

**Florida Arbovirus Surveillance**  
**Week 41: October 09 – October 15, 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 October 09 – October 15, 2011, the following arboviral activity was recorded in Florida:

**DENV activity:** One new case of locally acquired dengue has been reported in Palm Beach County. In 2011, there have been two locally acquired cases in Miami-Dade County, and one case each in Martin, Hillsborough and Palm Beach counties.

**EEEV activity:** No EEEV activity was reported this week. In 2011, positive samples from three equines, 25 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 Clay County. Five sentinel chickens in Hillsborough, Leon, Sarasota and St. Johns counties tested positive for antibodies to WNV. In 2011, positive samples from 24 humans, 115 sentinel chickens, three equines and one live wild bird (flavivirus positive) have been received from 18 counties.

**SLEV activity:** Seven sentinel chickens in Hillsborough, Manatee and Pinellas counties tested positive for antibodies to SLEV. In 2011, positive samples from 30 sentinel chickens have been received from four counties.

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

**Advisories/Alerts:** Duval County is under mosquito-borne illness alert. Clay, Hillsborough, Leon, Miami-Dade, Martin, Holmes, Palm Beach 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:** Twenty-one human cases of WNV infection have been acquired in Florida in 2011 with onset in June (1), July (8) Aug (8) and Sep (4). Eighteen cases were exposed in Duval; 16 of these cases were Duval County residents, one was a Leon County resident, and one case was a New Jersey resident. Three additional cases were acquired in Clay (1) Leon (1) and Miami-Dade (1) counties. Three positive asymptomatic blood donors were reported in Duval County.

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

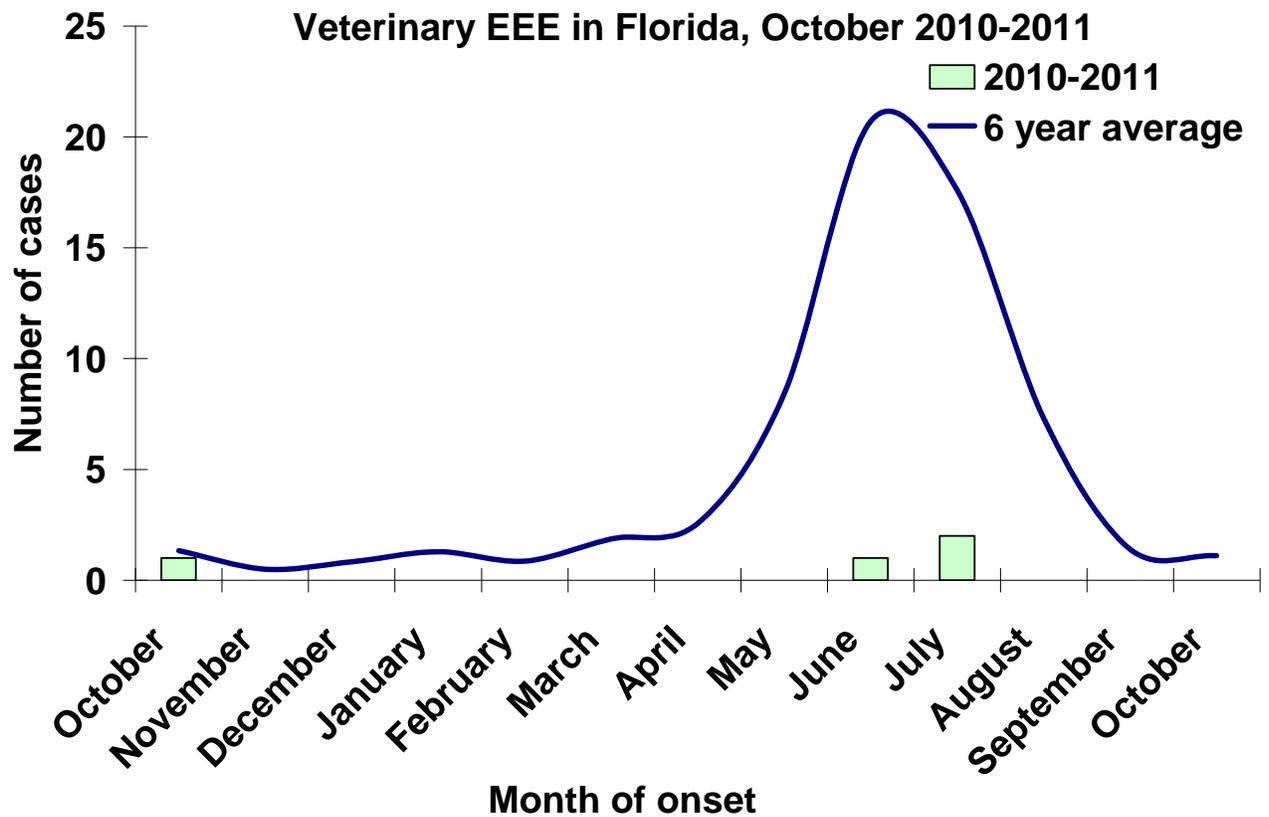
**Imported Dengue:** Forty cases of dengue with onset in 2011 have been reported in individuals with travel history to a dengue endemic country in the two weeks prior to onset. Countries of origin

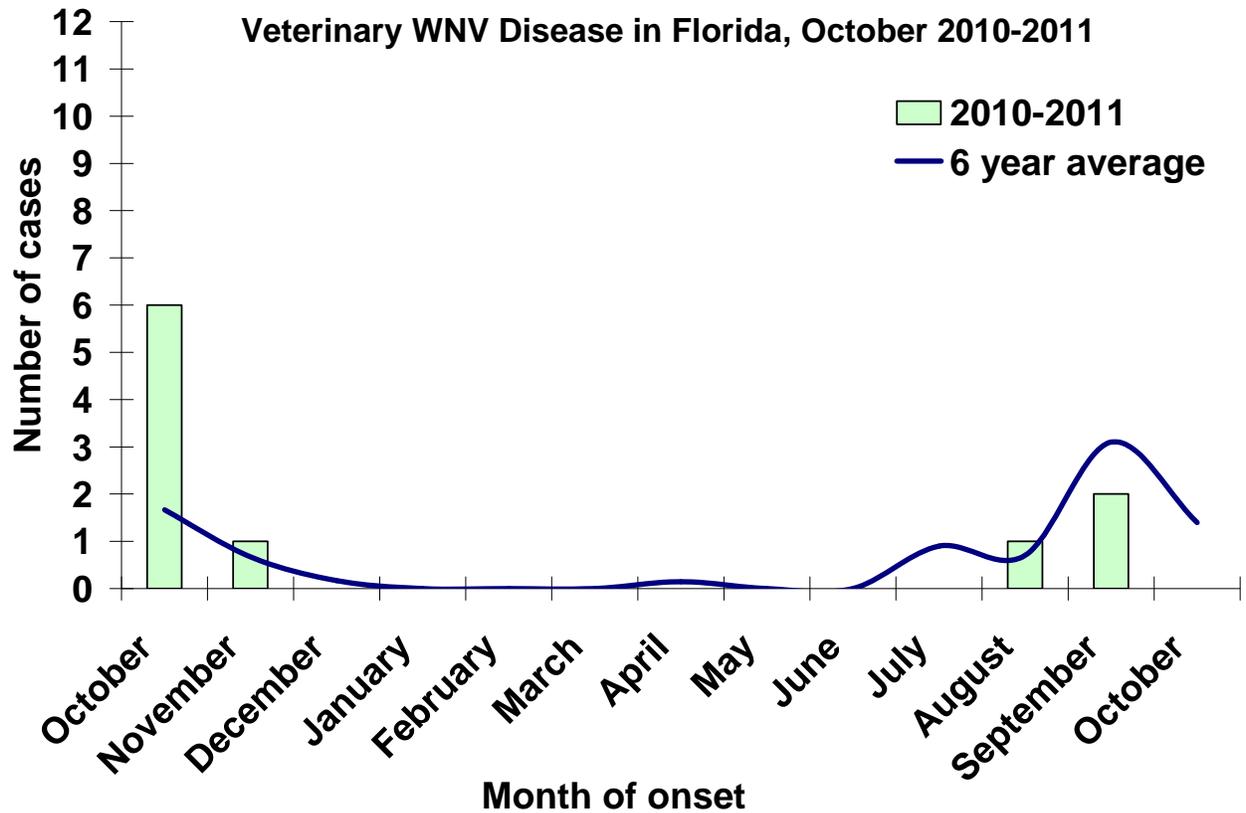
were Aruba, Bahamas (9), Bangladesh (2), Brazil (2), Colombia, Dominican Republic, Guyana, Haiti (2), India, Jamaica, Nicaragua, Panama (2), Puerto Rico (9), St. Lucia (2), Trinidad (3), Turks and Caicos Islands and Venezuela. Counties reporting cases were Broward (3), Flagler (2), Gulf, Hendry, Hillsborough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

**Imported Malaria:** Seventy-eight 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), French Guiana, Gabon, Ghana (5), Guinea Conakry, Guyana, Haiti (21), Honduras (4), 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 (7), Escambia, Hillsborough (6), Indian River, Lee (4), Leon (2), Miami-Dade (17), Manatee (3), Okaloosa, Orange (4), Palm Beach (6), Pasco, Pinellas, Seminole, St. Johns and St. Lucie (4).

**Veterinary Cases**

No positive horses were reported this week.



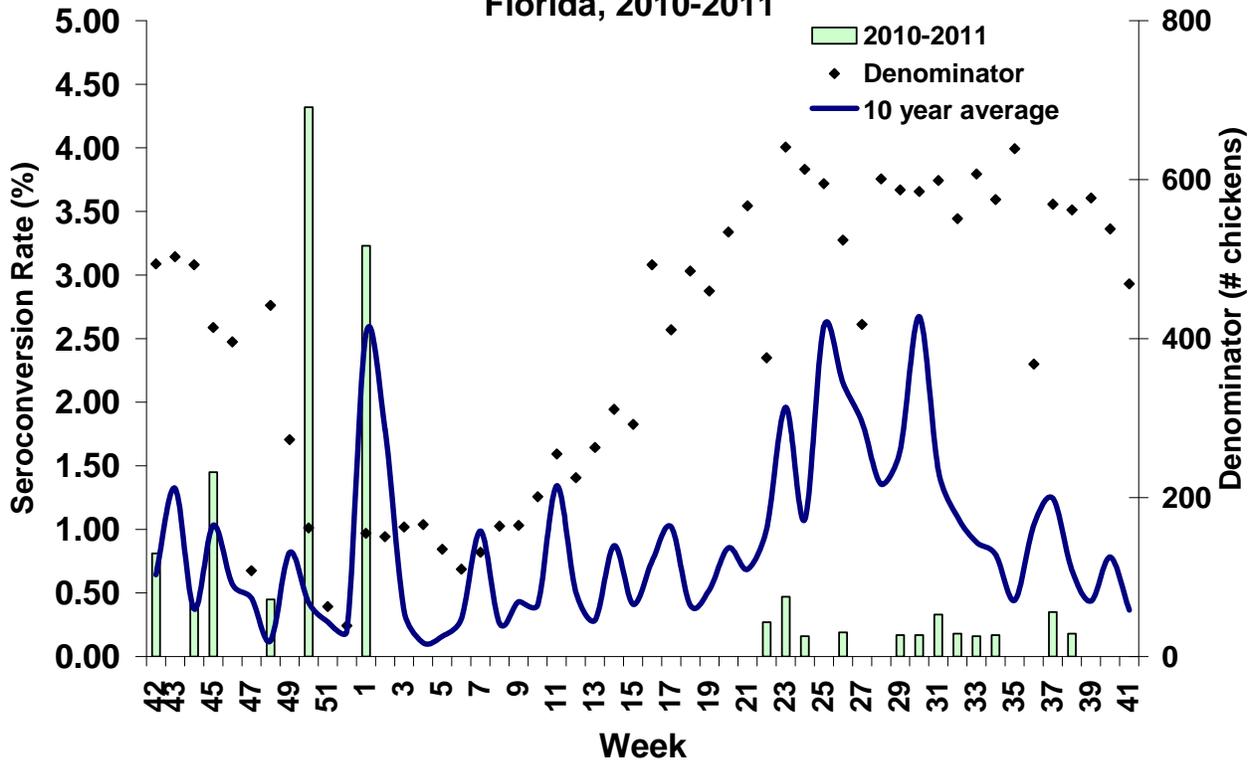


### Sentinel Chickens

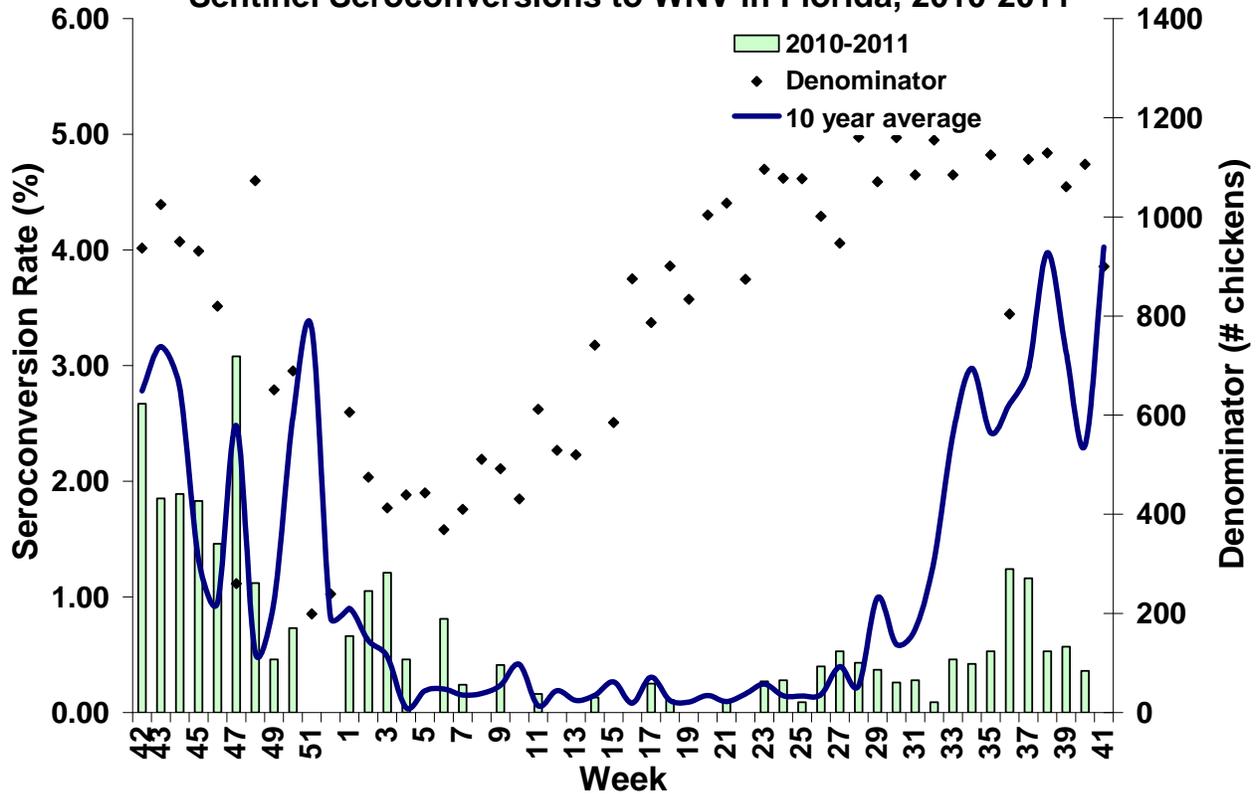
Five sentinel chickens in Hillsborough, Leon, Sarasota and St. Johns counties tested positive for antibodies to WNV. Seven sentinel chickens in Hillsborough, Manatee and Pinellas counties tested positive for antibodies to SLEV. One sentinel chicken in Citrus County tested positive for antibodies to HJV. 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	9/27/11				1.43	1 HJV	3 EEEV, 4 HJV, 3 WNV
Hillsborough	10/05/11	1.37	2.74			2 WNV, 1 SLEV	22 WNV, 5 SLEV
Leon	10/04/11		2.78			1 WNV	17 WNV
Manatee	9/14/11	1.28				1 SLEV	4 WNV, 1 SLEV
Pinellas	10/03/11	9.09				5 SLE	23 SLEV, 4 WNV
Sarasota	9/30/11		1.37			1 WNV	13 WNV
St. Johns	10/03/11		1.69			1 WNV	2 WNV, 2 EEEV

### Sentinel Seroconversions to EEEV in North and Panhandle Florida, 2010-2011



### Sentinel Seroconversions to WNV in Florida, 2010-2011



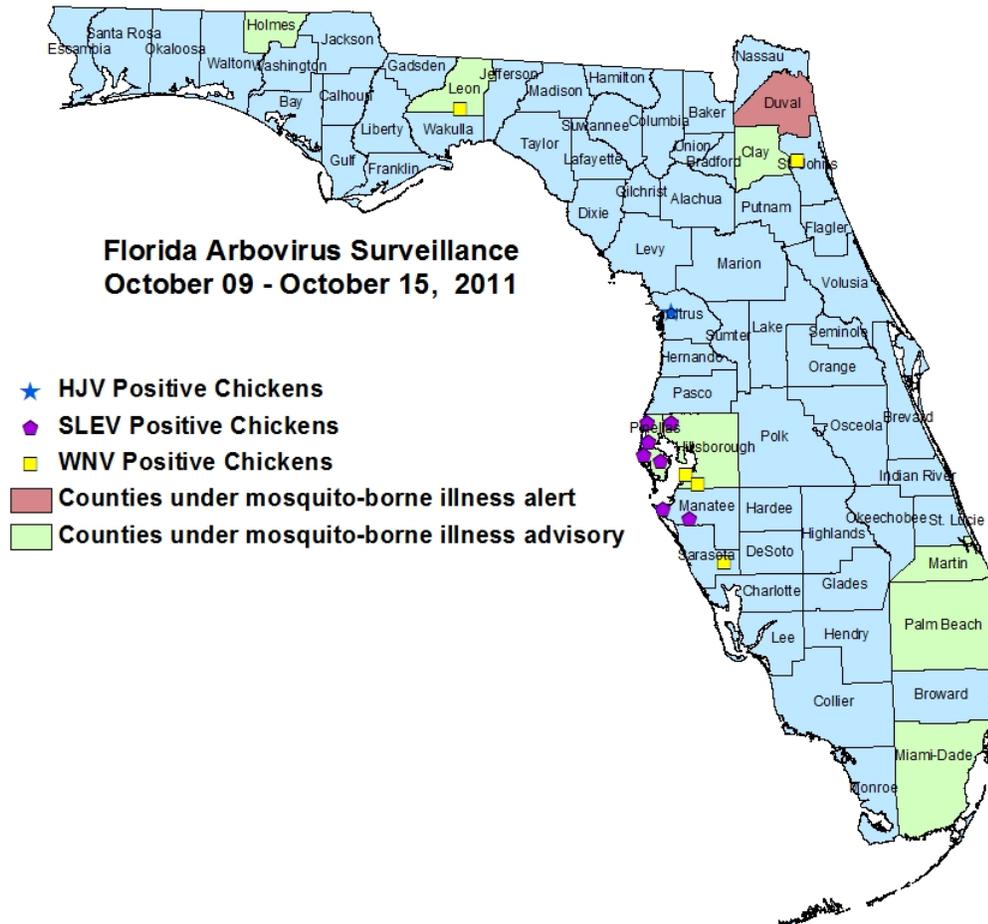
## Live Wild Birds

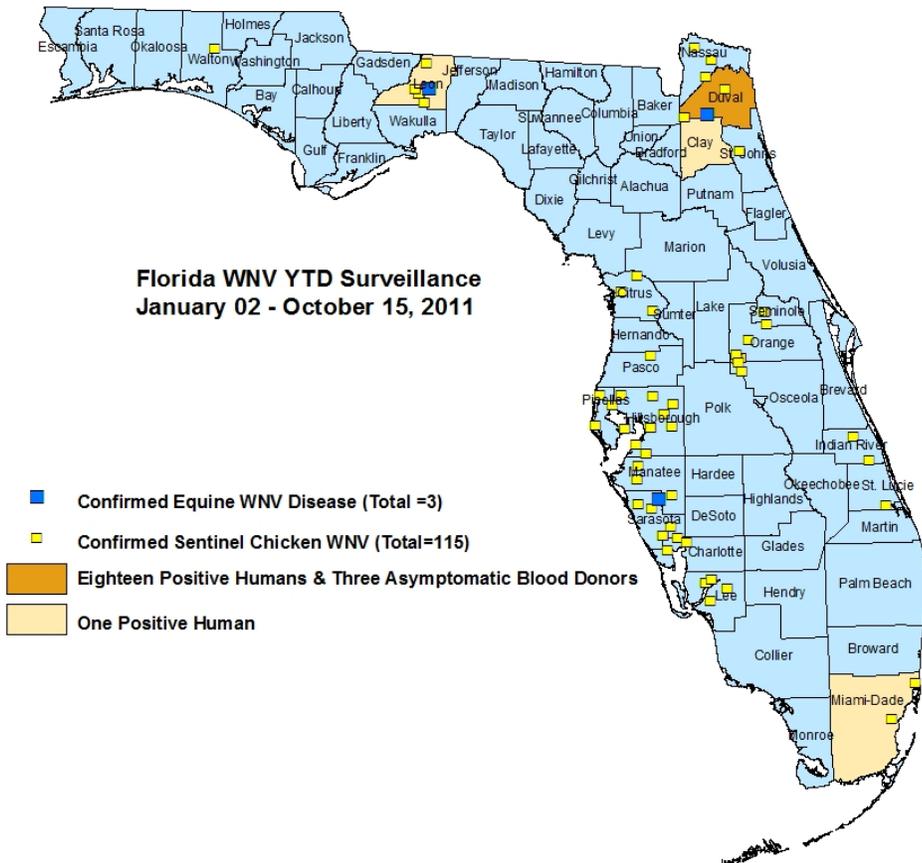
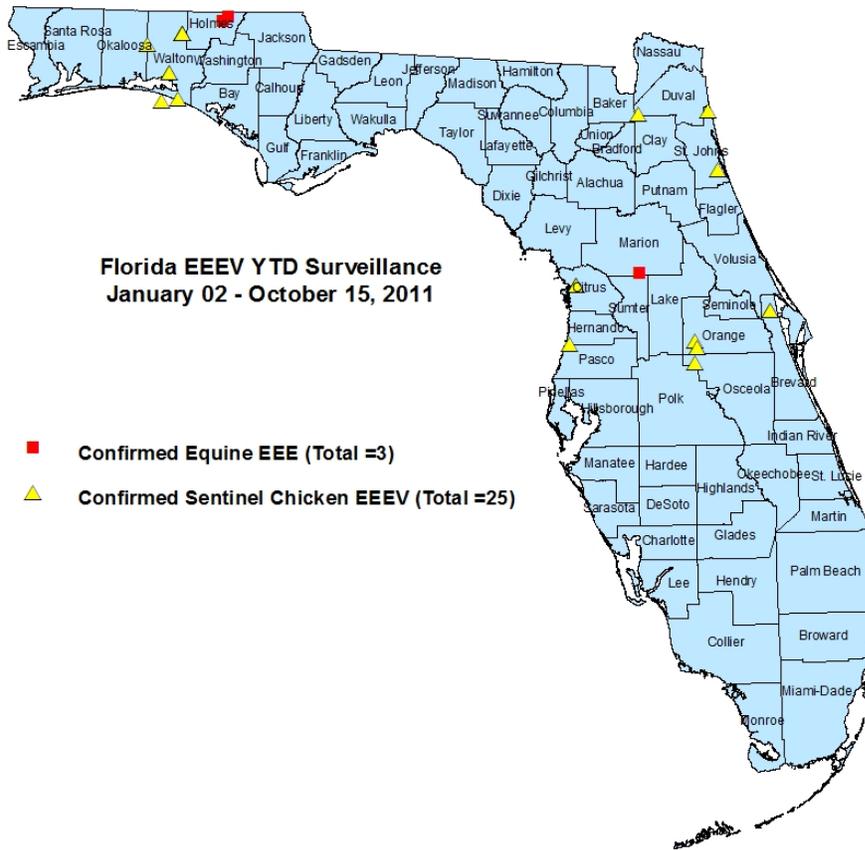
No positive live wild birds were reported this week.

## 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, 13 reports representing 30 dead birds were received from eight counties. Three were identified as jays and one as raptor. None were identified as crows. In 2011, two hundred and seventy-three reports representing a total of 792 dead birds (37 crows, 50 jays, 52 raptors, 653 others) were received from 44 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/](http://www.myfwc.com/bird/)

## Maps





## YTD Arbovirus Activity by County

County	Arbovirus Activity
<b>Brevard</b>	EEEV: 2 sentinels (5/20, 5/27)
<b>Citrus</b>	WNV: 3 sentinels (1/3, 1/11) EEEV: 3 sentinels (8/15, 9/12, 9/19) HJV: 4 sentinels (9/12, 9/19, 9/27)
<b>Charlotte</b>	WNV: 3 sentinels (7/1, 9/9)
<b>Clay</b>	WNV: 1 human (September),
<b>Dade</b>	DENV: 2 humans (acquired in Miami; January and August) WNV: 1 human (acquired in Miami; August), 2 sentinels (1/18, 6/22)
<b>Duval</b>	EEEV: 1 sentinel (6/11) WNV: 21 humans including 3 asymptomatic blood donors [June (1), July (8), Aug (6), Sept (3)]; 4 sentinels (7/15, 9/16); 1 horse (9/21)
<b>Hernando</b>	WNV : 1 sentinel (8/1) EEEV: 1 sentinel (6/6)
<b>Hillsborough</b>	DENV : 1 human (acquired in Hillsborough County, September) WNV: 22 sentinels (1/4, 1/11, 1/18, 1/25, 2/9, 3/1, 7/19, 8/30, 9/13, 9/27, 10/5) SLEV: 5 sentinels (8/23, 10/5)
<b>Holmes</b>	EEEV: 2 horses (7/3, 7/6)
<b>Indian River</b>	WNV: 2 sentinels (4/28, 8/18), SLEV: 1 sentinel (6/23)
<b>Lee</b>	WNV: 12 sentinels (6/13, 6/27, 7/11, 7/25, 8/20 )
<b>Leon</b>	WNV: 1 human (August), 17 sentinels (8/23, 8/30, 9/6, 9/12, 9/19, 9/26, 10/4); 1 horse (9/11)
<b>Manatee</b>	WNV: 4 sentinels (4/4, 7/20, 8/31) SLEV: 1 sentinel (9/14)
<b>Marion</b>	EEEV: 1 horse (6/21)
<b>Martin</b>	DENV: 1 human (acquired in Martin County; July)
<b>Nassau</b>	WNV: 4 sentinels (8/1, 8/29, 9/19) HJV: 1 sentinel (5/23)
<b>Okaloosa</b>	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)
<b>Orange</b>	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)
<b>Palm Beach</b>	DENV : 1 human (acquired in Palm Beach County, September)
<b>Pinellas</b>	WNV: 4 sentinels (8/29, 9/12, 9/6) SLEV: 23 sentinels (7/18, 8/8, 8/22, 8/29, 9/6, 9/12, 9/26, 10/3)
<b>Santa Rosa</b>	EEEV: 7 live wild birds (1 house sparrow 1/05 and 6 blue jays 3/1, 2/1, 4/12, 5/10, 5/18)
<b>Sarasota</b>	WNV: 13 sentinels (1/4, 2/14, 3/14, 4/25, 5/2, 6/27, 7/5, 7/18, 8/22, 9/12, 9/19, 9/30); 1 horse (8/12)
<b>Seminole</b>	WNV: 4 sentinels (6/7, 9/19)
<b>St. Johns</b>	WNV: 2 sentinel (9/12, 10/3) EEEV: 2 sentinels (6/13, 9/12)
<b>St. Lucie</b>	WNV: 1 sentinel (9/9)
<b>Walton</b>	EEEV: 12 sentinels (1/6, 7/18, 8/1, 8/8, 8/22, 9/19, 9/26) ; 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.