



Florida Arbovirus Surveillance Week 14: April 2-8, 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 2-8, 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. Two sentinel chickens tested positive for antibodies to WNV this week in Hillsborough County. No mosquito pools tested positive for WNV this week. In 2023, positive samples from three sentinel chickens and one horse have been reported from three 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. No horses with EEEV infection were reported this week. One sentinel chicken tested positive for antibodies to EEEV this week in Brevard County. In 2023, positive samples from eight sentinel chickens and two horses have been reported from six counties.

International Travel-Associated Dengue: Three cases of dengue were reported this week in persons that had international travel. In 2023, 59 travel-associated dengue cases have been reported.

Dengue Cases Acquired in Florida: One case of locally acquired dengue was 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: 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
Africa and the Middle East	Americas	Asia and the Pacific Islands	Americas	Africa and the Middle East	Oceania
São Tomé and Príncipe	Bolivia	Afghanistan	Paraguay	Nigeria	Australia
Somalia	Colombia	Bangladesh			
Sudan	Cuba	India			
	Dominican Republic	Laos			
	El Salvador	Malaysia			
	Guatemala	Myanmar (Burma)			
	Honduras	Nepal			
	Nicaragua	Pakistan			
	Panama	Philippines			
	Peru	Singapore			
		Sri Lanka			
		Vietnam			

Level 1 Travel Health Notice, Level 2 Travel Health Alert: 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.

2023 Human Case Summary

2023 International Travel-Associated Dengue Cases: Fifty-nine 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 (2), Collier (2), Duval, Escambia, Hendry, Hillsborough (6), Lee, Miami-Dade (38), Nassau, Orange, Osceola, Pasco, St. Lucie (2), and Volusia. Two cases were reported in non-Florida residents. In 2023, 49 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	36	1	1	6	46
Dominican Republic						1	1
India			1				1
Mexico						2	2
Puerto Rico	1						1
Total	4	5	38	1	1	10	59

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.

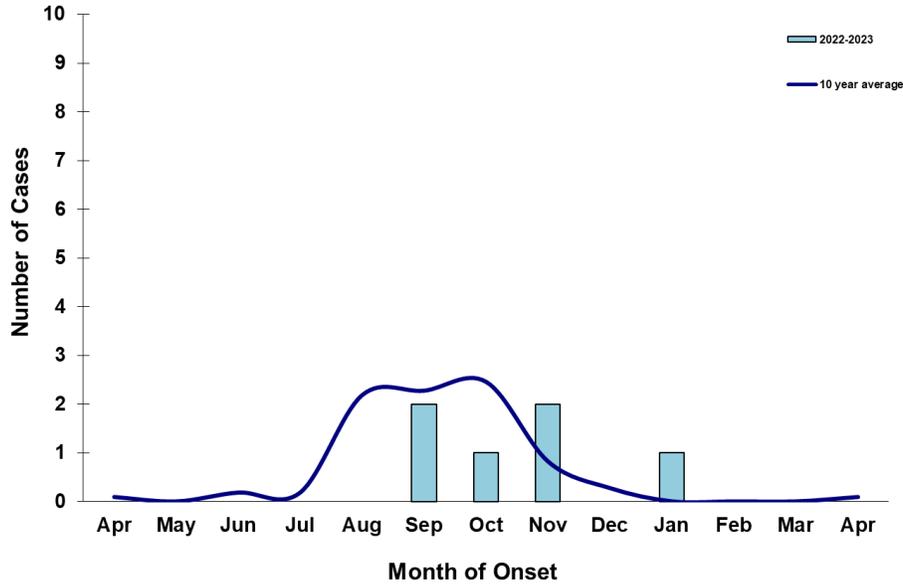
Six cases (55%) were diagnosed with *Plasmodium falciparum*. Three cases (27%) were diagnosed with *Plasmodium vivax*. Two cases (18%) were diagnosed with *Plasmodium malariae*.

Veterinary Cases**

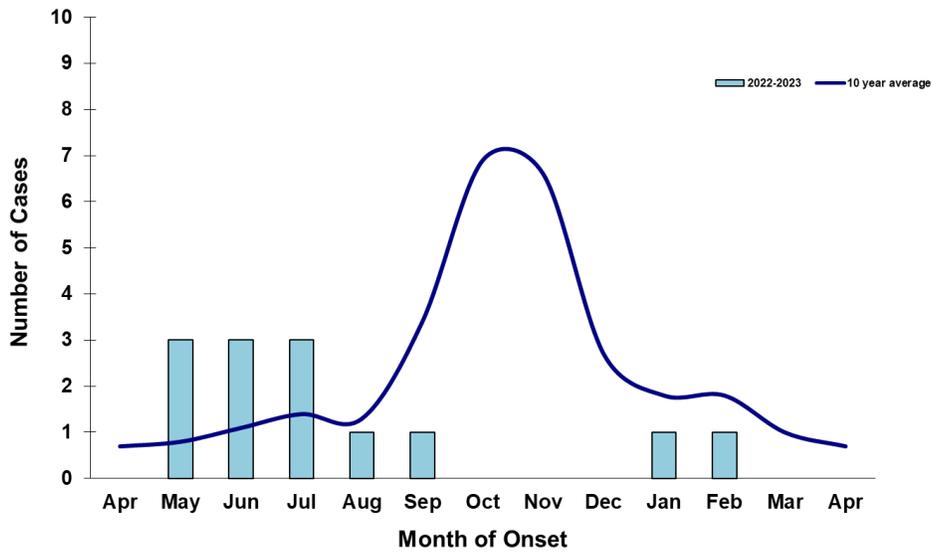
**Veterinary cases are reported by date of onset. Only mammalian veterinary cases are included in the graphs.

No veterinary cases were reported this week.

Veterinary WNV Disease in Florida, April 2022-2023



Veterinary EEEV Disease in Florida, April 2022-2023



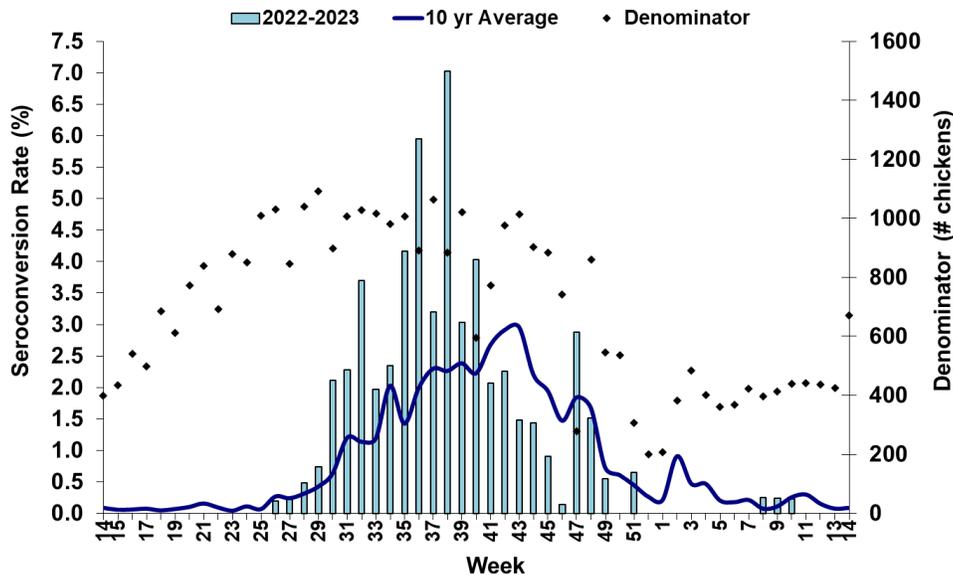
Sentinel Chickens

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.

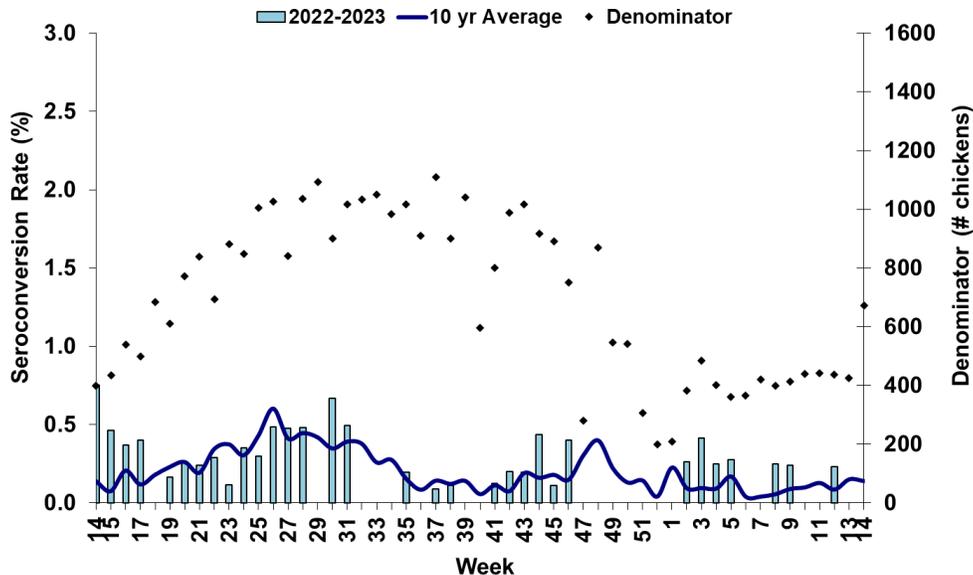
Two sentinel chickens tested positive for antibodies to WNV this week in Hillsborough County. One sentinel chicken tested positive for antibodies to EEEV this week in Brevard County.

County	Collection Date	Seroconversion Rates (%)					County Totals		
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Brevard	3/24/2023				1.45	1.45		1 EEEV	1 EEEV
Hillsborough	2/28/2023	3.33		3.33				1 WNV	2 WNV
	3/7/2023	3.33		3.33				1 WNV	

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

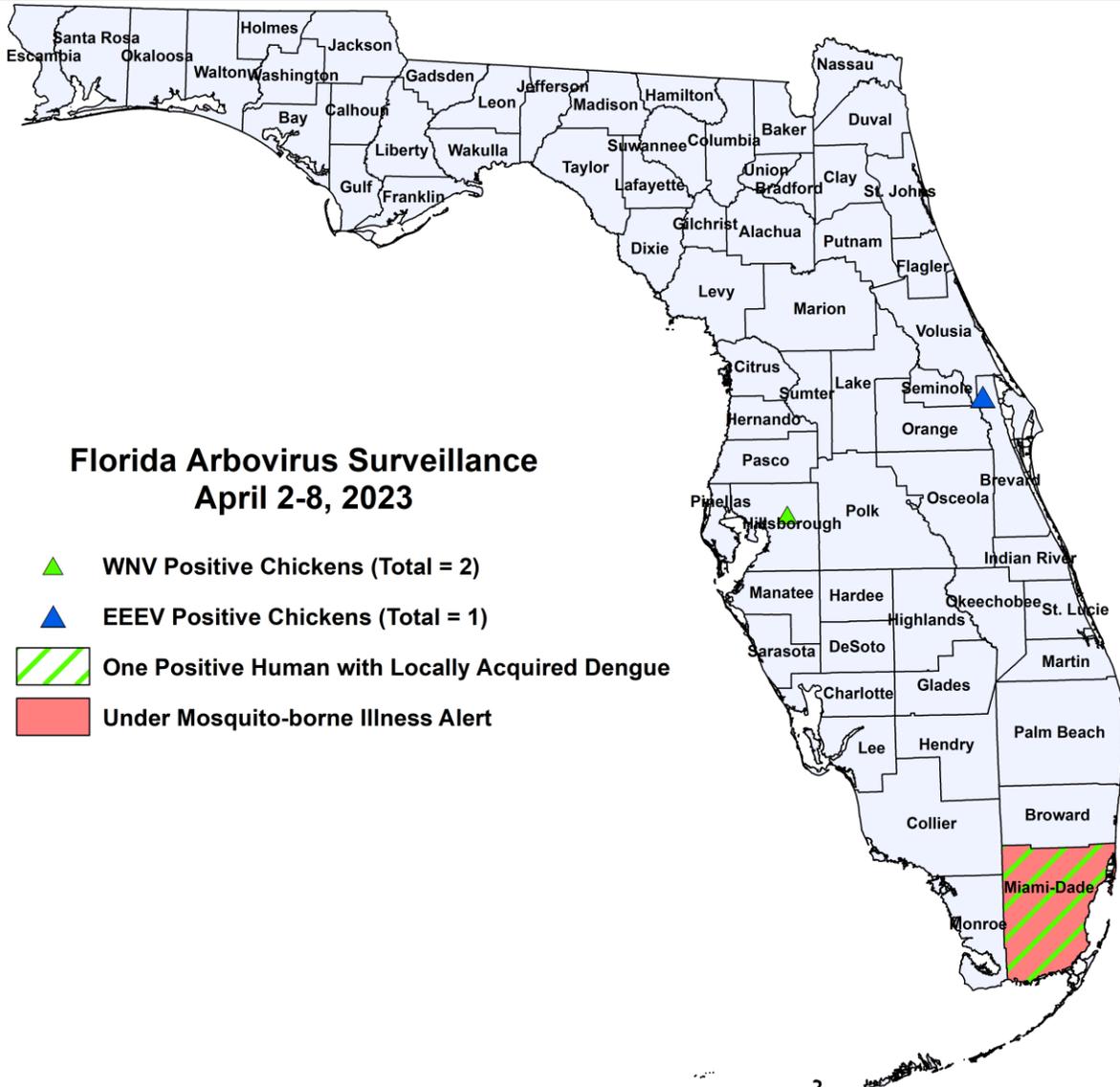
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 17 reports representing a total of 37 dead birds, including two crows, two jays, and two raptors, were received from 13 counties.

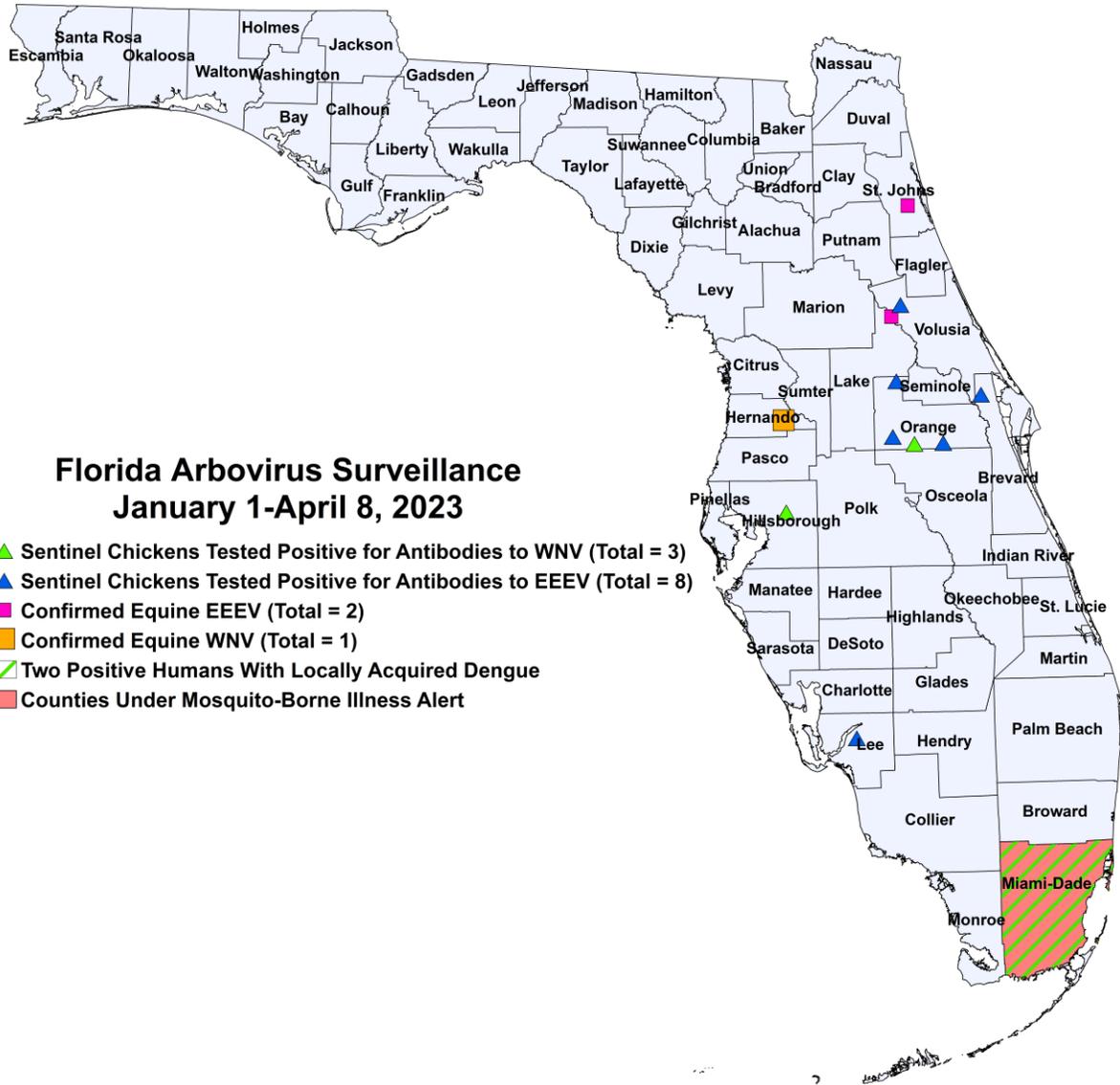
In 2023, 280 reports representing a total of 624 dead birds (17 crows, 7 jays, 38 raptors, 28 doves) were received from 46 of Florida's 67 counties.

2023

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Broward	1	0	1	0	0
Collier	3	0	0	0	0
Gulf	1	0	1	0	0
Hernando	5	0	0	0	0
Highlands	2	0	0	0	0
Hillsborough	7	0	0	0	0
Lake	1	0	0	1	0
Lee	5	0	0	0	0
Orange	2	2	0	0	0
Palm Beach	1	0	0	1	0
Pinellas	2	0	0	0	0
St. Lucie	3	0	0	0	0
Taylor	4	0	0	0	0

Maps





**Florida Arbovirus Surveillance
January 1-April 8, 2023**

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 3)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 8)
- Confirmed Equine EEEV (Total = 2)
- Confirmed Equine WNV (Total = 1)
- ✓ Two Positive Humans With Locally Acquired Dengue
- 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) 3 EEEV (1/17, 2/20, 2/27)	
St. Johns		1 EEEV (2/2)		
Volusia			3 EEEV (1/17, 1/23, 1/30)	

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

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

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. 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.