEV	WNV	EEEV	HJV	Week	YTD
Volusia	06/28/2010			4.2		1 EEE	11 EEE, 1 HJ
	06/21/2010			3.8		1 EEE	
Citrus	06/28/2010			1.5		1 EEE	3 EEE, 2 HJ
	05/24/2010			1.5	1.5	1 EEE, 1 HJV	
Flagler	06/21/2010			30.0		3 EEE	10 EEE
Leon	06/21/2010			3.3		1 EEE	2 EEE
Orange	06/21/2010			1.9		2 EEE	9 EEE, 9 HJV
	06/10/2010				6.4	7 HJV	
Hillsborough	06/10/2010		1.2			1 WNV	14 WNV
Walton (North)	06/07, 06/11/2010		15.4	2.6		6 WNV, 1 EEE	31 WNV, 5 EEE, 2 HJV





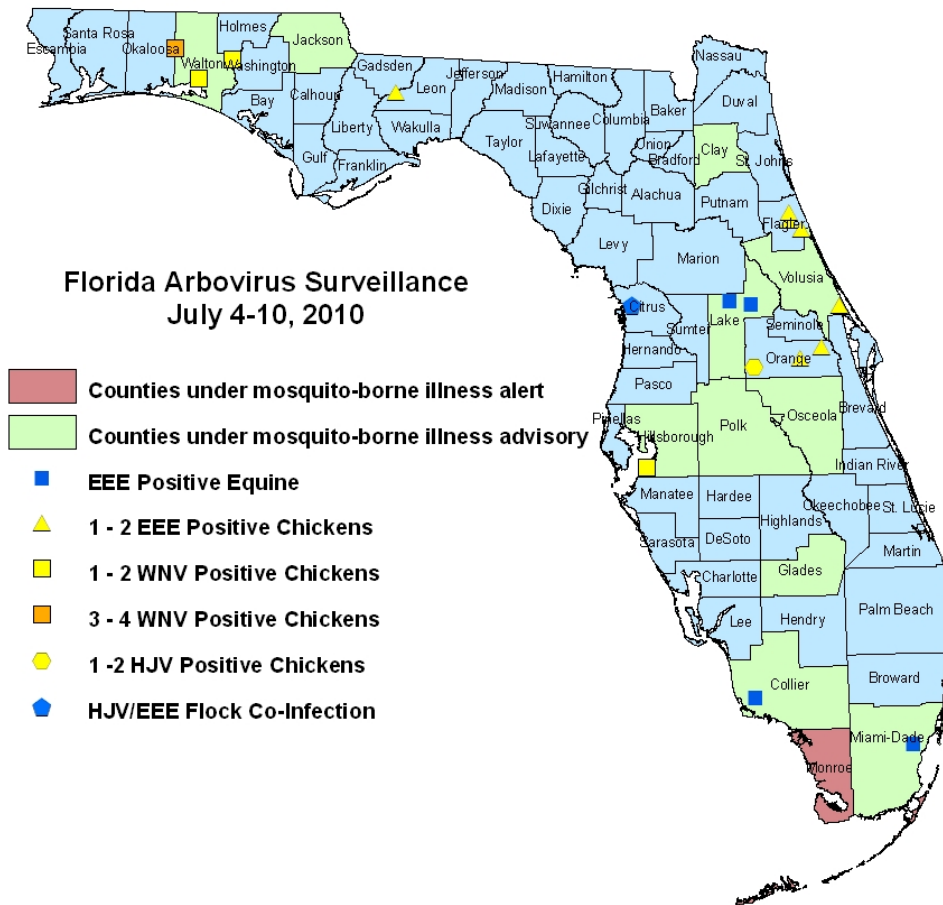
Live Wild Birds

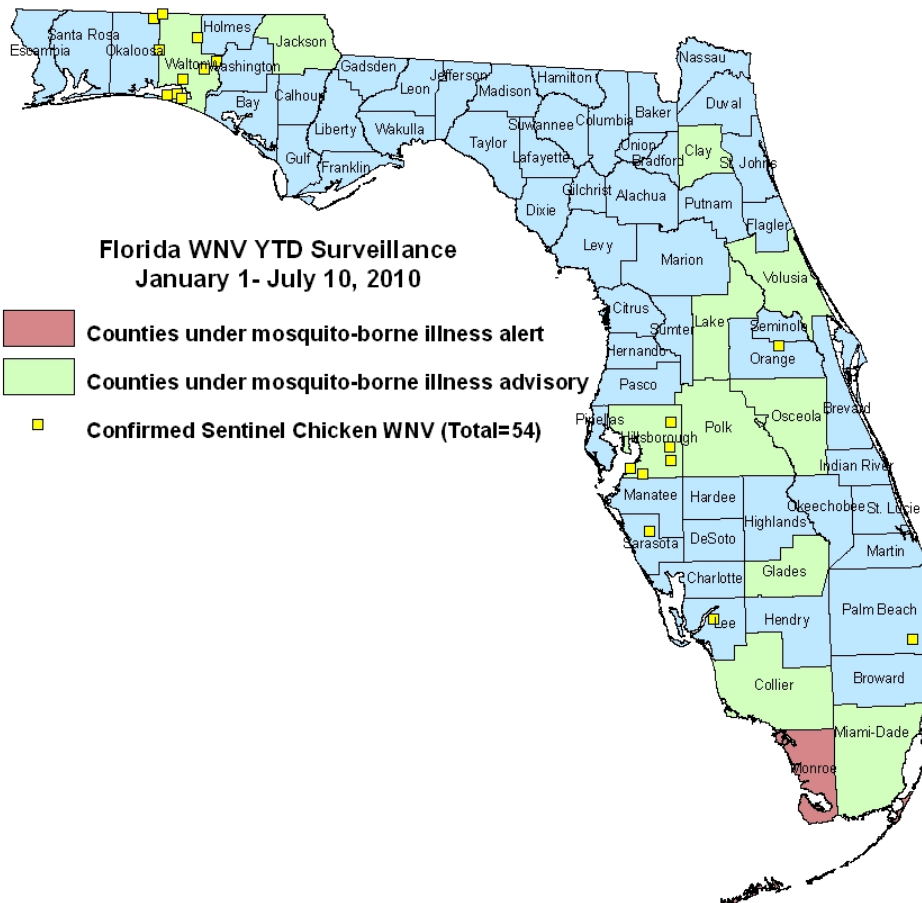
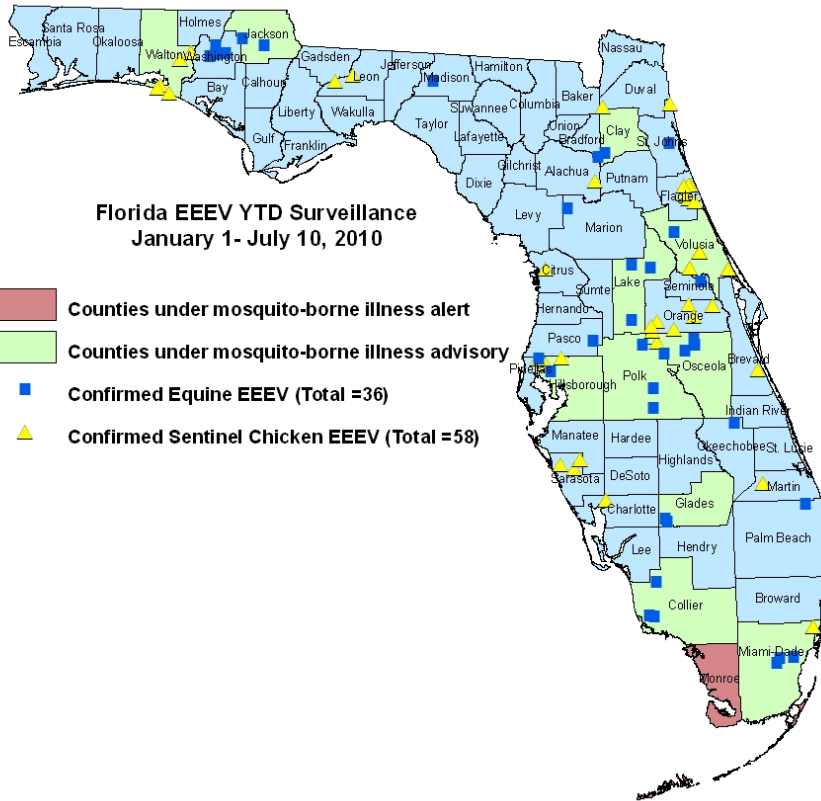
No positive live wild birds were reported this week.

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, 12 reports representing 63 dead birds were received from eight counties. Six were identified as crows and five as raptors; none were identified as jays. In 2010, 185 reports representing a total of 603 dead birds (21 crows, 10 jays, 36 raptors, 536 others) have been received from 42 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
Bradford	EEE: 1 horse (6/16)
Brevard	EEE: 1 sentinel (6/2)
Citrus	EEE: 3 sentinels (5/24, 6/7, 6/28) HJV: 2 sentinels (5/17, 5/24)
Clay	EEE: 1 horse (6/16)
Collier	EEE: 3 horses (6/9, 6/22, 6/29)
Duval	EEE: 1 sentinel (6/21)
Flagler	EEE : 10 sentinels (3/22, 4/26, 5/3, 6/7, 6/21) ; 3 mosquito pools (<i>Culiseta melanura</i> 4/27, 5/11, 6/15)
Glades	EEE : 2 horses (6/20, 6/24)
Hillsborough	WNV : 14 sentinels (1/12, 1/19, 2/22, 3/9, 3/22, 4/20, 5/11, 6/15) EEE: 2 horses (5/29, 6/11); 2 sentinels (5/4, 5/18)
Jackson	EEE: 2 horses (6/14, 6/28)
Lake	EEE: 3 horses (5/20, 6/29, 7/4)
Lee	WNV: 2 sentinels (3/30, 4/20)
Leon	DENV: 2 humans (acquired in Key West) EEE: 2 sentinels (6/1, 6/21)
Madison	EEE: 1 horse (6/21)
Marion	EEE: 1 horse (5/7)
Martin	EEE: 1 sentinel (5/28)
Miami-Dade	EEE: 3 horses (6/7, 6/17); 2 sentinels (6/14)
Monroe	DENV: 11 humans
Okaloosa	WNV: 1 live wild bird (flavivirus positive, blue jay 6/14) EEE : 6 live wild birds (1 house sparrow 1/4, 5 blue jay 1/27, 4/19, 4/21, 4/26)
Okeechobee	EEE : 1 horse (6/14)
Orange	EEE : 9 sentinels (1/7, 5/3, 5/17, 6/7, 6/10, 6/14, 6/21) HJV : 9 sentinels (5/17, 6/7, 6/10, 6/14)
Osceola	EEE: 3 horses (6/8, 6/10, 6/13), 1 donkey (5/15)
Palm Beach	WNV: 1 sentinel (3/15) EEE: 1 horse (6/22)
Pasco	EEE: 1 horse (6/11)
Pinellas	EEE: 2 sentinels (5/24) HJV: 1 sentinel (4/26)
Polk	EEE: 3 horses (4/28, 6/25, 6/28)
Putnam	EEE: 1 sentinel (6/4) HJV: 1 sentinel (5/14)
St. Johns	EEE: 1 horse (6/18); 1 sentinel (6/1) HJV: 2 sentinels (4/26, 5/3)
Santa Rosa	EEE: 8 live wild birds (8 blue jays 2/2, 3/22, 4/13, 4/19, 5/11, 5/18)
Sarasota	EEE: 3 sentinels (1/5, 1/11, 6/1) WNV : 1 sentinel (1/8)
Seminole	EEE : 1 horse (6/26)
Volusia	EEE : 1 horse (5/7) ; 11 sentinels (5/24, 6/1, 6/7, 6/14, 6/21, 6/28) HJV : 1 sentinel (5/17)
Walton	EEE : 8 sentinels (1/19, 3/22, 5/3, 6/8, 6/21) ; 2 live wild birds (1 cardinal 6/24, 1 blue jay 6/24) WNV : 34 sentinels (1/14, 2/4, 3/8, 3/12, 3/22, 4/7, 4/8, 4/23, 4/30, 5/5, 5/20, 6/7, 6/11) HJV : 3 sentinels (3/22, 5/17)
Washington	EEE : 4 horses (6/17, 6/22, 6/25, 6/28)

Acknowledgements and Data Sources

Contributors: Elizabeth Radke, MPH, Danielle Stanek, DVM, and Carina Blackmore, DVM, PhD.

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.