



## Florida Arbovirus Surveillance Week 22: May 26-June 1, 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 May 26-June 1, 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. No sentinel chickens tested positive for antibodies to WNV this week. 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. Two horses with EEEV infection were reported this week in Duval and Levy counties. Two sentinel chickens tested positive for antibodies to EEEV this week in Citrus and Pinellas counties. In 2024, positive samples from 19 sentinel chickens, six horses, two emus, and one emu flock have been reported from 13 counties.

**International Travel-Associated Dengue:** Eight cases of dengue were reported this week in persons that had international travel. In 2024, 198 travel-associated dengue cases have been reported.

**Dengue Cases Acquired in Florida:** No cases of locally acquired dengue were reported this week. In 2024, seven 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:** Nassau and Pasco counties are 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	Cambodia	Argentina	Brazil	Timor-Leste	Nigeria
Cape Verde	Brazil	Fiji	Uruguay	Bolivia	Maldives	
Ethiopia	Colombia	Indonesia		Peru		
Mali	Costa Rica	Laos				
Mauritius	Ecuador	Samoa				
Sudan	French Guiana	Singapore				
	Guadeloupe	Sri Lanka				
	Guatemala					
	Martinique					
	Mexico					
	Nicaragua					
	Panama					
	Paraguay					
	Peru					
	Turks and Caicos					
	Uruguay					

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: <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 ninety-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 (32), Charlotte (2), Collier, Duval (4), Flagler, Hernando, Hillsborough (12), Lake, Lee (8), Miami-Dade (86), Okaloosa, Orange (15), Osceola (7), Palm Beach (12), Pasco (2), Pinellas (2), Polk (3), Santa Rosa, Seminole, and Volusia (2). Twenty-six 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, 152 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	4				6	13
Barbados	1	1				2	4
Barbados/Trinidad and Tobago		1					1
Brazil	26	10				10	46
Colombia	3	6	3	1		4	17
Costa Rica			3				3
Cuba			45	3	1	10	59
Dominican Republic			8			2	10
Guyana			1				1
Honduras			2			1	3

Indonesia		1				1	2
Jamaica		1				1	2
Mexico	2	1	4				7
Nicaragua				1		2	3
Paraguay		3					3
Peru	2	2					4
Philippines						1	1
Puerto Rico	1	3	4			2	10
Saint Barthélemy		2				1	3
Trinidad and Tobago		1	1				2
US Virgin Islands						1	1
Venezuela			1			2	3
<b>Total</b>	<b>38</b>	<b>36</b>	<b>72</b>	<b>5</b>	<b>1</b>	<b>46</b>	<b>198</b>

**2024 Dengue Cases Acquired in Florida:** In 2024, seven cases of locally acquired dengue have been reported in Miami-Dade (6) and Pasco counties with onset in January (3), February, March (2), and April. 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	2	6
Pasco	1		1
<b>Total</b>	<b>5</b>	<b>2</b>	<b>7</b>

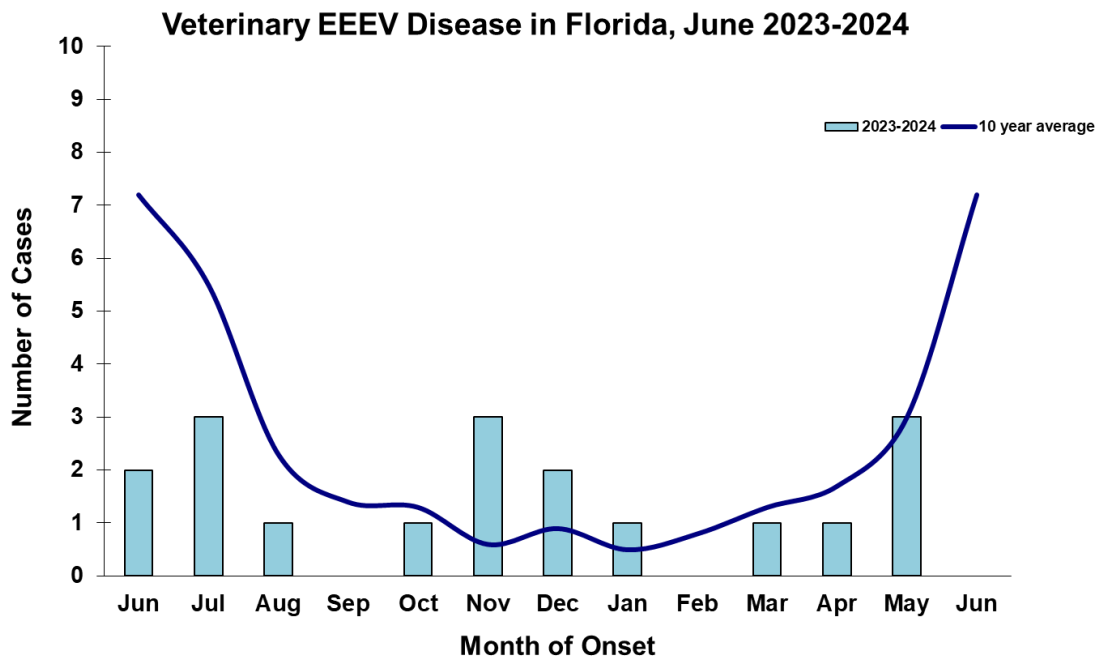
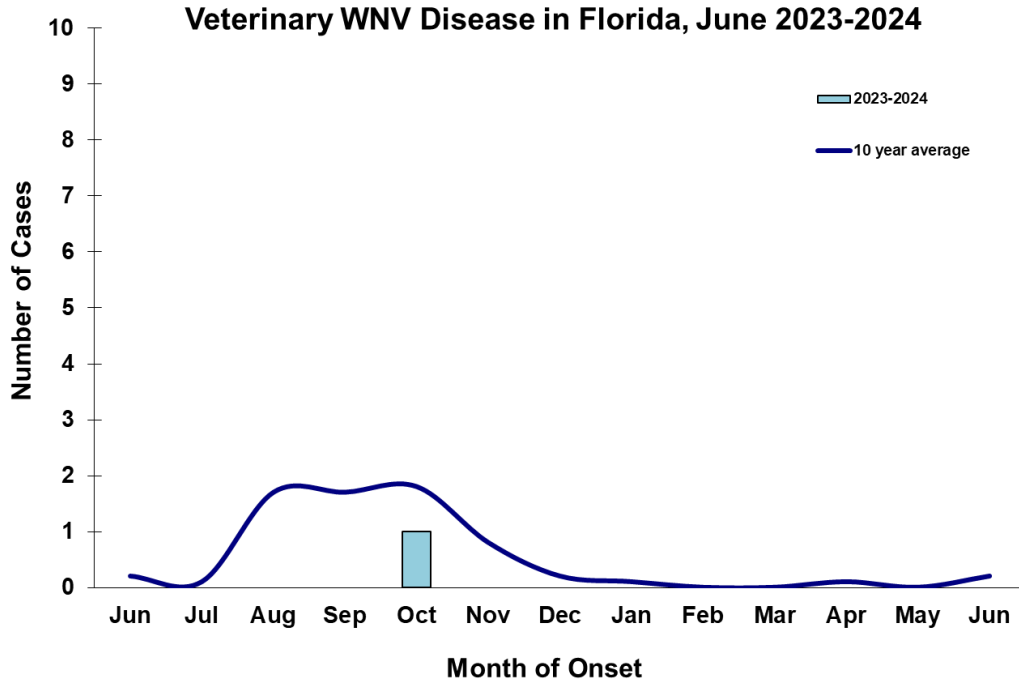
**2024 International Travel-Associated Malaria Cases:** Twenty-four cases of malaria with onset in 2024 have been reported in individuals with a travel history to a malaria-endemic area. Counties reporting cases were: Broward (2), Collier, Duval (3), Escambia, Hillsborough, Lee, Miami-Dade (3), Orange (5), Osceola (2), Palm Beach, Pinellas (2), Polk, and Sarasota. 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 ovale</i>	<i>Plasmodium vivax</i>	Total
Africa	1			1
Angola	1			1
Cameroon	1			1
Central/South America			5	5
Ecuador			1	1
Ethiopia			1	1
Gabon	1			1
Ghana	1			1
Kenya	1			1
Malawi	1			1
Mexico			2	2
Nicaragua			1	1
Nigeria	3			3
Republic of the Congo		1		1
Sierra Leone	1			1
Solomon Islands			1	1
Uganda/Rwanda	1			1
<b>Total</b>	<b>12</b>	<b>1</b>	<b>11</b>	<b>24</b>

## 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 Duval and Levy counties.



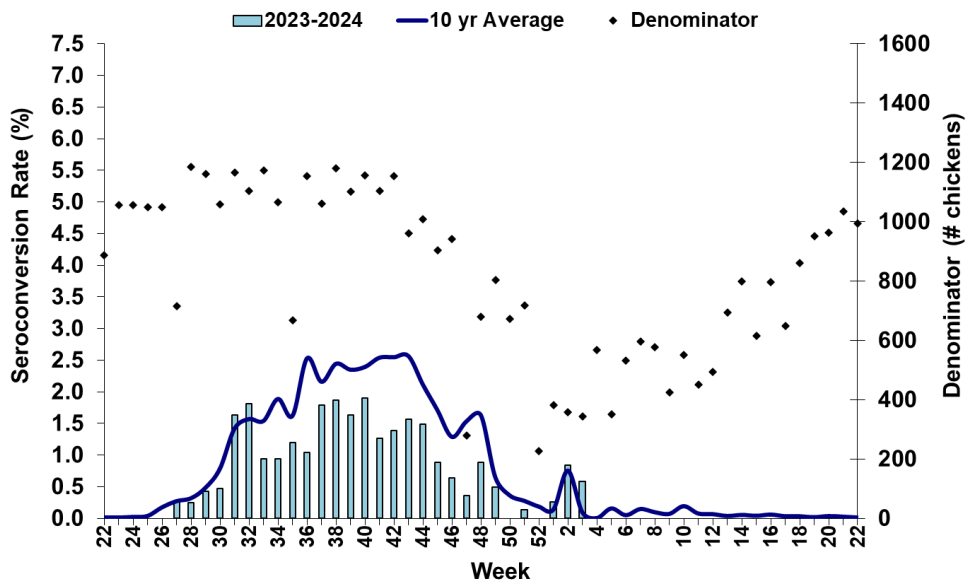
## Sentinel Chickens

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.

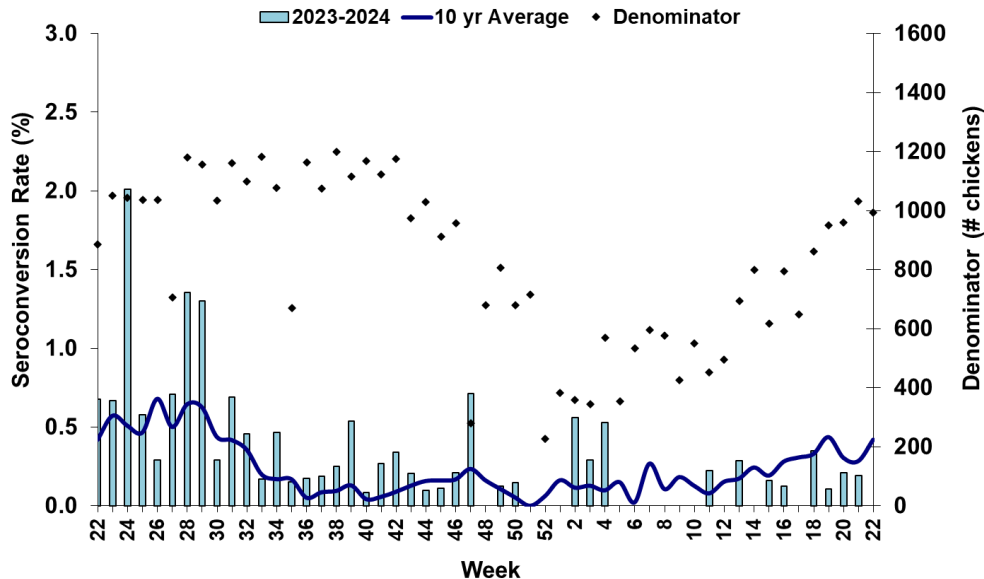
Two sentinel chickens tested positive for antibodies to EEEV this week in Citrus and Pinellas counties.

County	Collection Date	Seroconversion Rates (%)						County Totals	
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Citrus	5/20/2024				1.85	1.85		1 EEEV	5 WNV, 6 EEEV
Pinellas	5/20/2024				1.79	1.79		1 EEEV	1 EEEV

**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

## Dead Birds

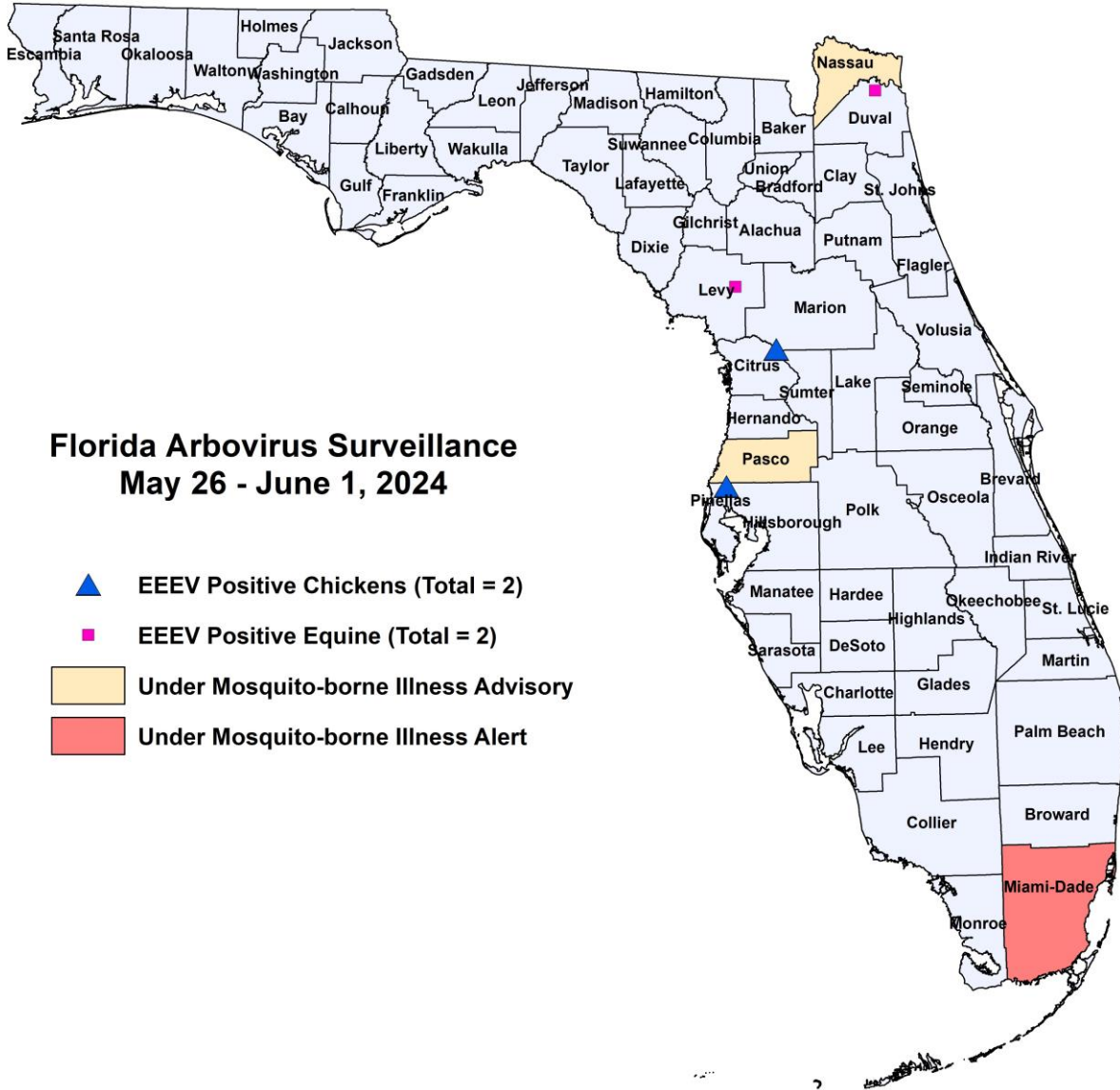
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 19 reports representing a total of 34 dead birds, including one jay, nine raptors, and two doves, were received from 14 counties.

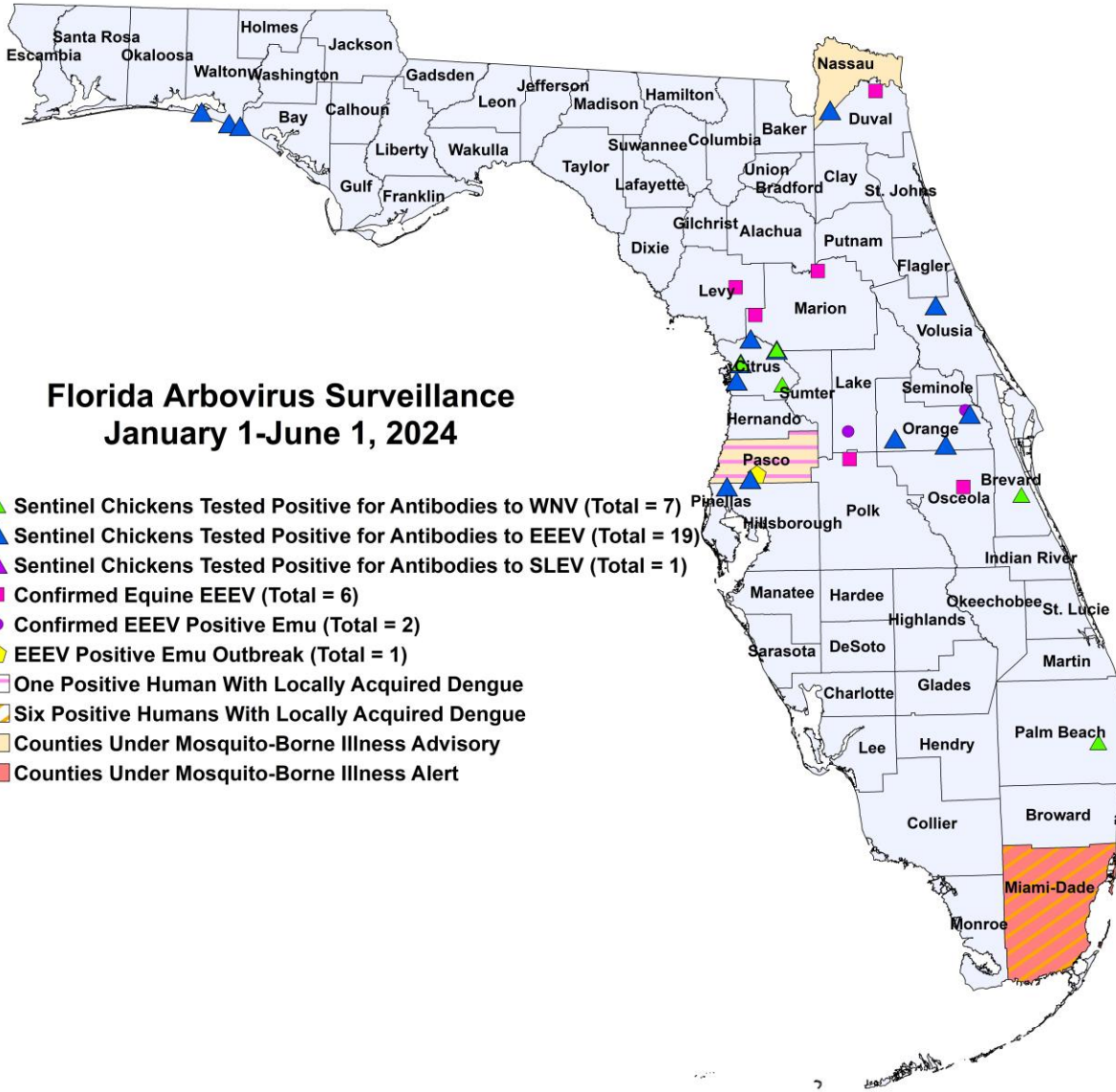
In 2024, 542 reports representing a total of 1124 dead birds (37 crows, 14 jays, 80 raptors, 40 doves) were received from 47 of Florida's 67 counties.

### 2024

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Brevard	1	0	0	1	0
Charlotte	1	0	0	0	0
Clay	10	0	0	0	0
Escambia	1	0	0	0	0
Hillsborough	1	0	0	1	0
Lee	4	0	0	0	0
Leon	1	0	0	1	0
Martin	1	0	1	0	0
Miami-Dade	2	0	0	0	2
Orange	3	0	0	2	0
Palm Beach	4	0	0	0	0
Pasco	3	0	0	3	0
Pinellas	1	0	0	1	0
Polk	1	0	0	0	0

# Maps





## Florida Arbovirus Surveillance January 1-June 1, 2024

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 7)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 19)
- ▲ Sentinel Chickens Tested Positive for Antibodies to SLEV (Total = 1)
- Confirmed Equine EEEV (Total = 6)
- Confirmed EEEV Positive Emu (Total = 2)
- ◆ EEEV Positive Emu Outbreak (Total = 1)
- ▭ One Positive Human With Locally Acquired Dengue
- ▭ Six 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
<b>Brevard</b>			1 WNV (1/3)	
<b>Citrus</b>			5 WNV (1/9, 1/15) 6 EEEV (1/9, 1/15, 2/26, 3/11, 5/20)	
<b>Duval</b>		1 EEEV (5/25)		
<b>Lake</b>				1 EEEV emu (2/6)
<b>Levy</b>		1 EEEV (5/21)		
<b>Marion</b>		1 EEEV (1/31, 3/29)		
<b>Miami-Dade</b>	6 dengue (January (2), February, March (2), April)			
<b>Nassau</b>			3 EEEV (5/3)	
<b>Orange</b>			3 EEEV (2/26, 3/25, 5/6)	1 EEEV emu (3/16)
<b>Osceola</b>		1 EEEV (5/2)		



County	Humans	Equines	Sentinel Chickens	Other
Palm Beach			1 WNV (3/18)	
Pasco	1 dengue (January)		1 EEEV (5/13)	1 EEEV emu flock outbreak (4/22 for first emu)
Pinellas			1 EEEV (5/20)	
Polk		1 EEEV (4/9)		
Volusia			2 EEEV (1/22, 4/8)	
Walton			3 EEEV (3/25, 4/15, 5/13) 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; 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.