



Florida Arbovirus Surveillance Week 28: July 7-13, 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 July 7-13, 2024, the following arboviral activity was recorded in Florida.

WNV activity: One human case of WNV infection was reported this week in Marion County. No horses with WNV infection were reported this week. Two sentinel chickens tested positive for antibodies to WNV this week in Walton County. No mosquito pools tested positive for WNV this week. In 2024, positive samples from one asymptomatic blood donor and 11 sentinel chickens have been reported from five 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, two sentinel chickens have been reported from two counties.

EEEV activity: No human cases of EEEV infection were reported this week. One horse with EEEV infection was reported this week in Madison County. No sentinel chickens tested positive for antibodies to EEEV this week. In 2024, positive samples from 39 sentinel chickens, 17 horses, two emus, and one emu flock have been reported from 24 counties.

International Travel-Associated Dengue: Eight cases of dengue were reported this week in persons that had international travel. In 2024, 260 travel-associated dengue cases have been reported.

Dengue Cases Acquired in Florida: Four cases of locally acquired dengue were reported this week. In 2024, 14 cases of locally acquired dengue have been reported from four counties.

International Travel-Associated Chikungunya Fever Cases: No cases of chikungunya fever were reported this week in persons that had international travel. In 2024, four 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: Holmes, Madison, Marion, Nassau, and Pasco counties are currently under a mosquito-borne illness advisory. Hillsborough, Miami-Dade and Monroe 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			Oropouche		Chikungunya	Yellow Fever
Africa and the Middle East	Americas	Asia and the Pacific Islands	Caribbean	South America	Asia	Africa
Afghanistan	Argentina	Cambodia	Cuba	Bolivia	Maldives	Nigeria
Burkina Faso	Brazil	Fiji		Brazil		
Ethiopia	Colombia	Indonesia		Colombia		
Mali	Costa Rica	Laos		Peru		
Mauritius	Curaçao	Samoa				
Sudan	Ecuador	Singapore				
	French Guiana	Sri Lanka				
	Guadeloupe					
	Guatemala					
	Guyana					
	Honduras					
	Martinique					
	Mexico					
	Nicaragua					
	Panama					
	Paraguay					
	Peru					
	Uruguay					

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

West Nile Virus Illnesses Acquired in Florida: In 2024, one asymptomatic positive blood donor was reported from Marion County (July).

2024 International Travel-Associated Chikungunya Cases: Four 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, Manatee, Orange, and Pinellas. Country of origin was Brazil (4).

2024 International Travel-Associated Dengue Cases: Two hundred and sixty 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 (40), Charlotte (2), Collier (2), Duval (6), Flagler, Hernando, Hillsborough (19), Lake, Lee (9), Miami-Dade (110), Monroe, Okaloosa, Orange (20), Osceola (11), Palm Beach (14), Pasco (2), Pinellas (3), Polk (4), Santa Rosa, Sarasota (2), Seminole, St. Lucie (3), and Volusia (2). Thirty-eight cases were reported in non-Florida residents. Three cases 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, 208 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	35	11	1			11	58
Brazil/Paraguay		1					1
Colombia	4	7	3	1		6	21
Costa Rica			3				3

Cuba		1	61	7	1	13	83
Dominican Republic			10			2	12
El Salvador	2						2
Guatemala			4				4
Guyana			3				3
Honduras			3		1	1	5
India	1						1
Indonesia		1				1	2
Jamaica		1				1	2
Maldives		1					1
Mexico	2	1	5				8
Netherlands Antilles		1					1
Nicaragua				1		2	3
Paraguay		3					3
Peru	2	2					4
Philippines						1	1
Puerto Rico	1	3	7			2	13
Saint Barthélemy		2				1	3
Trinidad and Tobago		1	3				4
US Virgin Islands						1	1
Venezuela			1			2	3
Total	51	42	104	9	2	52	260

2024 Dengue Cases Acquired in Florida: In 2024, 14 cases of locally acquired dengue have been reported in Hillsborough (2), Miami-Dade (9), Monroe (2), and Pasco counties with onset in January (3), February, March (2), April, and June (7). Twelve cases have been serotyped by PCR. Please see the table below for a breakdown of cases by county and serotype.

County of Exposure	DENV-1	DENV-3	Unknown	Total
Hillsborough	2			2
Miami-Dade		7	2	9
Monroe	2			2
Pasco		1		1
Total	4	8	2	14

2024 International Travel-Associated Malaria Cases: Twenty-eight 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: Brevard, Broward (3), Collier, Duval (3), Escambia, Hillsborough, Lee, Marion, Miami-Dade (3), Okaloosa, 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.

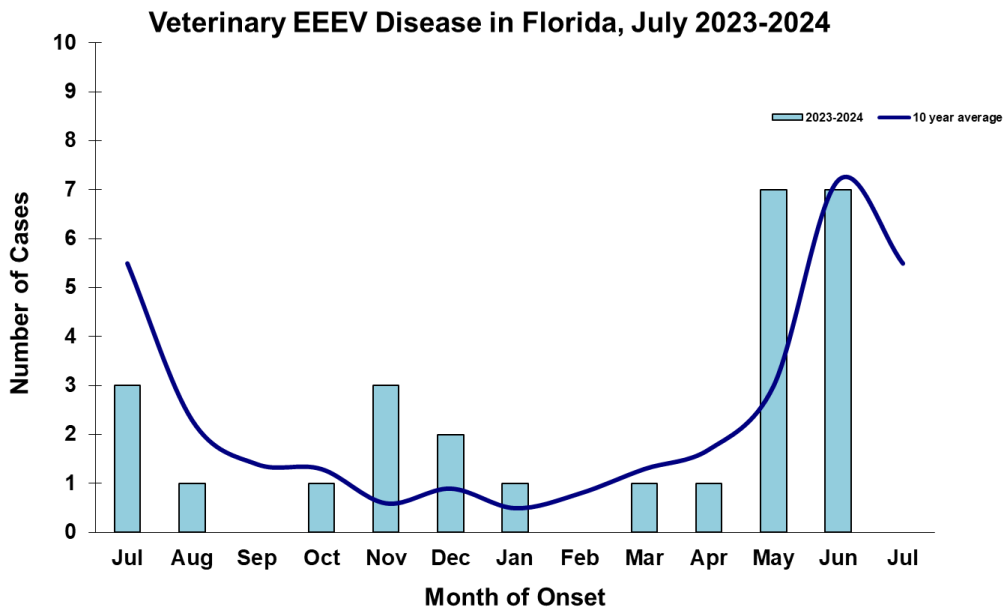
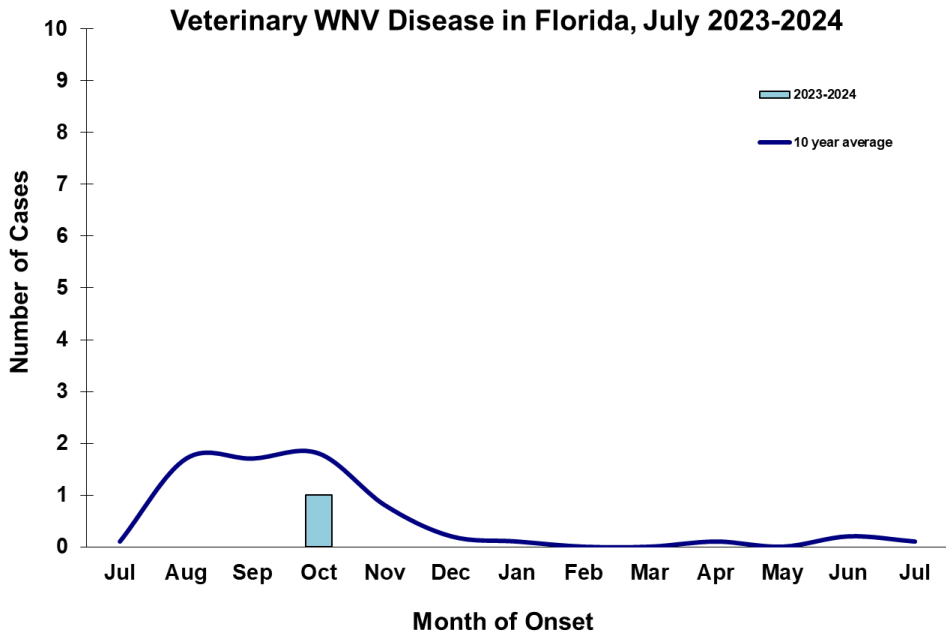
Country of Exposure	<i>Plasmodium falciparum</i>	<i>Plasmodium ovale</i>	<i>Plasmodium vivax</i>	Total
Africa	1			1
Angola	1			1
Benin	1			1
Cameroon	1			1
Central/South America			6	6
Chad	1			1
Ecuador			1	1
Ethiopia			1	1
Gabon	1			1
Ghana	1			1
Honduras			1	1
Kenya	1			1
Malawi	1			1
Mexico			2	2
Nicaragua			1	1
Nigeria	3			3
Republic of the Congo		1		1
Sierra Leone	1			1

Solomon Islands			1	1
Uganda/Rwanda	1			1
Total	14	1	13	28

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 Madison County.



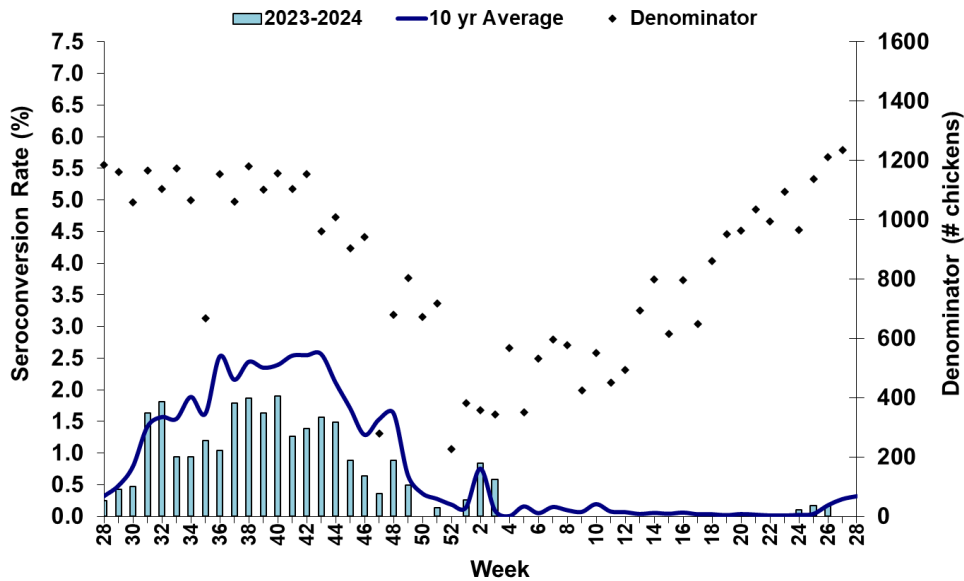
Sentinel Chickens

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.

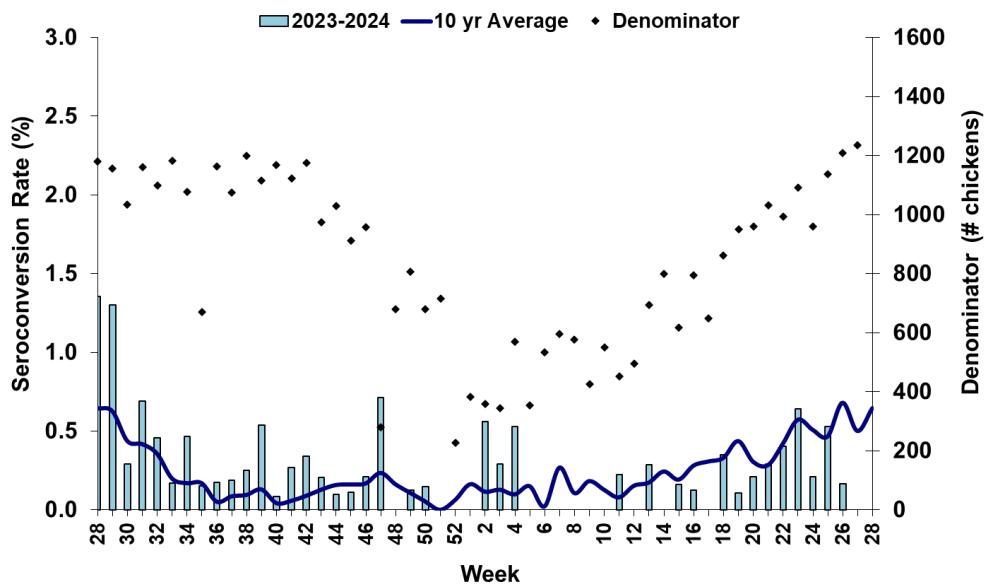
Two sentinel chickens tested positive for antibodies to WNV this week in Walton County.

County	Collection Date	Seroconversion Rates (%)						County Totals	
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Walton	5/20/2024	4.17		4.17				2 WNV	14 EEEV, 1 SLEV, 1 Alphavirus, 2 WNV

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.

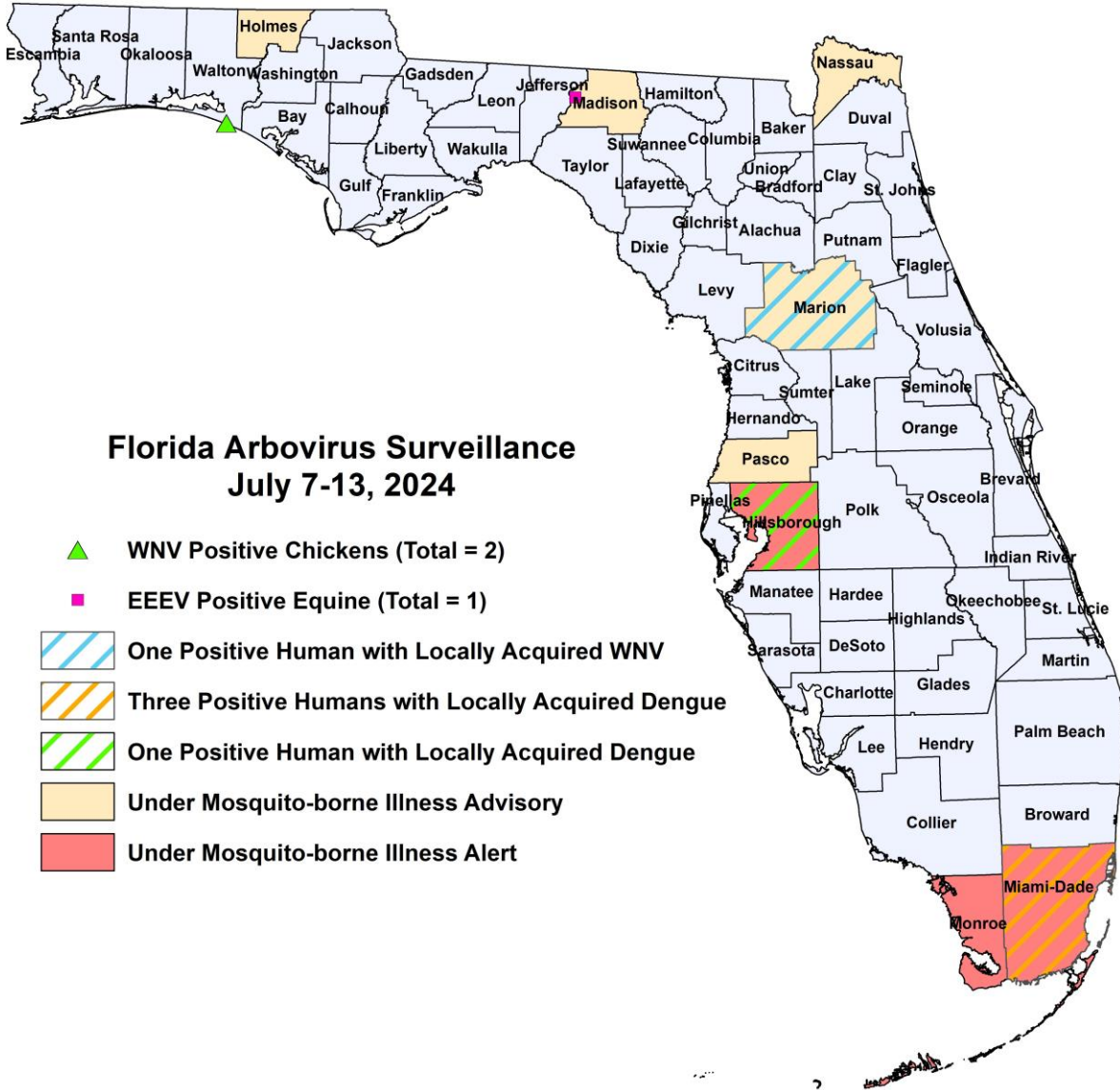
Due to technical difficulties dead bird reports were unavailable this week and will be updated when available.

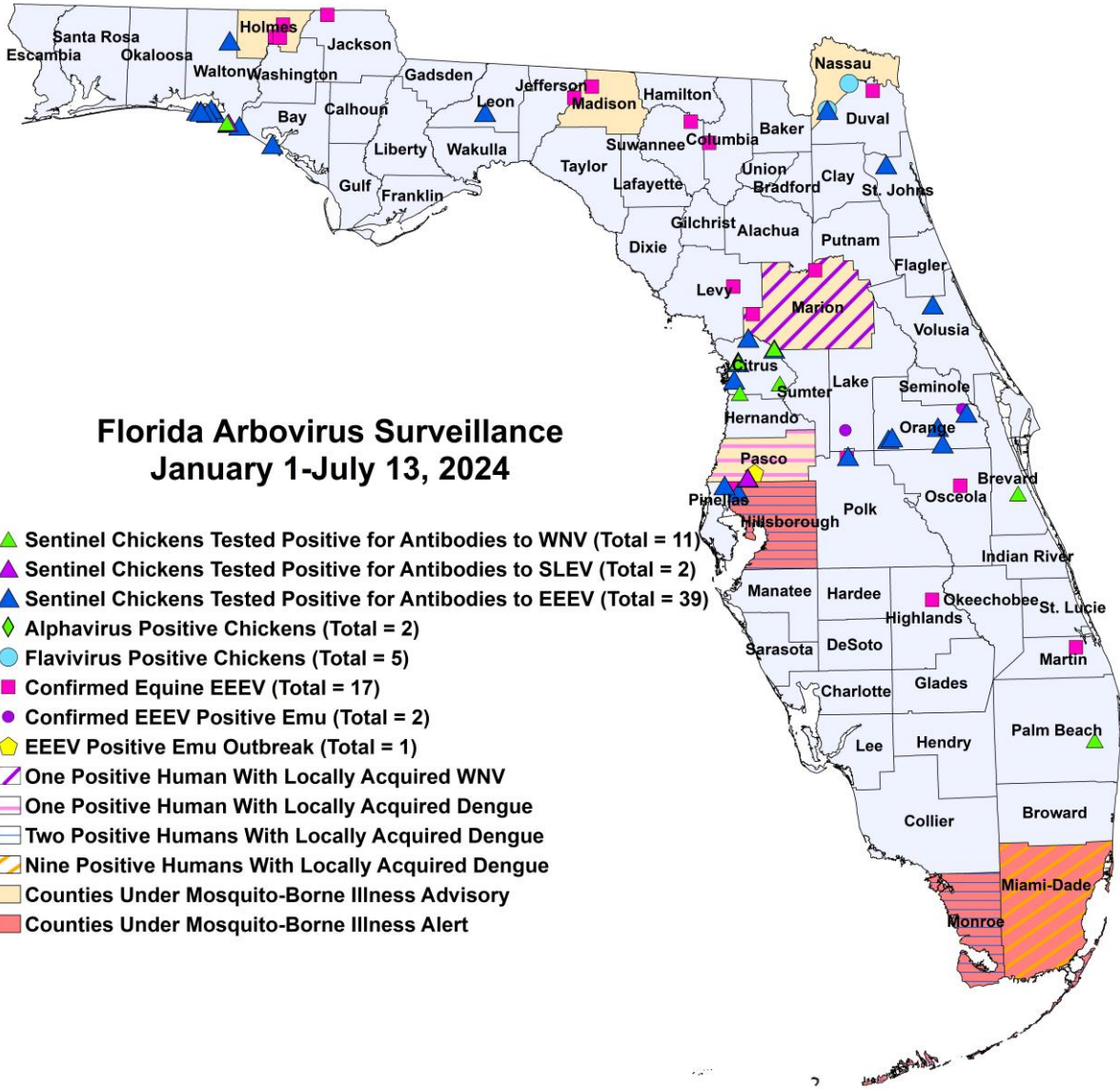
In 2024, 653 reports representing a total of 1390 dead birds (51 crows, 15 jays, 94 raptors, 66 doves) were received from 48 of Florida's 67 counties.

2024

County	Total Dead Birds	Crows	Jays	Raptors	Doves
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Maps





Florida Arbovirus Surveillance January 1-July 13, 2024

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 11)
- ▲ Sentinel Chickens Tested Positive for Antibodies to SLEV (Total = 2)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 39)
- ◆ Alphavirus Positive Chickens (Total = 2)
- Flavivirus Positive Chickens (Total = 5)
- Confirmed Equine EEEV (Total = 17)
- Confirmed EEEV Positive Emu (Total = 2)
- ◆ EEEV Positive Emu Outbreak (Total = 1)
- One Positive Human With Locally Acquired WNV
- One Positive Human With Locally Acquired Dengue
- Two Positive Humans With Locally Acquired Dengue
- Nine 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
Bay			2 EEEV (5/28, 6/10)	
Brevard			1 WNV (1/3)	
Citrus			7 WNV (1/9, 1/15, 6/25) 6 EEEV (1/9, 1/15, 2/26, 3/11, 5/20) 1 Alphavirus (5/20)	
Columbia		1 EEEV (6/16)		
Duval		1 EEEV (5/25)		
Highlands		1 EEEV (5/25)		
Hillsborough	2 dengue (June)	1 EEEV (5/26)	1 EEEV (6/3)	
Holmes		3 EEEV (6/16, 6/19)		
Jackson		1 EEEV (5/30)		
Lake				1 EEEV emu (2/6)
Leon			1 EEEV (6/18)	
Levy		1 EEEV (5/21)		
Madison		2 EEEV (6/20, 6/29)		

County	Humans	Equines	Sentinel Chickens	Other
Marion	1 asymptomatic blood donor (July)	2 EEEV (1/31, 3/29)		
Martin		1 EEEV (5/27)		
Miami-Dade	9 dengue (January (2), February, March (2), April, June (3))			
Monroe	2 dengue (June (2))			
Nassau			3 EEEV (5/3) 5 Flavivirus (5/3, 5/18, 5/23)	
Orange			5 EEEV (2/26, 3/25, 5/6, 5/28, 6/3)	1 EEEV emu (3/16)
Osceola		1 EEEV (5/2)		
Palm Beach			1 WNV (3/18)	
Pasco	1 dengue (January)		1 EEEV (5/13) 1 SLEV (6/10)	1 EEEV emu flock outbreak (4/22 for first emu)
Pinellas			2 EEEV (5/20, 5/28)	
Polk		1 EEEV (4/9)	1 EEEV (6/10)	
St. Johns			1 EEEV (6/3)	
Suwannee		1 EEEV (6/3)		
Volusia			2 EEEV (1/22, 4/8)	
Walton			14 EEEV (3/25, 4/15, 5/13, 5/28, 6/3, 6/4, 6/17, 6/24) 1 SLEV (4/1) 1 Alphavirus (6/3) 2 WNV (6/17)	

Acknowledgements and Data Sources

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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.