



Florida Arbovirus Surveillance Week 17: April 21-27, 2024

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 21-27, 2024, 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 Palm Beach County. No mosquito pools tested positive for WNV this week. In 2024, positive samples from seven sentinel chickens 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 2024, one sentinel chicken has been reported from one county.

EEEV activity: No human cases of EEEV infection were reported this week. One horse with EEEV infection was reported this week in Polk County. One sentinel chicken tested positive for antibodies to EEEV this week in Walton County. One emu flock tested positive for EEEV this week in Pasco County. In 2024, positive samples from 11 sentinel chickens, three horses, two emus, and one emu flock have been reported from eight counties.

International Travel-Associated Dengue: Nineteen cases of dengue were reported this week in persons that had international travel. In 2024, 138 travel-associated dengue cases have been reported.

Dengue Cases Acquired in Florida: One case of locally acquired dengue was reported this week. In 2024, six cases of locally acquired dengue have been reported from two counties.

International Travel-Associated Chikungunya Fever Cases: No cases of chikungunya fever were reported this week in persons that had international travel. In 2024, three 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 2024, 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 2024, 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 2024, no cases of locally acquired Zika fever have been reported.

Advisories/Alerts: Pasco 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			Western Equine Encephalitis	Oropouche	Chikungunya	Yellow Fever
Africa and the Middle East	Americas	Asia and the Pacific Islands	South America	South America	Asia	Africa
Burkina Faso	Argentina	Bangladesh	Argentina	Brazil	Timor-Leste	Nigeria
Cape Verde	Brazil	Cambodia	Uruguay	Bolivia		
Côte d'Ivoire	Colombia	Malaysia		Peru		
Ethiopia	Costa Rica	Sri Lanka				
Mali	French Guiana					
Mauritius	Guadeloupe					
Senegal	Guatemala					
Sudan	Haiti					
	Jamaica					
	Martinique					
	Mexico					
	Nicaragua					
	Panama					
	Paraguay					
	Peru					
	Saint Barthélemy					
	Saint Martin					
	Turks and Caicos					

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: <https://www.cdc.gov/fight-the-bite/at-risk/index.html>.

2024 Human Case Summary

2024 International Travel-Associated Chikungunya Cases: Three cases with onset in 2024 have been reported in individuals with travel history to a chikungunya-endemic area in the two weeks prior to onset. Counties reporting cases were: Broward, Orange, and Pinellas. Country of origin was Brazil (3).

2024 International Travel-Associated Dengue Cases: One hundred and thirty-eight cases with onset in 2024 have been reported in individuals with travel history to a dengue-endemic area in the two weeks prior to onset. Counties reporting cases were: Alachua, Brevard (3), Broward (24), Charlotte, Collier, Duval (3), Flagler, Hillsborough (6), Lee (7), Miami-Dade (64), Okaloosa, Orange (7), Osceola (4), Palm Beach (8), Pasco, Pinellas (2), Polk, Santa Rosa, and Volusia (2). Twelve cases were reported in non-Florida residents. One case met the criteria for severe dengue (dengue shock syndrome [DSS] or dengue hemorrhagic fever [DHF]). Those at greater risk for DSS and DHF include persons with previous dengue infection, pregnant women, infants, the elderly, and those with co-morbidities. However, severe illness can also occur in those without any of these risk factors. In 2024, 107 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-2 /DENV-3	Unknown	Total
Argentina	3	2				2	7
Barbados		1				1	2
Barbados/Trinidad and Tobago		1					1
Brazil	16	6				8	30
Colombia	2	6	2	1		3	14
Costa Rica			1				1
Cuba			33	2	1	5	41
Dominican Republic			6			2	8
Guyana			1				1

Honduras			1			1	2
Indonesia		1				1	2
Jamaica		1				1	2
Mexico	2	1	4				7
Nicaragua				1		2	3
Paraguay		3					3
Peru		1					1
Puerto Rico	1	1	2			1	5
Saint Barthélemy		2				1	3
Trinidad and Tobago			1				1
US Virgin Islands						1	1
Venezuela			1			2	3
Total	24	26	52	4	1	31	138

2024 Dengue Cases Acquired in Florida: In 2024, six cases of locally acquired dengue have been reported in Miami-Dade (5) and Pasco counties with onset in January (3), February, and March (2). Five cases have been serotyped by PCR. Please see the table below for a breakdown of cases by county and serotype.

County of Exposure	DENV-3	Unknown	Total
Miami-Dade	4	1	5
Pasco	1		1
Total	5	1	6

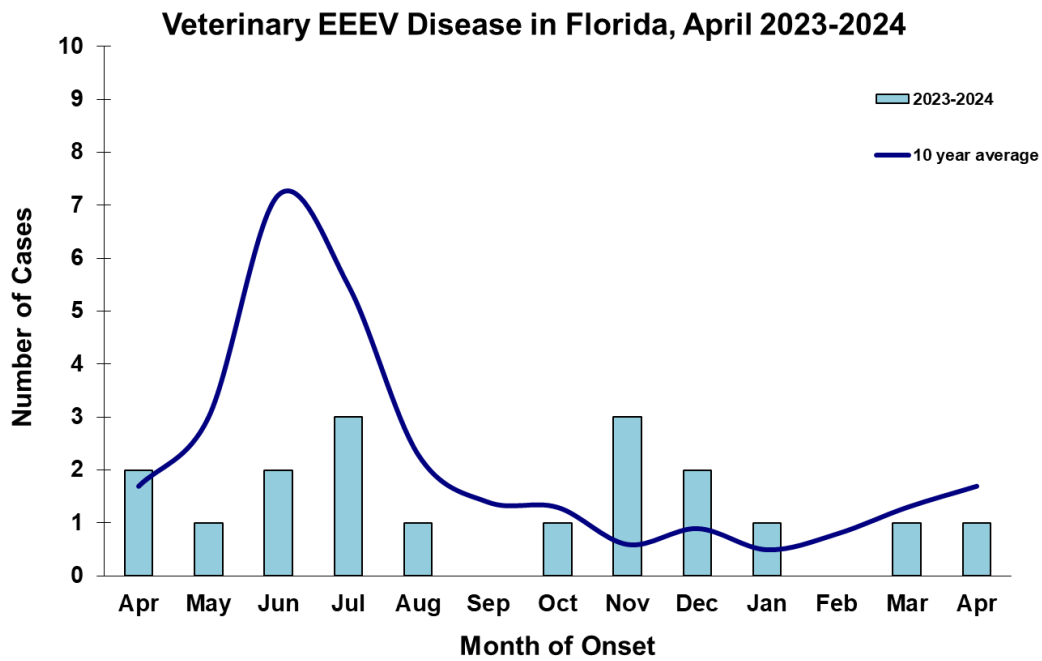
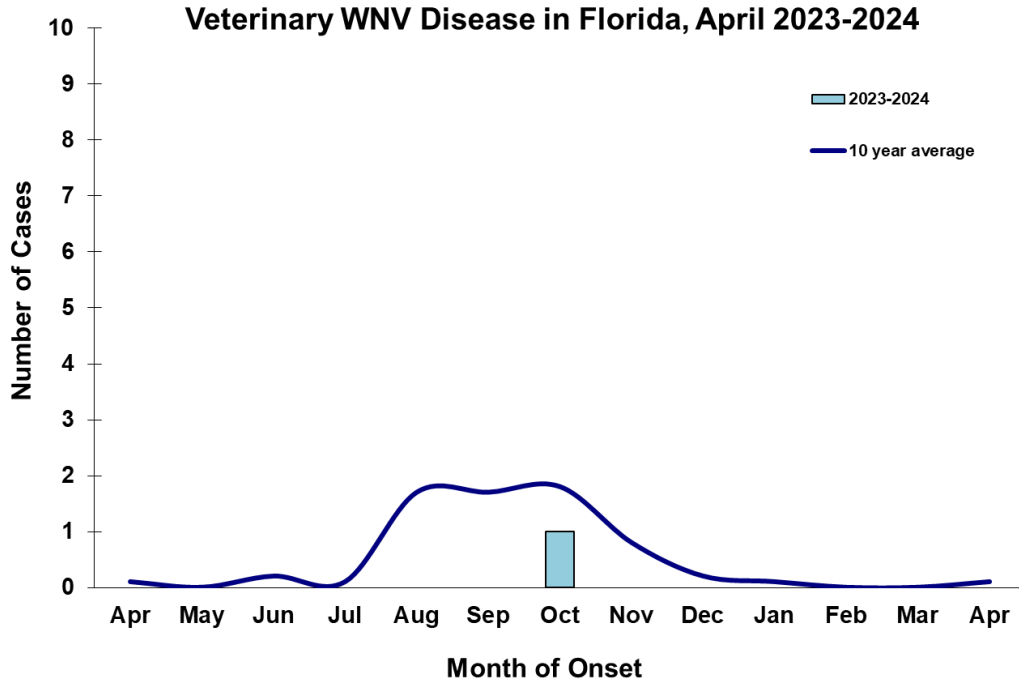
2024 International Travel-Associated Malaria Cases: Twenty cases of malaria with onset in 2024 have been reported in individuals with a travel history to a malaria-endemic area. Counties reporting cases were: Broward, Collier, Duval, Escambia, Hillsborough, Lee, Miami-Dade (4), Orange (5), Osceola (2), Palm Beach, Pinellas, and Polk. One case was reported in a non-Florida resident. Please see the table below for a breakdown of cases by country of origin and *Plasmodium* species.

Country of Exposure	<i>Plasmodium falciparum</i>	<i>Plasmodium vivax</i>	Total
Angola	1		1
Cameroon	1		1
Ecuador		2	2
Ethiopia		1	1
Gabon	1		1
Ghana	1		1
Malawi	1		1
Mexico		2	2
Nigeria	3		3
Sierra Leone	1		1
Central/South America		5	5
Uganda/Rwanda	1		1
Total	10	10	20

Veterinary Cases**

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

One horse with EEEV infection was reported this week in Polk County.



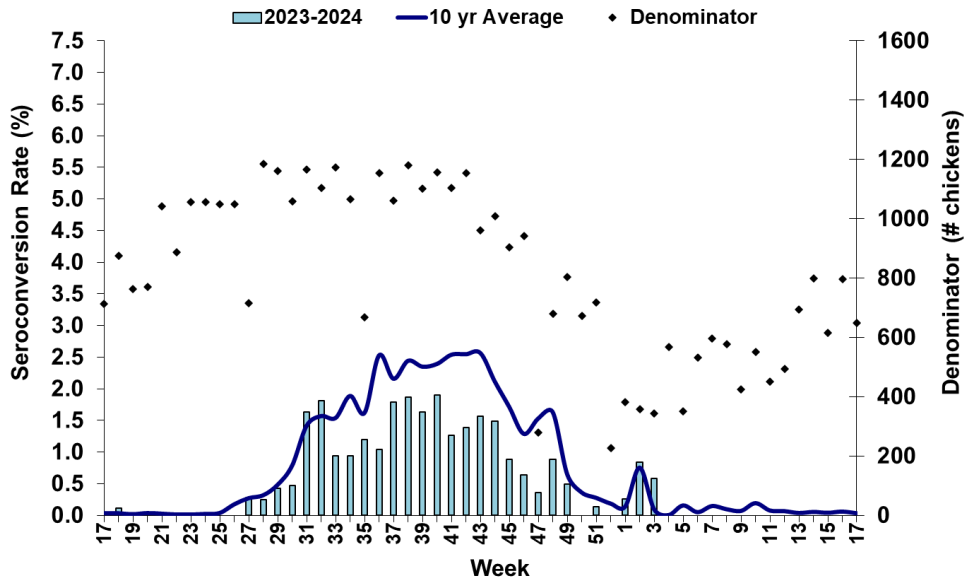
Sentinel Chickens

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.

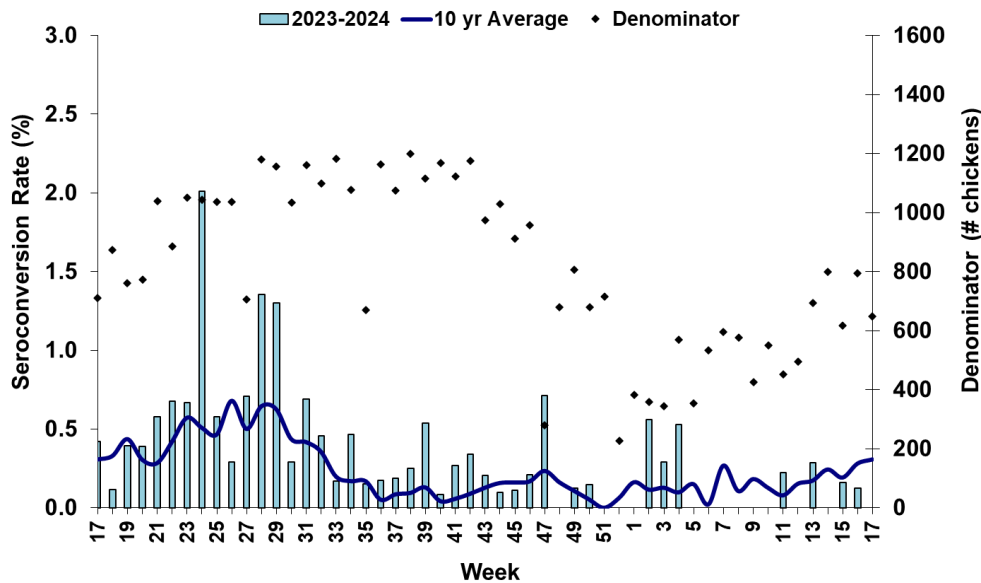
One sentinel chicken tested positive for antibodies to WNV this week in Palm Beach County. One sentinel chicken tested positive for antibodies to EEEV this week in Walton County.

County	Collection Date	Seroconversion Rates (%)						County Totals	
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Palm Beach	3/18/2024	3.13		3.13				1 WNV	1 WNV
Walton	4/15/2024				2.08	2.08		1 EEEV	2 EEEV, 1 SLEV

Sentinel Seroconversions to WNV in Florida, 2023–2024



Sentinel Seroconversions to EEEV in Florida, 2023–2024



Mosquito Pools

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

County	Collection Date	Result	Species	County YTD
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Dead Birds

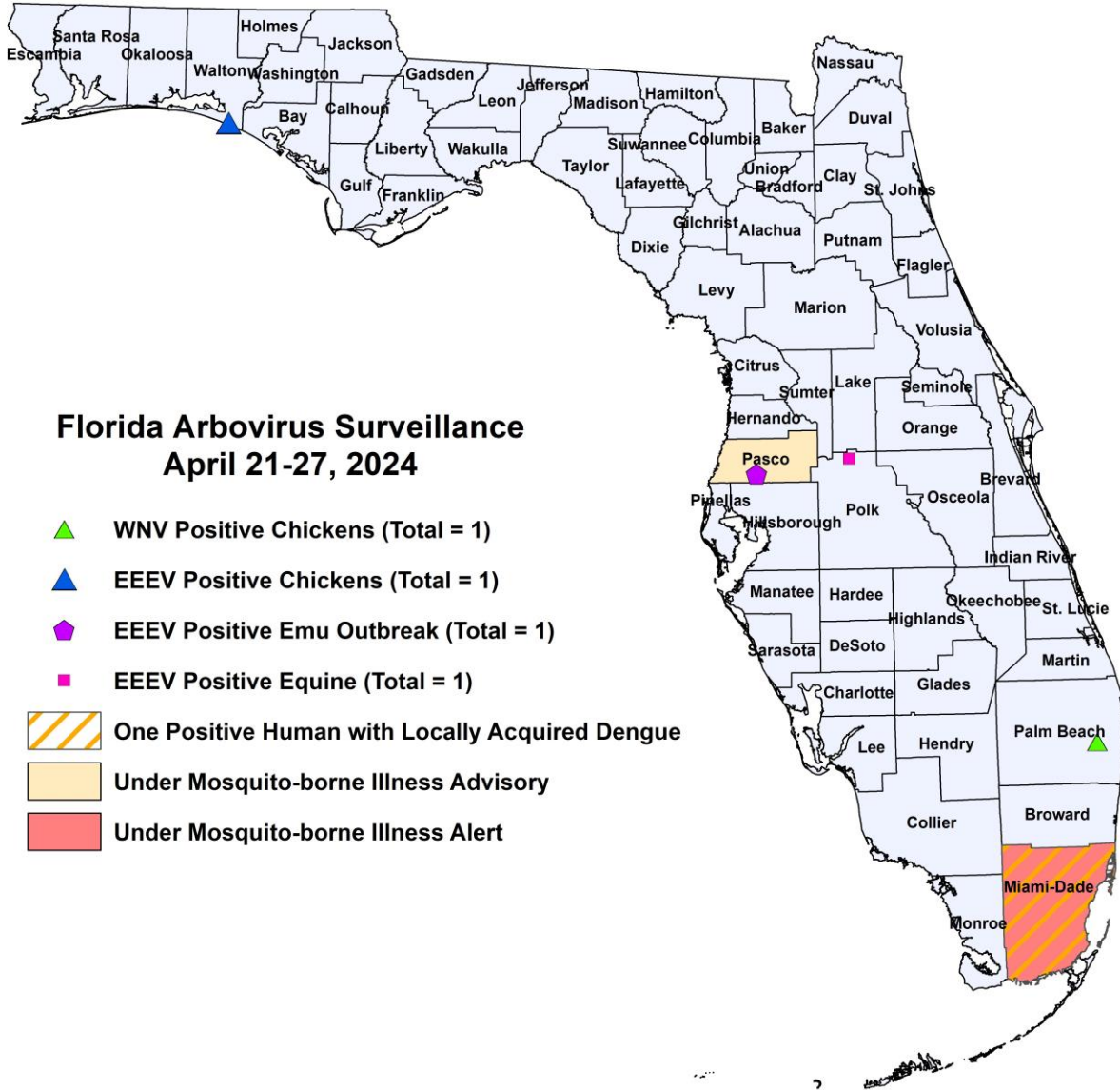
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 17 reports representing a total of 29 dead birds, including one crow, one jay, two raptors, and two doves, were received from 12 counties.

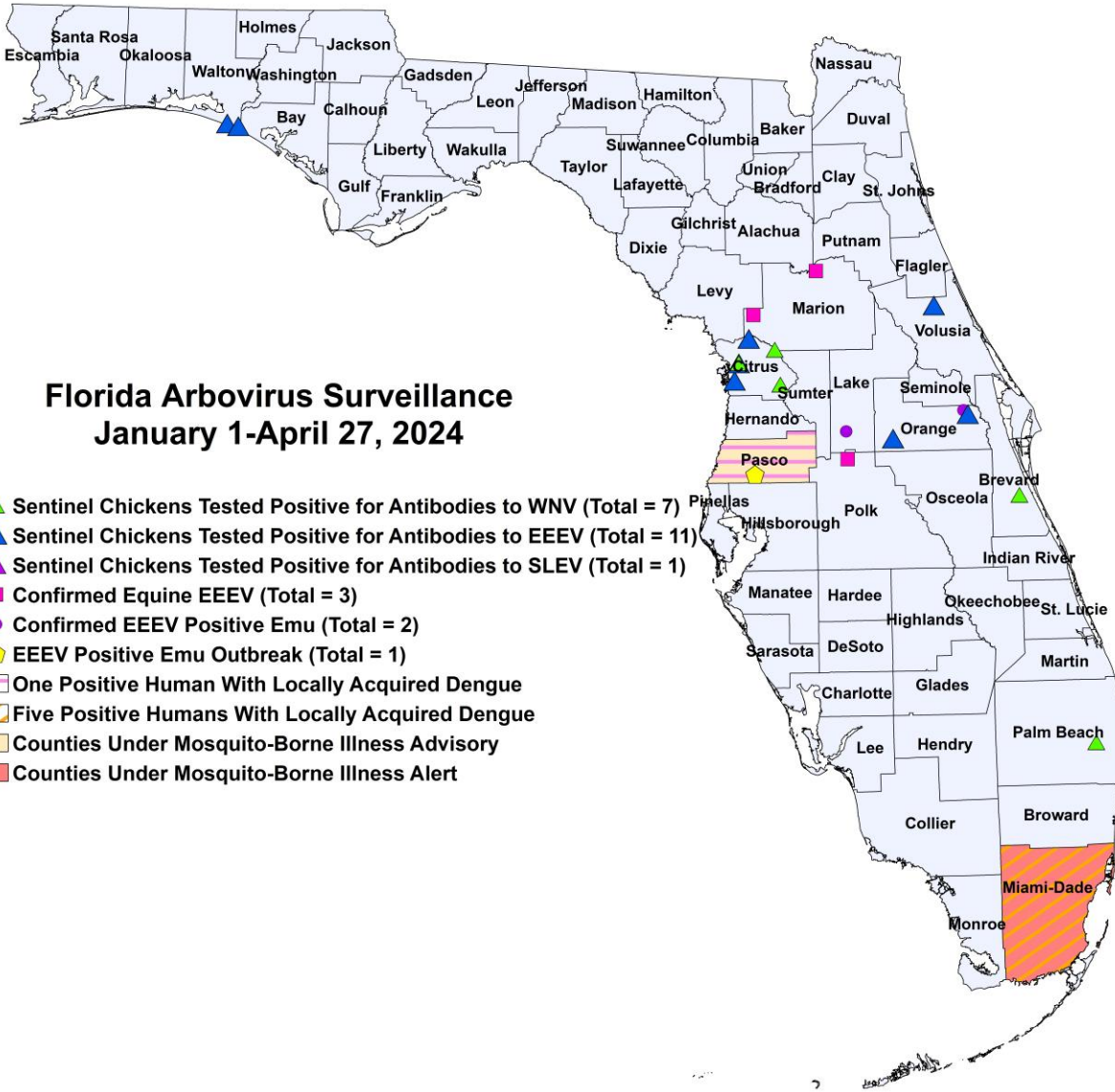
In 2024, 418 reports representing a total of 896 dead birds (32 crows, 6 jays, 53 raptors, 26 doves) were received from 46 of Florida's 67 counties.

2024

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Brevard	6	0	0	0	0
Charlotte	4	0	0	0	2
Citrus	1	0	0	1	0
Duval	2	0	0	0	0
Escambia	2	0	0	0	0
Hillsborough	1	0	0	0	0
Marion	1	0	0	0	0
Miami-Dade	7	0	0	0	0
Orange	1	0	0	0	0
Palm Beach	2	1	1	0	0
Seminole	1	0	0	1	0
Wakulla	1	0	0	0	0

Maps





Florida Arbovirus Surveillance January 1-April 27, 2024

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 7)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 11)
- ▲ Sentinel Chickens Tested Positive for Antibodies to SLEV (Total = 1)
- Confirmed Equine EEEV (Total = 3)
- Confirmed EEEV Positive Emu (Total = 2)
- ◆ EEEV Positive Emu Outbreak (Total = 1)
- One Positive Human With Locally Acquired Dengue
- Five Positive Humans With Locally Acquired Dengue
- Counties Under Mosquito-Borne Illness Advisory
- Counties Under Mosquito-Borne Illness Alert

2024 Mosquito-Borne Disease Activity by County

County	Humans	Equines	Sentinel Chickens	Other
Brevard			1 WNV (1/3)	
Citrus			5 WNV (1/9, 1/15) 5 EEEV (1/9, 1/15, 2/26, 3/11)	
Lake				1 EEEV emu (2/6)
Marion		1 EEEV (1/31, 3/29)		
Miami-Dade	5 dengue (January (2), February, March (2))			
Orange			2 EEEV (2/26, 3/25)	1 EEEV emu (3/16)
Palm Beach			1 WNV (3/18)	
Pasco	1 dengue (January)			1 EEEV emu flock outbreak (4/22 for first emu)
Polk		1 EEEV (4/9)		

County	Humans	Equines	Sentinel Chickens	Other
Volusia			2 EEEV (1/22, 4/8)	
Walton			2 EEEV (3/25, 4/15) 1 SLEV (4/1)	

Acknowledgements and Data Sources

Contributors: Andrea Morrison, PhD, MSPH, Rebecca Zimler, PhD, MPH, and Danielle Stanek, DVM, DOH Bureau of Epidemiology; Lea Heberlein, 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.