



## Florida Arbovirus Surveillance Week 16: April 14-20, 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 14-20, 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 six sentinel chickens have been reported from two 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. No horses with EEEV infection were reported this week. One sentinel chicken tested positive for antibodies to EEEV this week in Volusia County. In 2024, positive samples from 10 sentinel chickens, two horses, and two emus have been reported from six counties.

**International Travel-Associated Dengue:** Thirteen cases of dengue were reported this week in persons that had international travel. In 2024, 119 travel-associated dengue cases have been reported.

**Dengue Cases Acquired in Florida:** No cases of locally acquired dengue were reported this week. In 2024, five 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. Hardee and Miami-Dade counties are 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				
Côte d'Ivoire	Colombia	Malaysia				
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](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 nineteen 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 (2), Broward (22), Collier, Duval (2), Flagler, Hillsborough (5), Lee (5), Miami-Dade (55), Okaloosa, Orange (7), Osceola (4), Palm Beach (6), Pasco, Pinellas (2), Polk, Santa Rosa, and Volusia (2). Eleven 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, 92 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		2				2	4
Barbados		1				1	2
Barbados/Trinidad and Tobago		1					1
Brazil	13	6				6	25
Colombia	2	5	2	1		3	13
Costa Rica			1				1
Cuba			28	2	1	5	36
Dominican Republic			6			2	8
Guyana			1				1

Indonesia		1				1	2
Jamaica		1				1	2
Mexico	2	1	3				6
Nicaragua				1		2	3
Paraguay		2					2
Peru		1					1
Puerto Rico	1	1	2			1	5
Saint Barthélemy		2				1	3
Trinidad and Tobago			1				1
Venezuela			1			2	3
<b>Total</b>	<b>18</b>	<b>24</b>	<b>45</b>	<b>4</b>	<b>1</b>	<b>27</b>	<b>119</b>

**2024 Dengue Cases Acquired in Florida:** In 2024, five cases of locally acquired dengue have been reported in Miami-Dade (4) and Pasco counties with onset in January (3), February, and March. 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	Total
Miami-Dade	4	4
Pasco	1	1
<b>Total</b>	<b>5</b>	<b>5</b>

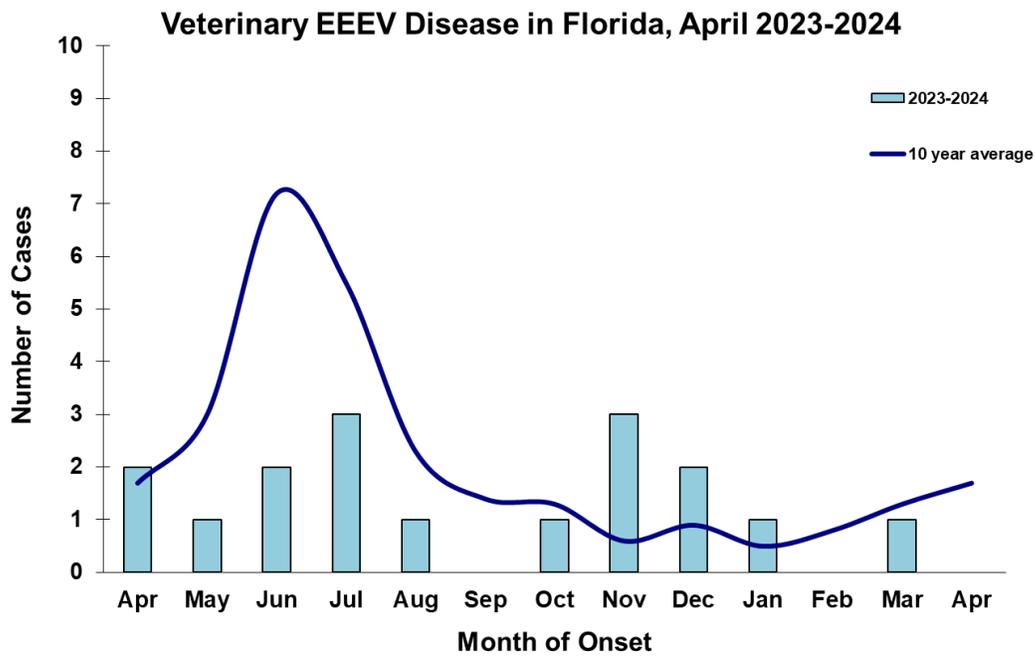
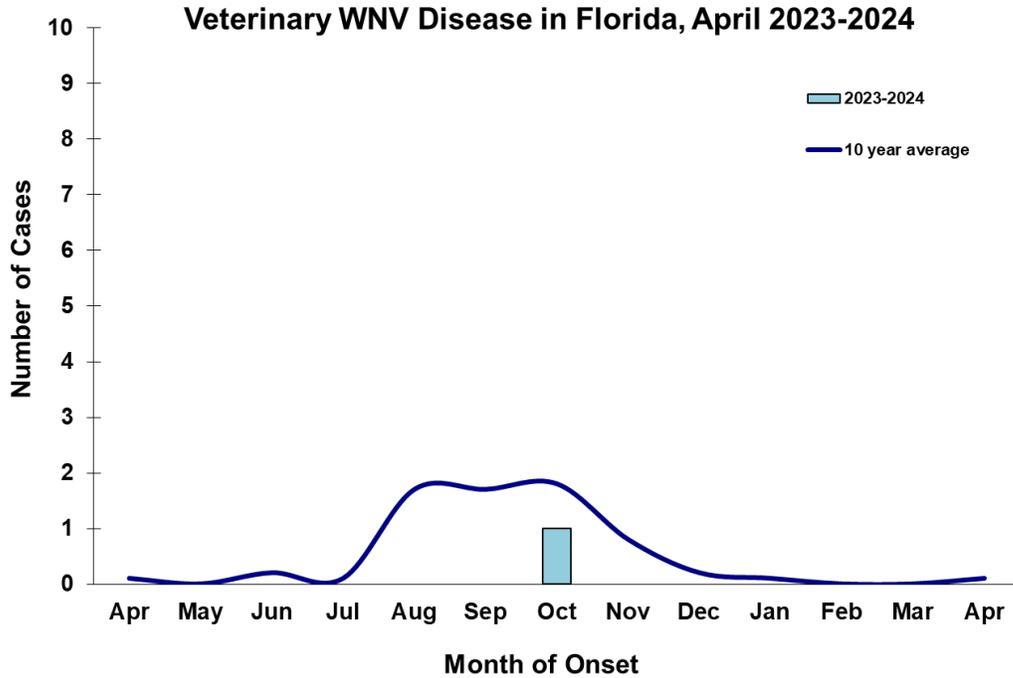
**2024 International Travel-Associated Malaria Cases:** Twenty cases of malaria with onset in 2024 have been reported in individuals with a travel history to a malaria-endemic area. Counties reporting cases were: Broward, Collier, Duval, Escambia, Hillsborough, Lee, Miami-Dade (4), Orange (5), Osceola (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
<b>Total</b>	<b>10</b>	<b>10</b>	<b>20</b>

## 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.



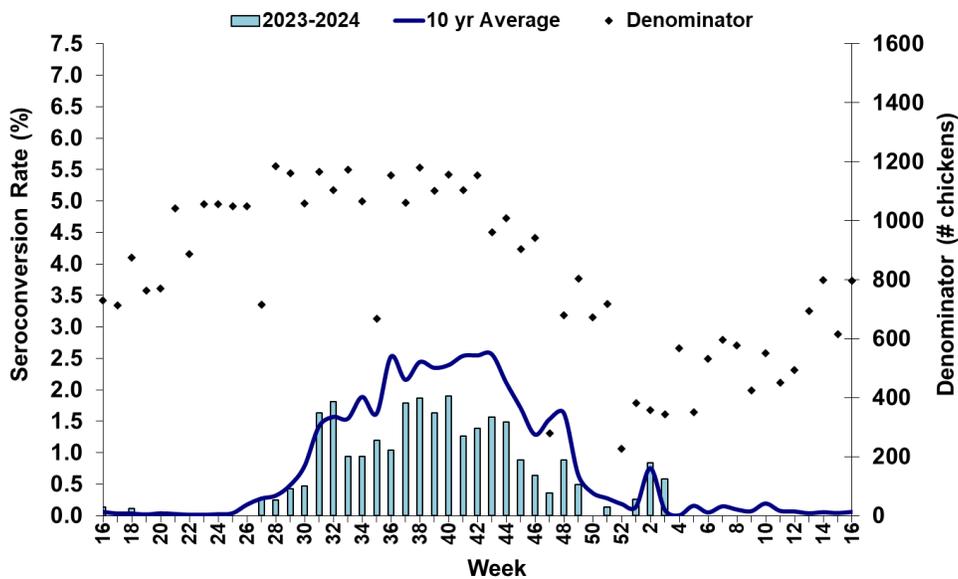
## Sentinel Chickens

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.

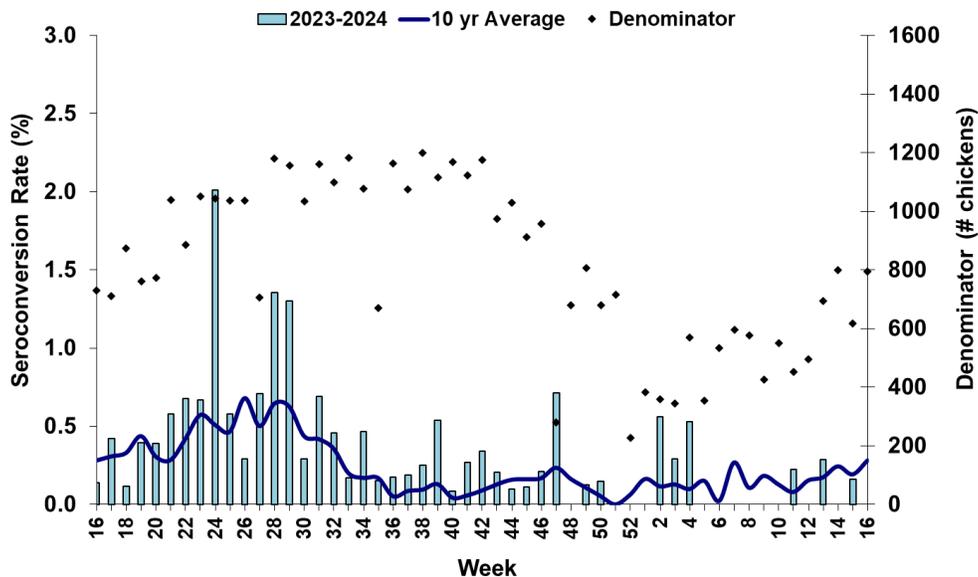
One sentinel chicken tested positive for antibodies to EEEV this week in Volusia County.

County	Collection Date	Seroconversion Rates (%)						County Totals	
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Volusia	4/08/2024				2.08	2.08		1 EEEV	2 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

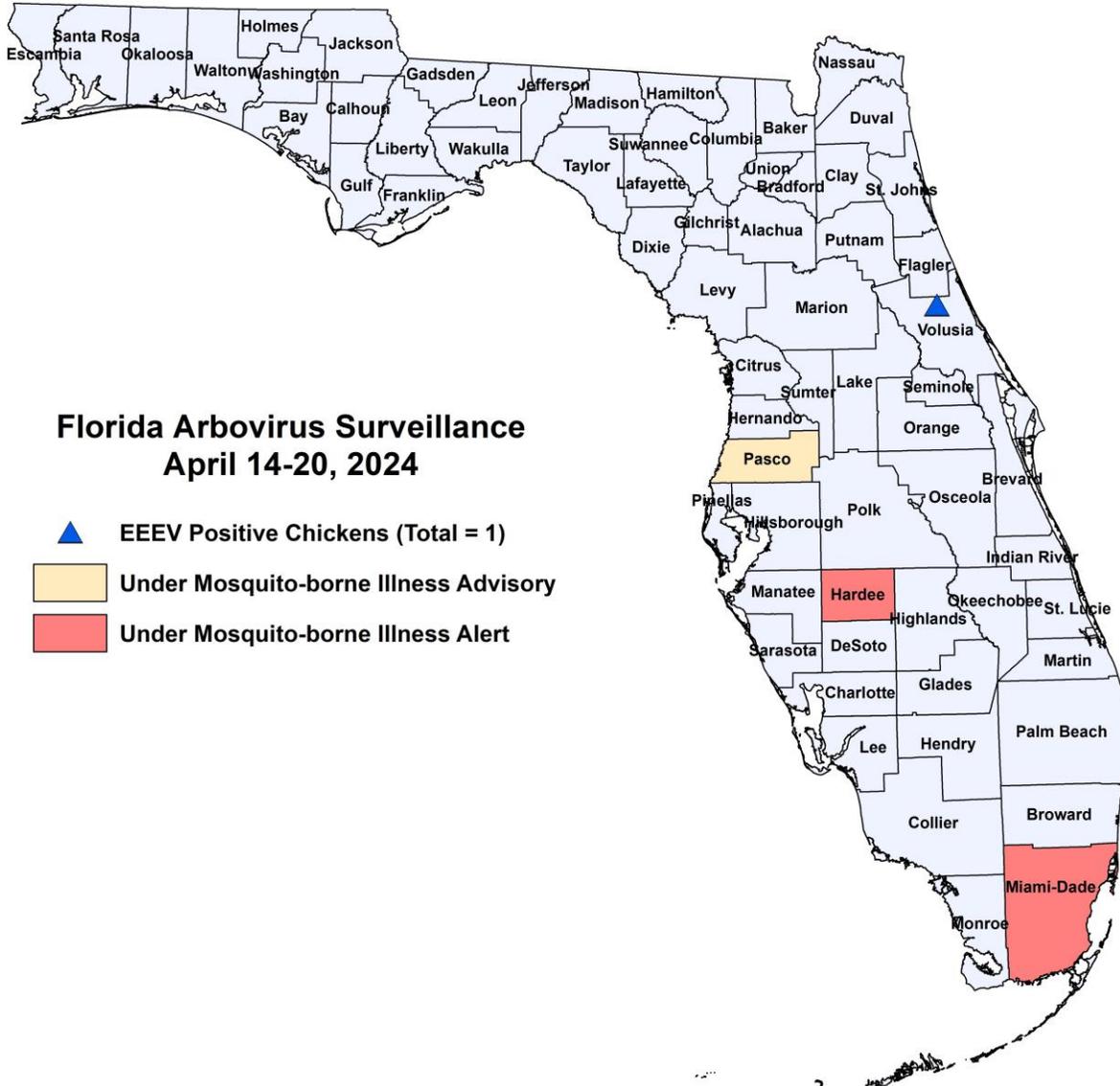
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 33 reports representing a total of 51 dead birds, including seven crows, two jays, seven raptors, and 11 doves, were received from 21 counties.

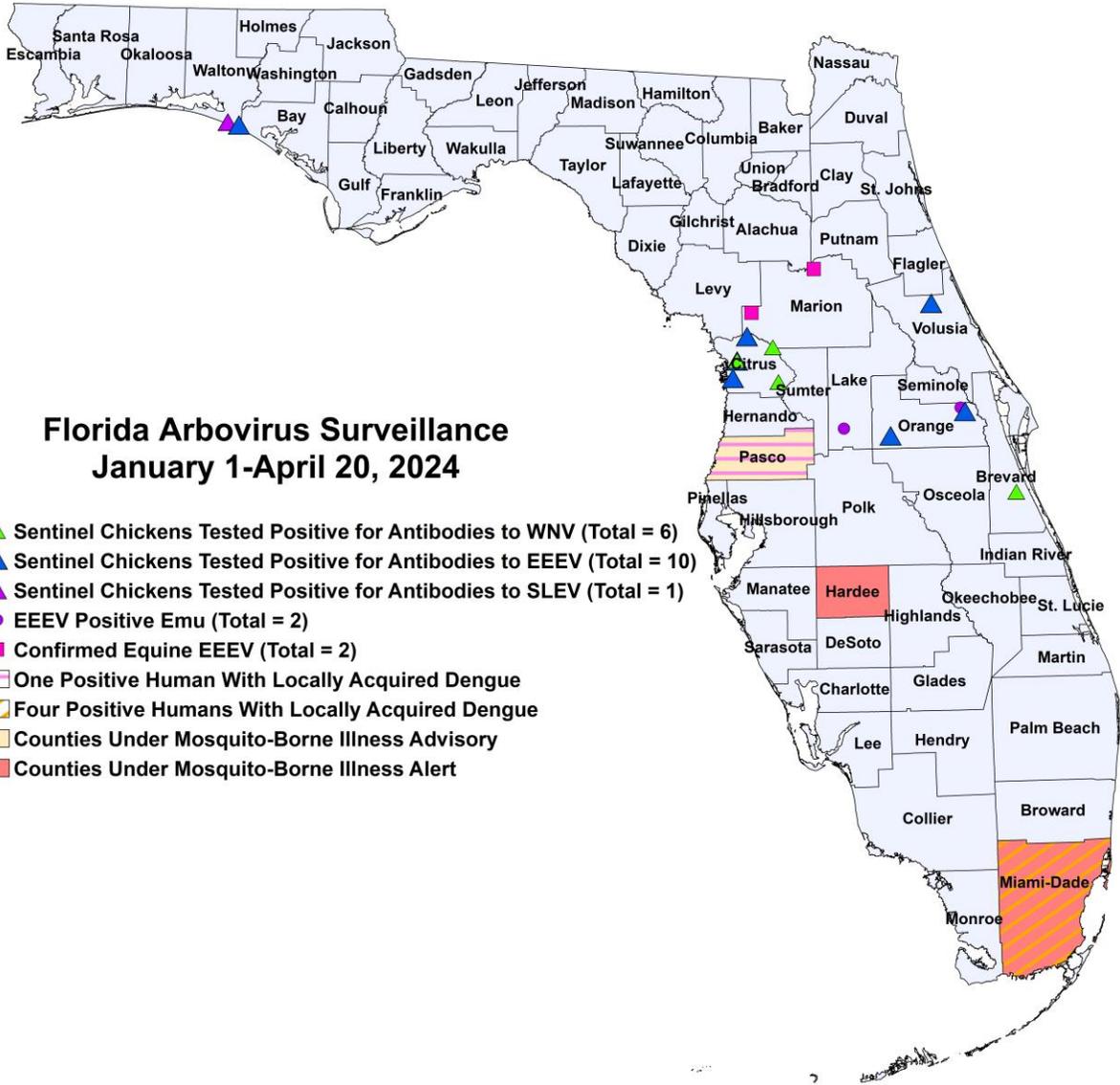
In 2024, 401 reports representing a total of 867 dead birds (31 crows, 5 jays, 51 raptors, 24 doves) were received from 46 of Florida's 67 counties.

### 2024

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Bay	2	0	0	0	0
Brevard	7	3	2	1	0
Broward	10	0	0	0	10
Charlotte	1	0	0	0	0
Citrus	1	0	0	1	0
Collier	2	1	0	0	0
Duval	1	0	0	1	0
Escambia	1	0	0	1	0
Flagler	2	2	0	0	0
Hillsborough	2	0	0	0	0
Lee	4	1	0	1	0
Leon	2	0	0	0	0
Manatee	3	0	0	0	0
Miami-Dade	1	0	0	0	1
Orange	2	0	0	0	0
Osceola	1	0	0	0	0
Palm Beach	1	0	0	1	0
Pasco	1	0	0	1	0
Pinellas	2	0	0	0	0
Sarasota	1	0	0	0	0
St. Johns	4	0	0	0	0

# Maps





## Florida Arbovirus Surveillance January 1-April 20, 2024

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 6)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 10)
- ▲ Sentinel Chickens Tested Positive for Antibodies to SLEV (Total = 1)
- EEEV Positive Emu (Total = 2)
- Confirmed Equine EEEV (Total = 2)
- ▭ One Positive Human With Locally Acquired Dengue
- ▭ Four 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) 5 EEEV (1/9, 1/15, 2/26, 3/11)	
<b>Lake</b>				1 EEEV emu (2/6)
<b>Marion</b>		1 EEEV (1/31, 3/29)		
<b>Miami-Dade</b>	4 dengue (January (2), February, March)			
<b>Orange</b>			2 EEEV (2/26, 3/25)	1 EEEV emu (3/16)
<b>Pasco</b>	1 dengue (January)			
<b>Volusia</b>			2 EEEV (1/22, 4/8)	
<b>Walton</b>			1 EEEV (3/25) 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](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.