



Florida Arbovirus Surveillance Week 32: August 4-10, 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 August 4-10, 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. Sixteen sentinel chickens tested positive for antibodies to WNV this week in Alachua, Brevard, Citrus, Duval, Pinellas, Polk, Sarasota, Volusia, and Walton counties. No mosquito pools tested positive for WNV this week. In 2024, positive samples from two humans, two asymptomatic blood donors, and 49 sentinel chickens have been reported from 13 counties.

SLEV activity: No human cases of SLEV infection were reported this week. One sentinel chicken tested positive for antibodies to SLEV this week in Walton County. In 2024, four sentinel chickens have been reported from three counties.

EEEV activity: No human cases of EEEV infection were reported this week. Two horses with EEEV infection were reported this week in Madison and Lake counties. Two sentinel chickens tested positive for antibodies to EEEV this week in Orange and St. Johns counties. In 2024, positive samples from 43 sentinel chickens, 21 horses, two emus, and one emu flock have been reported from 25 counties.

International Travel-Associated Dengue: Fifteen cases of dengue were reported this week in persons that had international travel. In 2024, 334 travel-associated dengue cases have been reported.

Dengue Cases Acquired in Florida: No cases of locally acquired dengue were reported this week. In 2024, 18 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, five 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 Oropouche Fever cases: Nine cases of Oropouche fever were reported this week in persons that had international travel. In 2024, 11 travel-associated Oropouche fever cases 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: Alachua, Bay, Duval, Holmes, Madison, Nassau, Pasco, and Walton counties are currently under a mosquito-borne illness advisory. Hillsborough, Marion, 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, two human cases of WNV illness acquired in Florida have been reported in Duval (July) and Marion (July) counties. Two asymptomatic positive blood donors were reported from Marion (July) and Walton (July) counties.

2024 International Travel-Associated Chikungunya Cases: Five 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 (2), Manatee, Orange, and Pinellas. Country of origin was Brazil (5).

2024 International Travel-Associated Oropouche Cases: Eleven cases with onset in 2024 have been reported in individuals with travel history to an Oropouche-endemic area in the two weeks prior to onset. Counties reporting cases were: Hillsborough (4), Lee (2), Miami-Dade, Orange (2), and Polk (2). Country of origin was Cuba (11).

2024 International Travel-Associated Dengue Cases: Three hundred and thirty-four 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 (5), Broward (49), Charlotte (2), Collier (4), Duval (6), Escambia (2), Flagler, Hernando, Hillsborough (25), Indian River, Lake (3), Lee (11), Manatee, Marion, Miami-Dade (144), Monroe, Okaloosa, Orange (24), Osceola (12), Palm Beach (16), Pasco (3), Pinellas (3), Polk (5), Santa Rosa, Sarasota (4), Seminole, St. Lucie (3), and Volusia (3). Forty-one cases were reported in non-Florida residents. Six 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, 265 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	DENV-3/DENV-4	Unknown	Total
Argentina	3	4					6	13
Barbados	1	1					2	4
Barbados/ Trinidad and Tobago		1						1
Brazil	37	12	1				11	61
Brazil/Paraguay		1						1
Colombia	4	9	4	1			6	24
Colombia/Panama							1	1
Costa Rica			4	1				5
Cuba		1	80	13	1	1	18	114
Dominican Republic			11				4	15
El Salvador	2		3					5
Guatemala			6				3	9
Guyana			3					3
Honduras			7		1		3	11
India	1							1
Indonesia		1					1	2
Jamaica		1					1	2
Maldives		1						1
Mexico	2	1	7				1	11
Netherlands Antilles		1						1
Nicaragua			1	1			2	4
Paraguay		3						3
Peru	2	2						4
Philippines							1	1
Puerto Rico	1	5	9				4	19
Saint Barthélemy		2					1	3
Surinam		1						1
Trinidad and Tobago		1	5				1	7
US Virgin Islands		1					1	2
Venezuela			3				2	5
Total	53	49	144	16	2	1	69	334

2024 Dengue Cases Acquired in Florida: In 2024, 18 cases of locally acquired dengue have been reported in Hillsborough (2), Miami-Dade (12), Monroe (3), and Pasco counties with onset in January (3), February, March (2), April, June (10) and July. Fifteen 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		10	2	12
Monroe	2		1	3
Pasco		1		1
Total	4	11	3	18

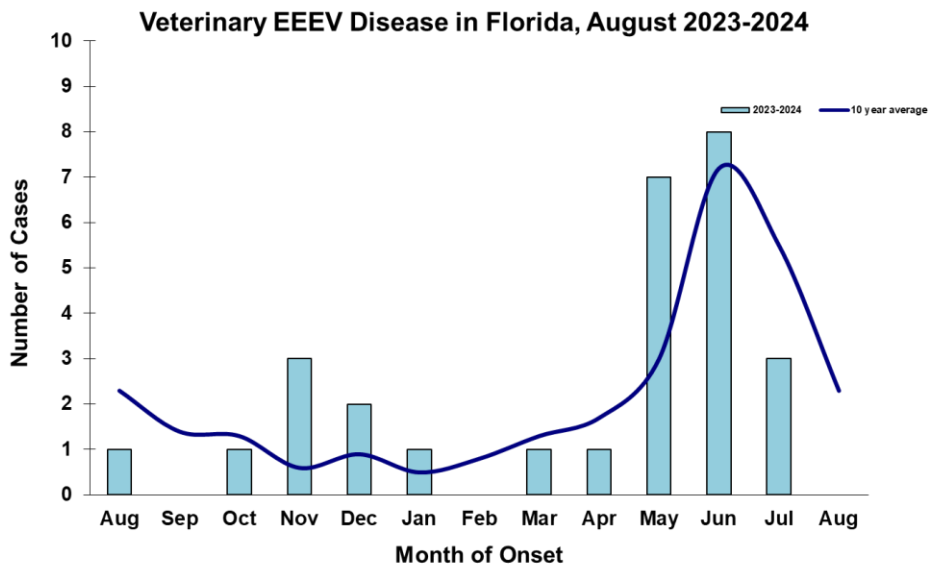
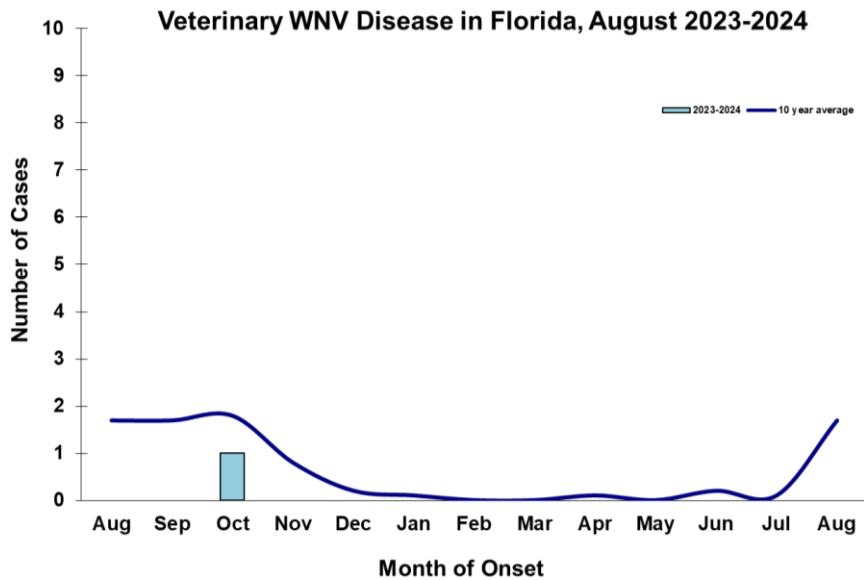
2024 International Travel-Associated Malaria Cases: Thirty-one cases of malaria with onset in 2024 have been reported in individuals with a travel history to a malaria-endemic area. Counties reporting cases were: Brevard, Broward (3), Clay, Collier, Duval (3), Escambia, Hillsborough, Indian River, Lee, Marion, Miami-Dade (3), Okaloosa, Orange (5), Osceola (2), Palm Beach, Pinellas (2), Polk, Sarasota, and Seminole. Two cases were reported in non-Florida residents. 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			7	7
Chad	1			1

Ecuador			1	1
Ethiopia			1	1
Gabon	1		1	2
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
Tanzania	1			1
Uganda/Rwanda	1			1
Total	15	1	15	31

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 Madison and Lake counties.



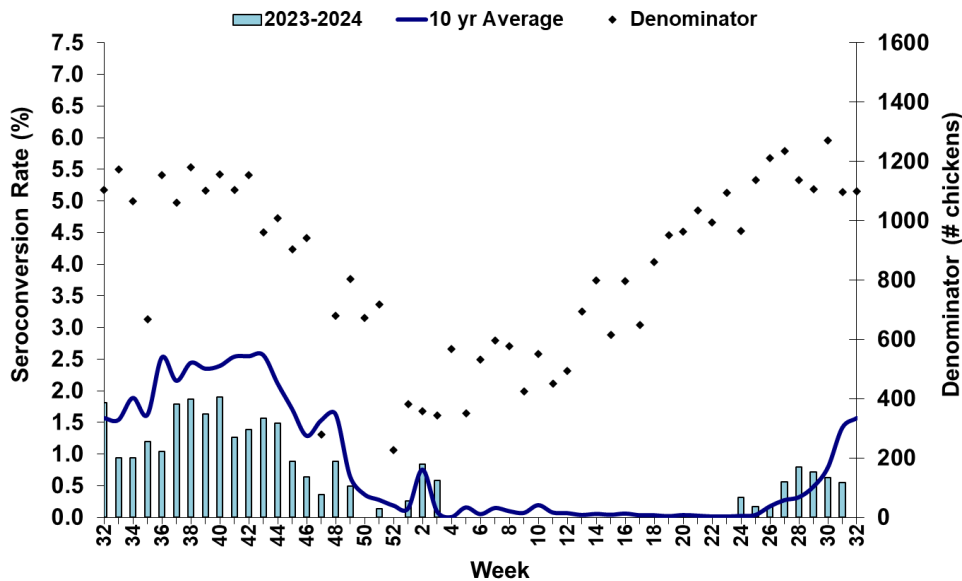
Sentinel Chickens

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.

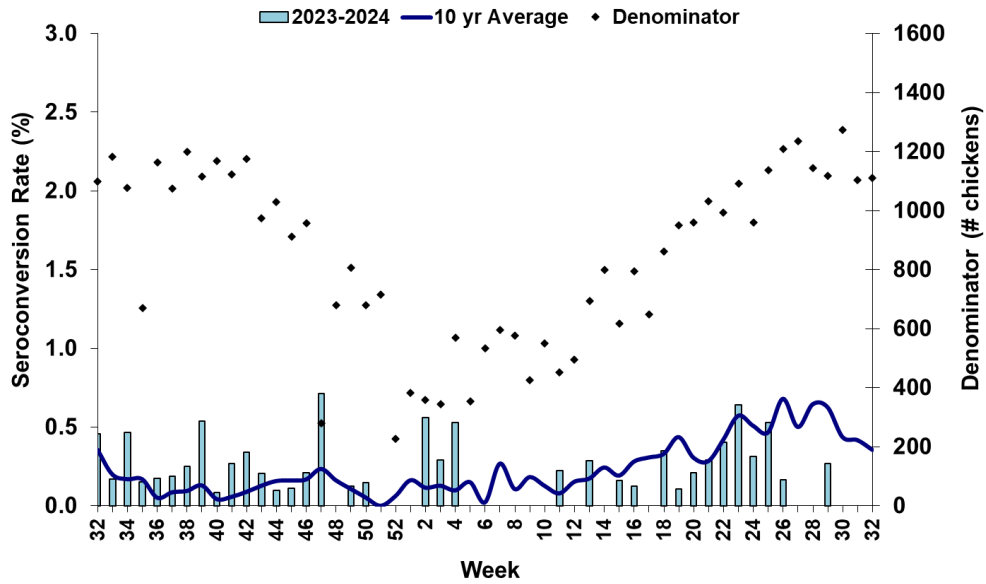
Sixteen sentinel chickens tested positive for antibodies to WNV this week in Alachua, Brevard, Citrus, Duval, Pinellas, Polk, Sarasota, Volusia, and Walton counties. One sentinel chicken tested positive for antibodies to SLEV this week in Walton County. Two sentinel chickens tested positive for antibodies to EEEV this week in Orange and St. Johns counties.

County	Collection Date	Seroconversion Rates (%)						County Totals	
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Alachua	7/2/2024	5.56		5.56				1 WNV	1 WNV
Brevard	7/26/2024	1.39		1.39				1 WNV	2 WNV
Citrus	7/8/2024	1.56		1.56				1 WNV	8 WNV, 6 EEEV, 1 Alphavirus
Duval	7/15/2024	7.41		7.41				2 WNV	4 WNV
Orange	7/15/2024				0.85	0.85		1 EEE	6 EEEV
Pinellas	7/29/2024	1.79		1.79				1 WNV	2 EEEV, 1 WNV
Polk	7/29/2024	2.13		2.13				1 WNV	1 EEEV, 3 WNV
Sarasota	7/26/2024	1.39		1.39				1 WNV	1 WNV
St. Johns	6/10/2024				3.45	3.45		1 EEE	2 EEEV
Volusia	7/8/2024	2.08		2.08				1 WNV	2 EEEV, 3 WNV
	7/29/2024	2.13		2.13				1 WNV	
Walton	7/8/2024	2.63		2.63				1 WNV	16 EEEV, 2 SLEV, 1 Alphavirus, 23 WNV
	7/15/2024	7.69		7.69				3 WNV	
	7/29/2024	3.57	1.19	2.38				2 WNV, 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

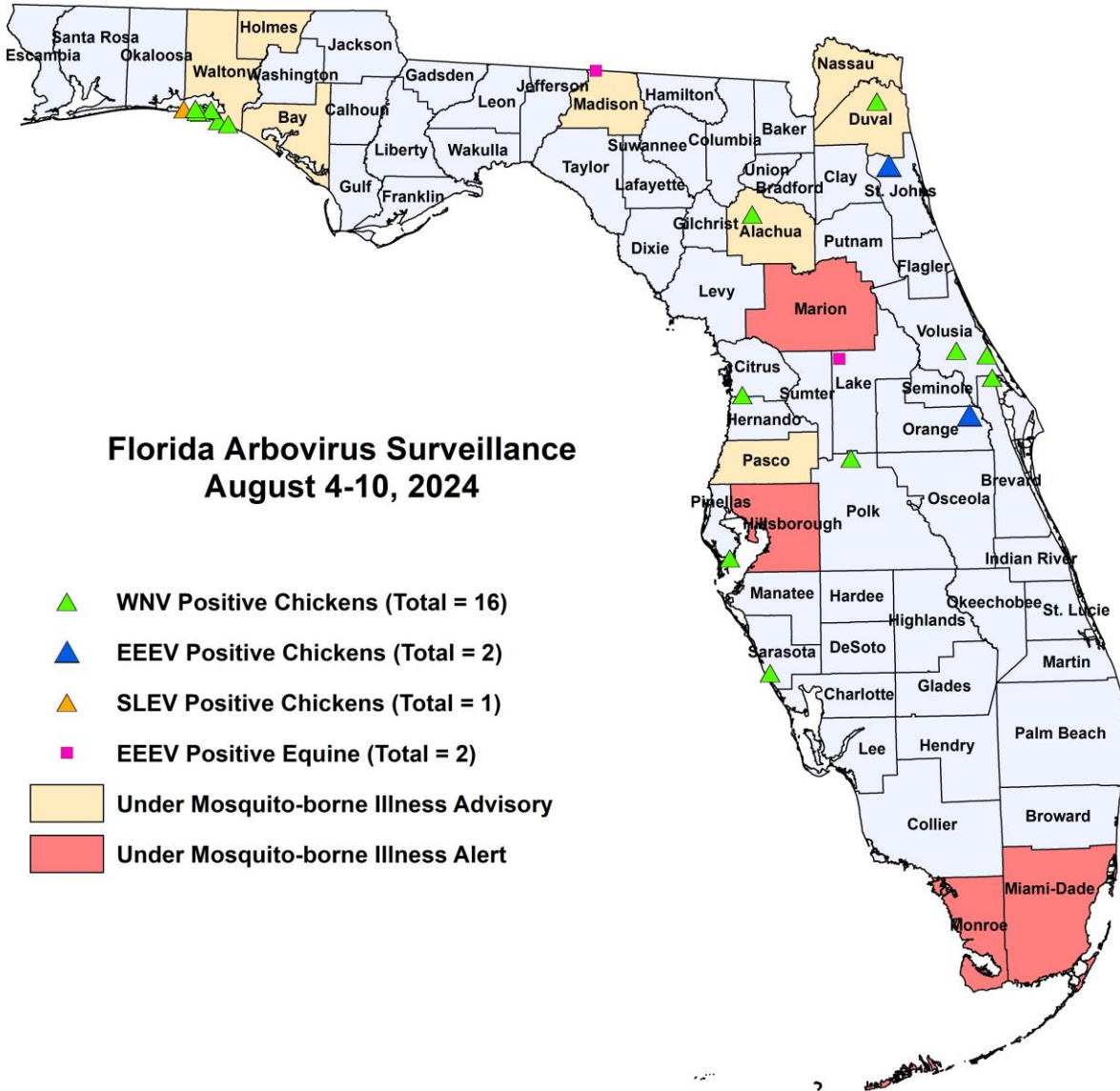
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, nine reports representing a total of 11 dead birds, including one jay, two raptors and four doves, were received from eight counties.

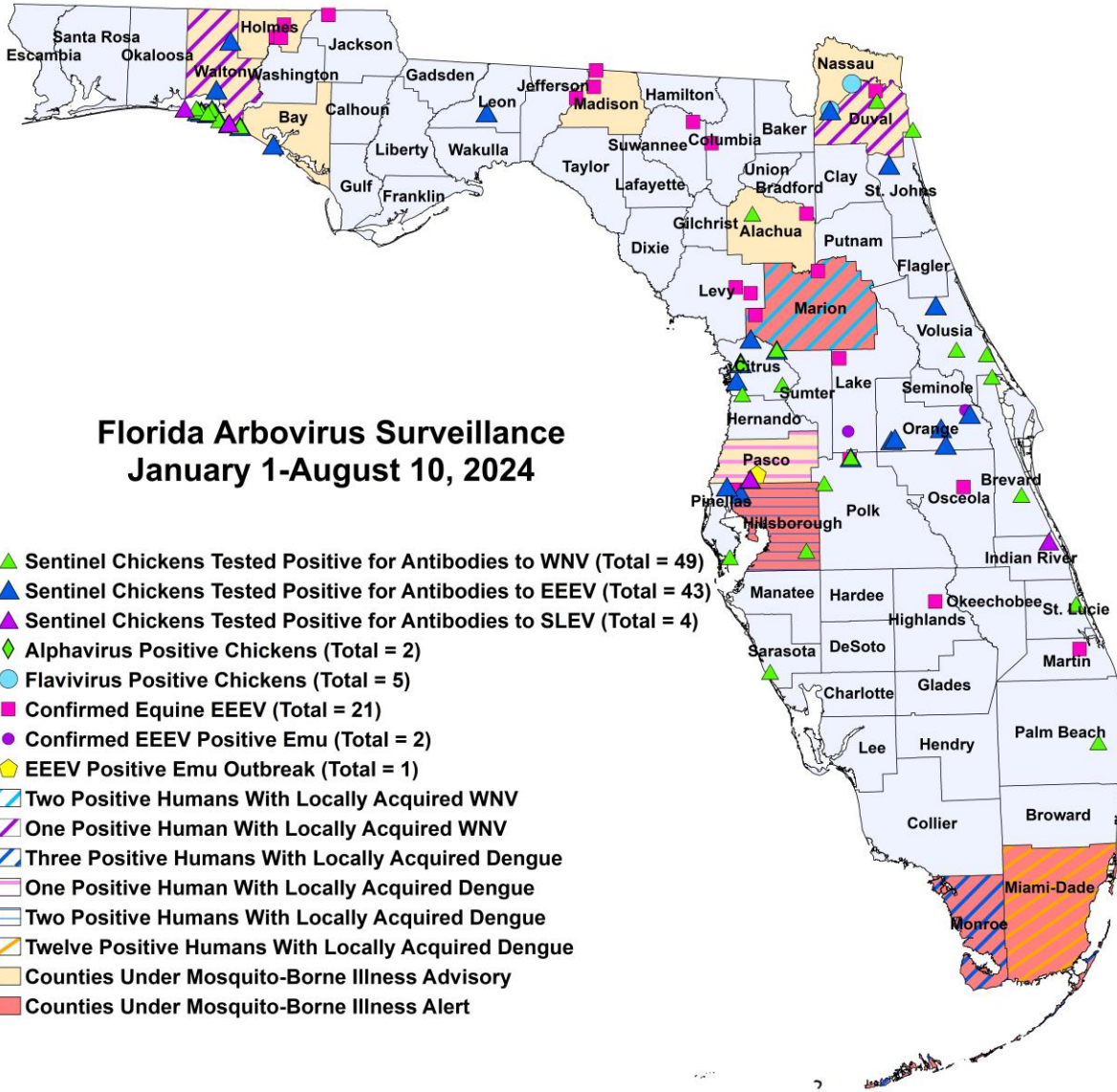
In 2024, 729 reports representing a total of 1588 dead birds (56 crows, 20 jays, 105 raptors, 86 doves) were received from 50 of Florida’s 67 counties.

2024

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Broward	3	0	0	0	3
Collier	1	0	0	0	1
Hernando	1	0	0	1	0
Lafayette	1	0	0	1	0
Manatee	1	0	0	0	0
Pinellas	2	0	0	0	0
St. Lucie	1	0	0	0	0
Volusia	1	0	1	0	0

Maps





Florida Arbovirus Surveillance January 1-August 10, 2024

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 49)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 43)
- ▲ Sentinel Chickens Tested Positive for Antibodies to SLEV (Total = 4)
- ◆ Alphavirus Positive Chickens (Total = 2)
- Flavivirus Positive Chickens (Total = 5)
- Confirmed Equine EEEV (Total = 21)
- Confirmed EEEV Positive Emu (Total = 2)
- ◆ EEEV Positive Emu Outbreak (Total = 1)
- ▨ Two Positive Humans With Locally Acquired WNV
- ▨ One Positive Human With Locally Acquired WNV
- ▨ Three Positive Humans With Locally Acquired Dengue
- ▨ One Positive Human With Locally Acquired Dengue
- ▨ Two Positive Humans With Locally Acquired Dengue
- ▨ Twelve 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
Alachua		1 EEEV (6/21)	1 WNV (7/2)	
Bay			2 EEEV (5/28, 6/10)	
Brevard			2 WNV (1/3, 7/26)	
Citrus			8 WNV (1/9, 1/15, 6/25, 7/8) 6 EEEV (1/9, 1/15, 2/26, 3/11, 5/20) 1 Alphavirus (5/20)	
Columbia		1 EEEV (6/16)		
Duval	1 WNV (July)	1 EEEV (5/25)	4 WNV (7/8, 7/15)	
Highlands		1 EEEV (5/25)		
Hillsborough	2 dengue (June)	1 EEEV (5/26)	1 EEEV (6/3) 1 WNV (6/10)	
Holmes		3 EEEV (6/16, 6/19)		
Indian River			1 SLEV (7/18)	
Jackson		1 EEEV (5/30)		
Lake		1 EEEV (7/31)		1 EEEV emu (2/6)

County	Humans	Equines	Sentinel Chickens	Other
Leon			1 EEEV (6/18)	
Levy		2 EEEV (5/21, 7/4)		
Madison		3 EEEV (6/20, 6/29, 7/24)		
Marion	1 asymptomatic WNV blood donor (July) 1 WNV (July)	2 EEEV (1/31, 3/29)		
Martin		1 EEEV (5/27)		
Miami-Dade	12 dengue (January (2), February, March (2), April, June (5), July)			
Monroe	3 dengue (June (3))			
Nassau			3 EEEV (5/3) 5 Flavivirus (5/3, 5/18, 5/23)	
Orange			6 EEEV (2/26, 3/25, 5/6, 5/28, 6/3, 7/15)	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) 1 WNV (7/29)	
Polk		1 EEEV (4/9)	1 EEEV (6/10) 3 WNV (6/10, 7/22, 7/29)	
Sarasota			1 WNV (7/26)	
St. Johns			2 EEEV (6/3, 6/10)	
St. Lucie			1 WNV (7/2)	
Suwannee		1 EEEV (6/3)		
Volusia			2 EEEV (1/22, 4/8) 3 WNV (7/8, 7/22, 7/29)	
Walton	1 asymptomatic WNV blood donor (July)		16 EEEV (3/25, 4/15, 5/13, 5/28, 6/3, 6/4, 6/17, 6/24, 7/15, 7/16) 2 SLEV (4/1, 7/29) 1 Alphavirus (6/3) 23 WNV (6/17, 7/1, 7/8, 7/15, 7/22, 7/29)	

Acknowledgements and Data Sources

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