



## Florida Arbovirus Surveillance Week 16: April 16-22, 2023

Arbovirus surveillance in Florida includes endemic mosquito-borne viruses such as West Nile virus (WNV), Eastern equine encephalitis virus (EEEV), and St. Louis encephalitis virus (SLEV), as well as exotic viruses such as dengue virus (DENV), chikungunya virus (CHIKV), Zika virus (ZIKV) and California encephalitis group viruses (CEV). Malaria, a parasitic mosquito-borne disease is also included. During the period of April 16-22, 2023, the following arboviral activity was recorded in Florida.

**WNV activity:** No human cases of WNV infection were reported this week. No horses with WNV infection were reported this week. One sentinel chicken tested positive for antibodies to WNV this week in Walton County. No mosquito pools tested positive for WNV this week. In 2023, positive samples from four sentinel chickens and one horse have been reported from four counties.

**SLEV activity:** No human cases of SLEV infection were reported this week. No sentinel chickens tested positive for antibodies to SLEV this week. In 2023, no sentinel chickens tested positive for SLEV.

**EEEV activity:** No human cases of EEEV infection were reported this week. Two horses with EEEV infection were reported this week in Polk County. Four sentinel chickens tested positive for antibodies to EEEV this week in Orange, Volusia, and Walton counties. In 2023, positive samples from 13 sentinel chickens and four horses have been reported from eight counties.

**International Travel-Associated Dengue:** Two cases of dengue were reported this week in persons that had international travel. In 2023, 63 travel-associated dengue cases have been reported.

**Dengue Cases Acquired in Florida:** No cases of locally acquired dengue were reported this week in Miami-Dade County. In 2023, two cases of locally acquired dengue have been reported.

**International Travel-Associated Chikungunya Fever Cases:** No cases of chikungunya fever were reported this week. In 2023, no cases of travel-associated chikungunya fever have been reported.

**Chikungunya Fever Cases Acquired in Florida:** No cases of locally acquired chikungunya fever were reported this week. In 2023, no cases of locally acquired chikungunya fever have been reported.

**International Travel-Associated Zika Fever Cases:** No cases of Zika fever were reported this week in persons that had international travel. In 2023, no travel-associated Zika fever cases have been reported.

**Zika Fever Cases Acquired in Florida:** No cases of locally acquired Zika fever were reported this week. In 2023, no cases of locally acquired Zika fever have been reported.

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

There are currently multiple travel health notices from the Centers for Disease Control and Prevention related to mosquito-borne diseases.

Dengue			Chikungunya	Yellow Fever	Japanese Encephalitis	Malaria
Africa and the Middle East	Americas	Asia and the Pacific Islands	Americas	Africa and the Middle East	Oceania	Americas
São Tomé and Príncipe	Argentina	Bangladesh	Paraguay	Nigeria	Australia	Costa Rica
Somalia	Bolivia	Laos				
Sudan	Colombia	Malaysia				
	Cuba	Myanmar (Burma)				
	Dominican Republic	Pakistan				
	Guadeloupe	Philippines				
	Guatemala	Sri Lanka				
	Martinique	Vietnam				
	Nicaragua					
	Panama					
	Peru					

Level 1 Travel Health Notice, Level 2 Travel Health Alert: [wwwnc.cdc.gov/travel/notices](http://wwwnc.cdc.gov/travel/notices).

For a map of arboviral disease activity in the United States visit: [www.cdc.gov/arbovet/maps/ADB\\_Diseases\\_Map/index.html](http://www.cdc.gov/arbovet/maps/ADB_Diseases_Map/index.html).

## 2023 Human Case Summary

**2023 International Travel-Associated Dengue Cases:** Sixty-three cases with onset in 2023 have been reported in individuals with travel history to a dengue-endemic area in the two weeks prior to onset. Counties reporting cases were: Broward (3), Collier (2), Duval, Escambia, Hendry, Hillsborough (6), Lee, Miami-Dade (41), Nassau, Orange, Osceola, Pasco, St. Lucie (2), and Volusia. Two cases were reported in non-Florida residents. In 2023, 52 cases of dengue reported in Florida have been serotyped by PCR. Please see the table below for a breakdown of cases by country of origin and serotype.

Country of Exposure	DENV-1	DENV-2	DENV-3	DENV-4	DENV-3/DENV-4	Unknown	Total
Bolivia		4					4
Brazil	2					1	3
Colombia			1				1
Cuba	1	1	39	1	1	6	49
Dominican Republic						1	1
India			1				1
Mexico			1			2	3
Puerto Rico	1						1
<b>Total</b>	<b>4</b>	<b>5</b>	<b>42</b>	<b>1</b>	<b>1</b>	<b>10</b>	<b>63</b>

**2023 Dengue Cases Acquired in Florida:** In 2023, two cases of locally acquired dengue have been reported in Miami-Dade County, with onsets in January and March. Two cases have been serotyped by PCR. Serotypes reported were DENV-3 (2).

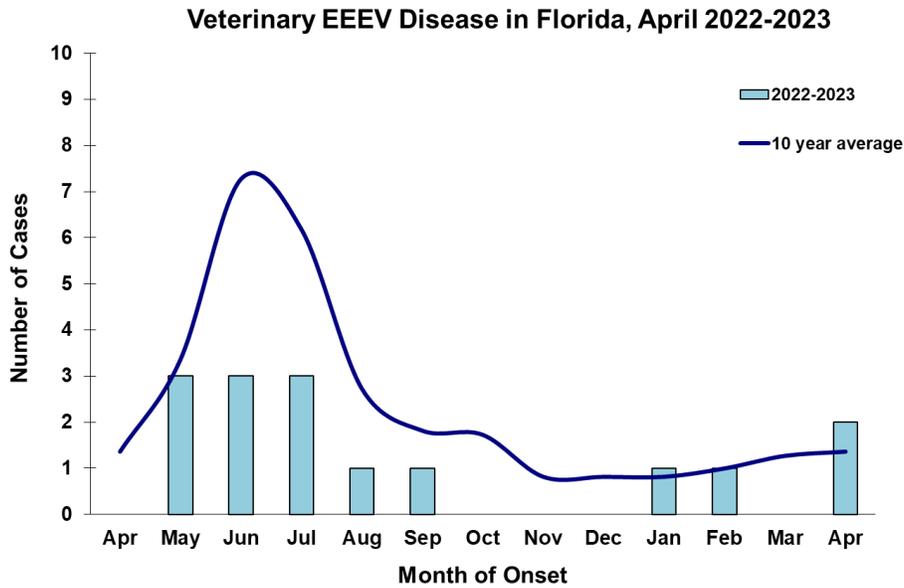
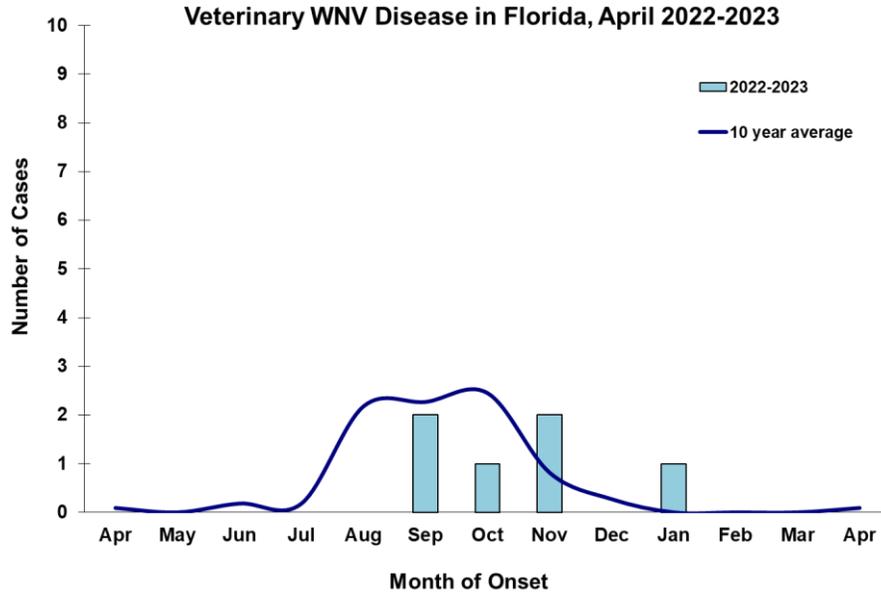
**2023 International Travel-Associated Malaria Cases:** Eleven cases of malaria with onset in 2023 have been reported. Countries of origin were: Burundi, Côte D'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Ghana (2), Kenya, multiple countries (2), Nicaragua, and Sierra Leone. Counties reporting cases were: Broward, Duval, Hillsborough, Leon (2), Miami-Dade (3), Osceola, and Pinellas (2). Four cases were reported in non-Florida residents.

Six cases (55%) were diagnosed with *Plasmodium falciparum*. Three cases (27%) were diagnosed with *Plasmodium vivax*. Two cases (18%) were diagnosed with *Plasmodium malariae*.

## Veterinary Cases\*\*

\*\*Veterinary cases are reported by date of onset. Only mammalian veterinary cases are included in the graphs.

Two horses with EEEV infection were reported this week in Polk County.



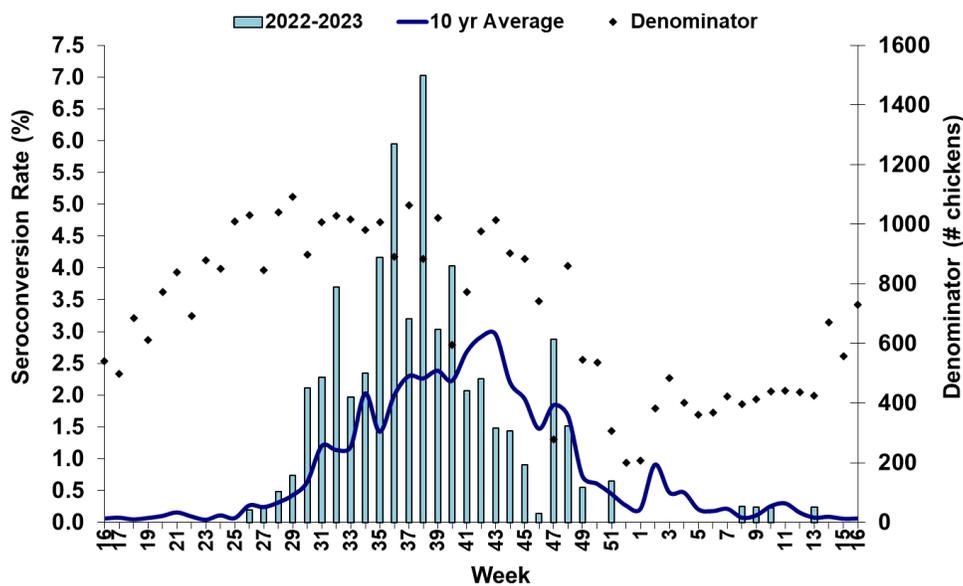
## Sentinel Chickens

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.

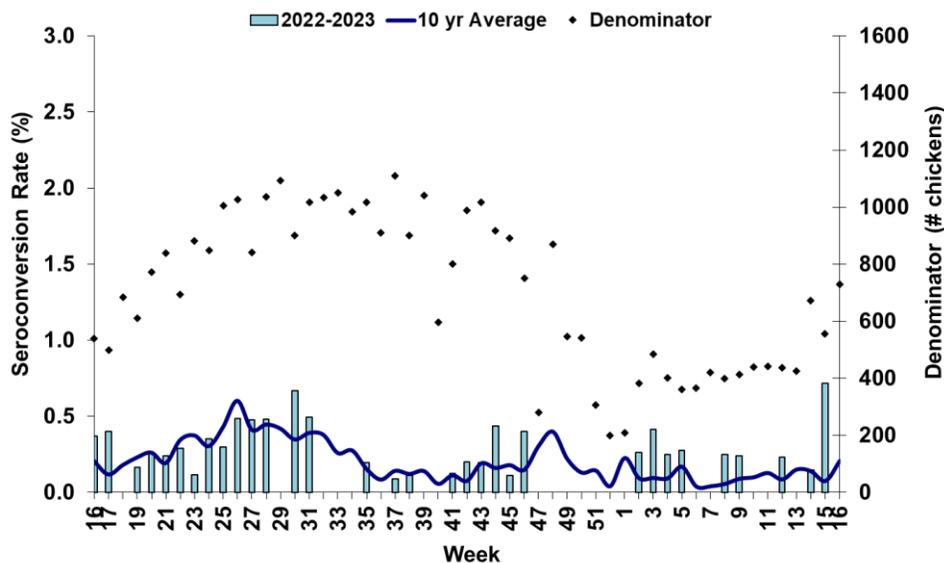
One sentinel chicken tested positive for antibodies to WNV this week in Walton County. Four sentinel chicken tested positive for antibodies to EEEV this week in Orange, Volusia, and Walton counties.

County	Collection Date	Seroconversion Rates (%)					Collection Week	County Totals
		Flavi	SLEV	WNV	Alpha	EEEV		HJV
Orange	4/10/2023				0.90	0.90	1 EEEV	1 WNV, 4 EEEV
Volusia	4/10/2023				4.00	4.00	2 EEEV	5 EEEV
Walton	3/27/2023	2.13		2.13			1 WNV	1 WNV, 2 EEEV
	4/10/2023				2.17	2.17	1 EEEV	

**Sentinel Seroconversions to WNV in Florida, 2022–2023**



**Sentinel Seroconversions to EEEV in Florida, 2022–2023**



## Mosquito Pools

No mosquito pools tested positive for WNV or EEEV this week.

County	Collection Date	Result	Species	County YTD

## Dead Birds

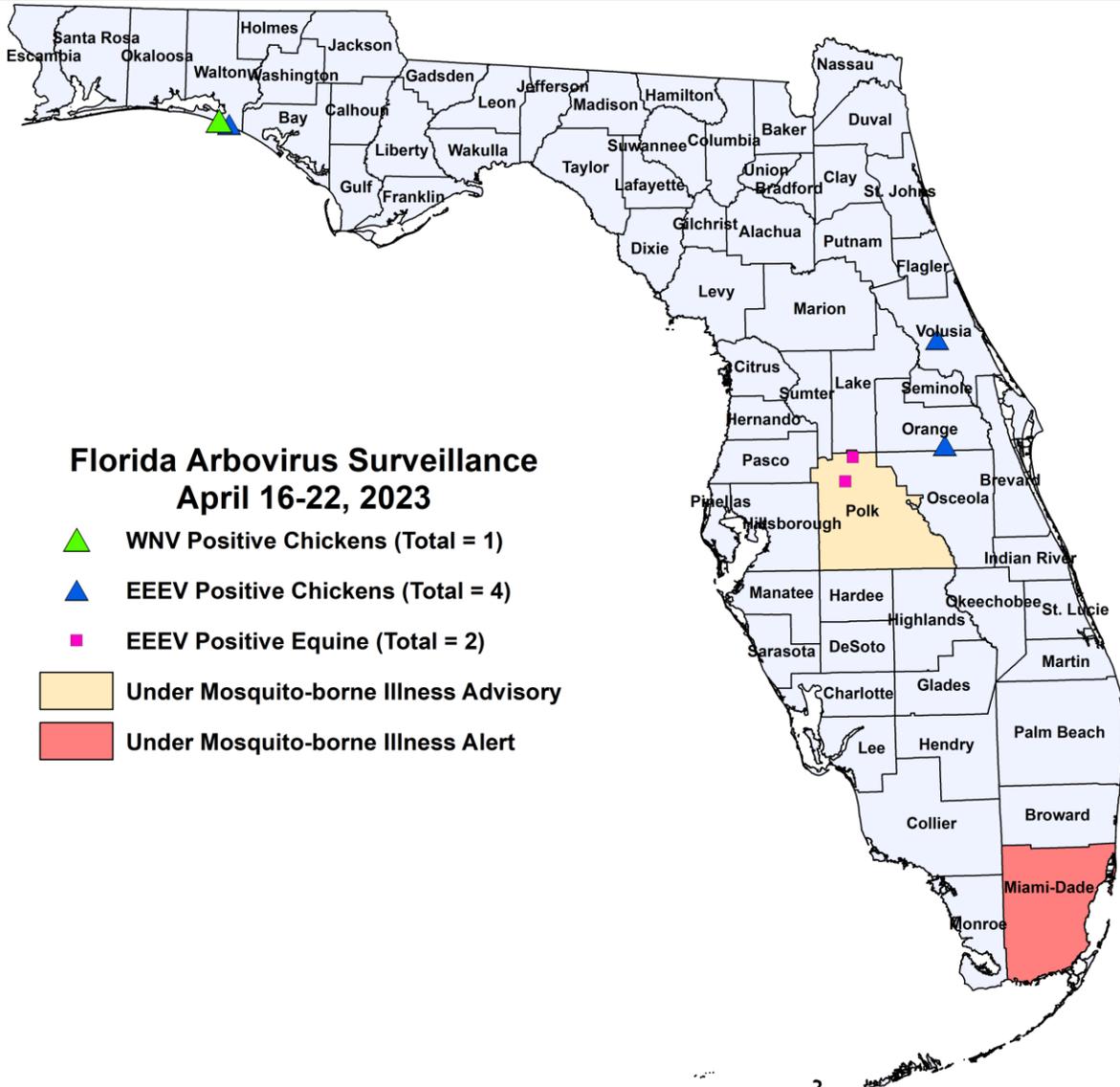
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 28 reports representing a total of 43 dead birds, including two crows, eight raptors, and seven doves, were received from 12 counties.

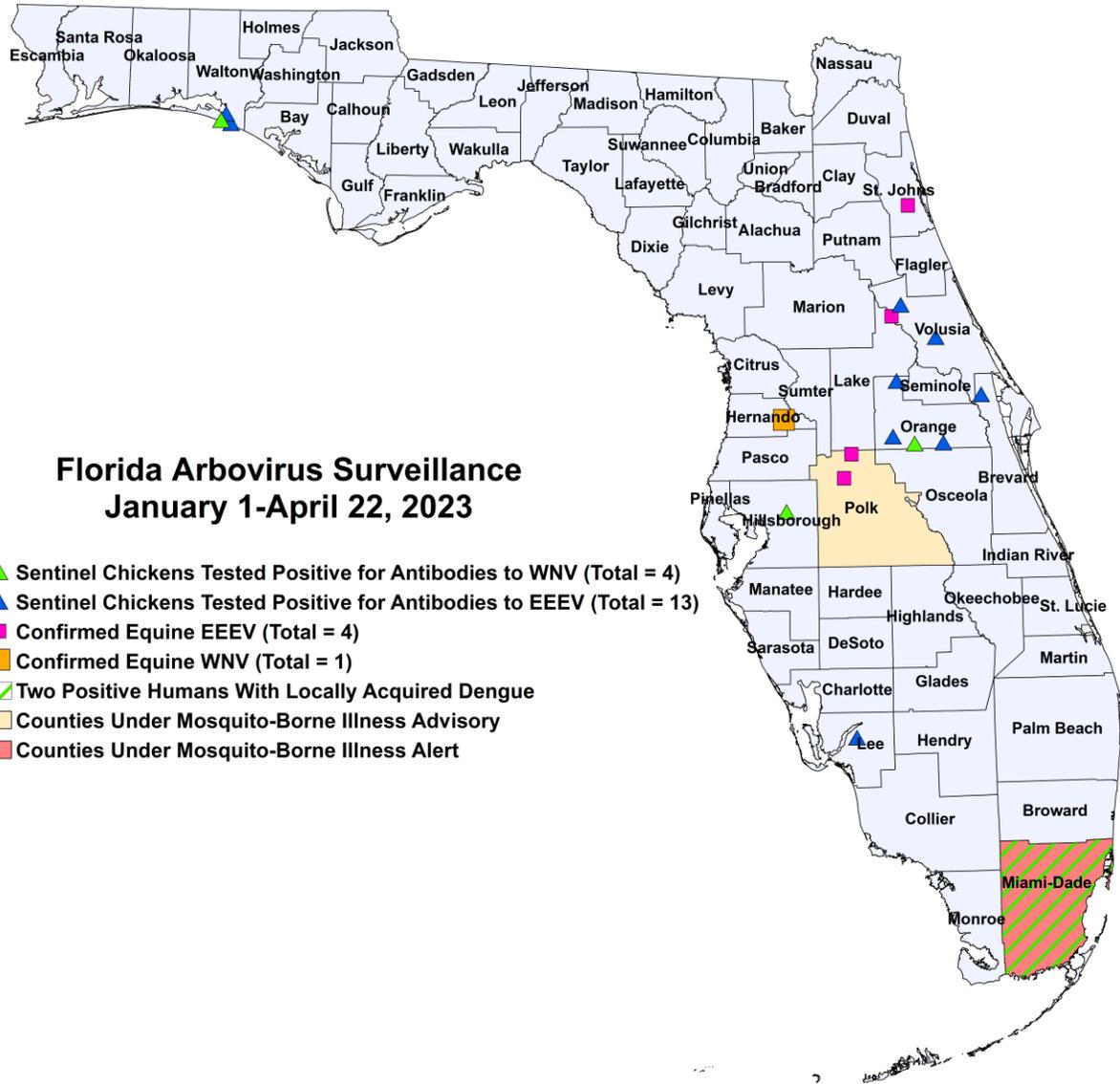
In 2023, 329 reports representing a total of 736 dead birds (20 crows, 8 jays, 50 raptors, 36 doves) were received from 46 of Florida's 67 counties.

### 2023

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Bay	1	0	0	0	0
Brevard	1	0	0	0	0
Duval	2	0	0	1	0
Hendry	1	0	0	0	0
Hillsborough	7	0	0	0	0
Lee	16	1	0	5	7
Miami-Dade	4	0	0	1	0
Nassau	3	0	0	0	0
Orange	1	0	0	1	0
Palm Beach	1	1	0	0	0
Pasco	1	0	0	0	0
Pinellas	5	0	0	0	0

# Maps





### Florida Arbovirus Surveillance January 1-April 22, 2023

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 4)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 13)
- Confirmed Equine EEEV (Total = 4)
- Confirmed Equine WNV (Total = 1)
- ✓ Two Positive Humans With Locally Acquired Dengue
- Counties Under Mosquito-Borne Illness Advisory
- Counties Under Mosquito-Borne Illness Alert

### 2023 Arbovirus Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Brevard			1 EEEV (3/24)	
Hernando		1 WNV (1/6)		
Hillsborough			2 WNV (2/28, 3/7)	
Lake		1 EEEV (1/29)		
Lee			1 EEEV (1/9)	
Miami-Dade	2 dengue (January, March)			
Orange			1 WNV (2/20) 4 EEEV (1/17, 2/20, 2/27, 4/10)	
Polk		2 EEEV (4/7, 4/10)		
St. Johns		1 EEEV (2/2)		
Volusia			5 EEEV (1/17, 1/23, 1/30, 4/10)	
Walton			1 WNV (3/27) 2 EEEV (4/3, 4/10)	

## Acknowledgements and Data Sources

Contributors: Andrea Morrison, PhD, MSPH, Rebecca Zimler, PhD, MPH, and Danielle Stanek, DVM, DOH Bureau of Epidemiology; Lea Heberlein-Larson, DrPH; Alexis LaCrue, PhD, MS; Maribel Castaneda, and Amanda Davis, BS; DOH Bureau of Public Health Laboratories; Carina Blackmore, DVM, PhD, DOH Division of Disease Control and Health Protection.

**For more surveillance information, please see the DOH website at:** [www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/surveillance.html](http://www.floridahealth.gov/diseases-and-conditions/mosquito-borne-diseases/surveillance.html)

**For arbovirus surveillance information for the United States, please see the Centers for Disease Control and Prevention website at:** [www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm](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, chikungunya, and malaria by date of onset. Suspect cases are not included. Activity is mapped by county of exposure rather than county of residence. 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: [www.floridahealth.gov/diseases-and-conditions/disease-reporting-and-management/disease-reporting-and-surveillance/index.html](http://www.floridahealth.gov/diseases-and-conditions/disease-reporting-and-management/disease-reporting-and-surveillance/index.html). 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 Bureau of Public 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.