



Florida Arbovirus Surveillance Week 37: September 8-14, 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 September 8-14, 2024, the following arboviral activity was recorded in Florida.

WNV activity: One human case of WNV infection was reported this week in Bay County. One horse with WNV infection was reported this week in Marion County. Twenty-seven sentinel chickens tested positive for antibodies to WNV this week in Brevard, Citrus, Hillsborough, Orange, Pasco, Pinellas, Polk, Sarasota, St. Johns, Volusia, and Walton counties. No mosquito pools tested positive for WNV this week. In 2024, positive samples from four humans, five asymptomatic blood donors, two horses, one goose, and 188 sentinel chickens have been reported from 23 counties.

SLEV activity: No human cases of SLEV infection were reported this week. Three sentinel chickens tested positive for antibodies to SLEV this week in Nassau and Polk counties. In 2024, 21 sentinel chickens have been reported from 11 counties.

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 Orange County. In 2024, positive samples from 50 sentinel chickens, 21 horses, two emus, and one emu flock have been reported from 26 counties.

International Travel-Associated Dengue: Thirty-six cases of dengue were reported this week in persons that had international travel. In 2024, 515 travel-associated dengue cases have been reported.

Dengue Cases Acquired in Florida: Four cases of locally acquired dengue were reported this week. In 2024, 35 cases of locally acquired dengue have been reported from seven counties.

International Travel-Associated Chikungunya Fever Cases: One case of chikungunya fever was reported this week in a person that had international travel. In 2024, seven 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: Twenty-two cases of Oropouche fever were reported this week in persons that had international travel. In 2024, 70 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, Holmes, Madison, Mantatee, Nassau, Orange, Palm Beach, Pinellas, Sarasota, and Volusia counties are currently under a mosquito-borne illness advisory. Duval, Hillsborough, Marion, Miami-Dade, Monroe, Pasco, and Walton 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		Yellow Fever	Zika
Africa and the Middle East	Americas	Asia and the Pacific Islands	Caribbean	South America	Africa	Asia
Afghanistan	Brazil	French Polynesia	Cuba	Bolivia	Nigeria	India
Iran	Colombia	Laos		Brazil		
Burkina Faso	Costa Rica	Samoa		Colombia		
Cape Verde	Cuba	Singapore		Peru		
Ghana	Ecuador	Sri Lanka				
Mali	El Salvador					
Mauritius	French Guiana					
Sudan	Guatemala					
	Guyana					
	Honduras					
	Mexico					
	Panama					
	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, four human cases of WNV illness acquired in Florida have been reported in Bay (August), Duval (July), Marion (July), and Walton (July) counties. Five asymptomatic positive blood donors were reported from Duval (August), Manatee (August), Marion (July), and Walton (July, August) counties.

2024 International Travel-Associated Chikungunya Cases: Seven 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, Miami-Dade, Orange, Pinellas, and Hillsborough. Countries of origin were: Brazil (5) and India (2). Two cases were reported in non-Florida residents.

2024 International Travel-Associated Oropouche Cases: Seventy 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: Broward (3), Duval, Hillsborough (11), Lee (4), Miami-Dade (41), Orange (2), Palm Beach (2), Pasco (2), Polk (2), Sarasota, and St. Lucie. Country of origin was Cuba (70).

2024 International Travel-Associated Dengue Cases: Five hundred fifteen 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 (6), Broward (69), Charlotte (2), Collier (6), Columbia, Duval (7), Escambia (2), Flagler, Hendry, Hernando, Hillsborough (33), Indian River, Lake (3), Lee (16), Levy (2), Manatee, Marion (4), Martin, Miami-Dade (233), Monroe (4), Okaloosa, Okeechobee (2), Orange (29), Osceola (16), Palm Beach (32), Pasco (6), Pinellas (3), Polk (12), Santa Rosa (2), Sarasota (4), Seminole (4), St. Lucie (5), and Volusia (4). Forty-nine 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, 421 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				7	14
Barbados	1	1				2	4
Barbados/Trinidad and Tobago		1					1
Brazil	36	12	1			12	61
Brazil/Paraguay		1					1

Colombia	5	10	6	1		7	29
Colombia/Panama						1	1
Costa Rica			4	1			5
Cuba		1	125	52	1	27	206
Dominican Republic			12			4	16
El Salvador	2		7			1	10
Grenada		1					1
Guatemala			11			3	14
Guyana			3				3
Honduras			24		1	5	30
India	2					1	3
Indonesia		1				1	2
Jamaica		1				1	2
Maldives		1					1
Mexico	2	2	13	1		2	20
Netherlands Antilles		1					1
Nicaragua	1		1	1		2	5
Panama			1				1
Paraguay		3					3
Peru	2	2	1				5
Philippines				1		1	2
Puerto Rico	7	7	13			6	33
Puerto Rico/US Virgin Islands			1				1
Saint Barthélemy		2				1	3
Surinam		1					1
Trinidad and Tobago		2	17			5	24
US Virgin Islands		3				1	4
Venezuela			4			4	8
Total	61	57	244	57	2	94	515

2024 Dengue Cases Acquired in Florida: In 2024, 35 cases of locally acquired dengue have been reported in Hillsborough (3), Manatee, Miami-Dade (22), Monroe (3), Orange (2), Palm Beach, and Pasco (3) counties with onset in January (3), February, March (2), April, June (11), July (7) and August (10). One case was reported in a non-Florida resident. Thirty-one 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	1		3
Manatee		1		1
Miami-Dade		20	2	22
Monroe	2		1	3
Orange		2		2
Palm Beach			1	1
Pasco		3		3
Total	4	27	4	35

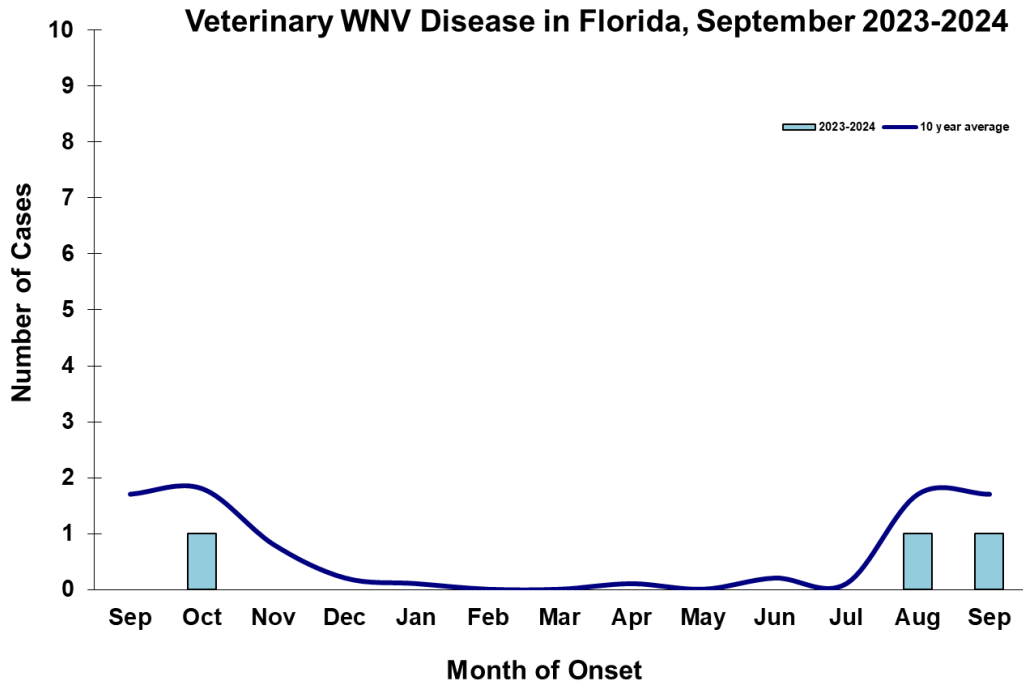
2024 International Travel-Associated Malaria Cases: Fifty-five cases of malaria with onset in 2024 have been reported in individuals with a travel history to a malaria-endemic area. Counties reporting cases were: Alachua (2), Brevard (2), Broward (7), Clay, Collier, Duval (4), Escambia, Hillsborough (6), Indian River, Lee (2), Leon, Marion, Miami-Dade (3), Okaloosa, Orange (8), Osceola (2), Palm Beach (2), Pasco (2), Pinellas (4), Polk, Sarasota, Seminole, and Volusia. Six 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	2			2
Central/South America			9	9

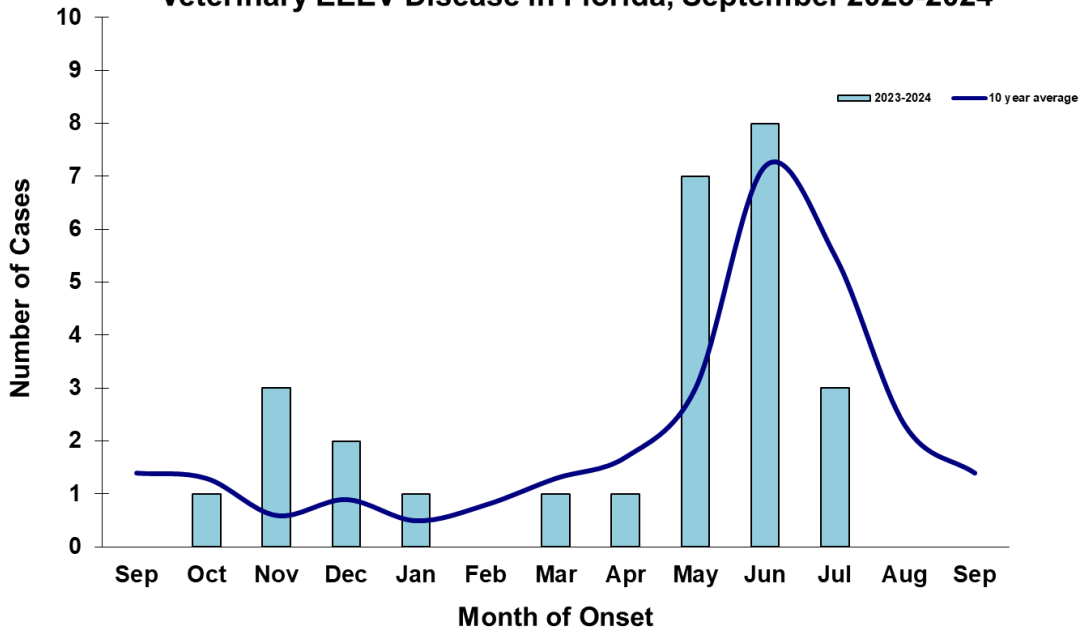
Chad	1			1
Côte D'Ivoire	2			2
Ecuador			1	1
Ethiopia	1		1	2
Gabon	1		1	2
Ghana	3			3
Honduras			1	1
Kenya	1			1
Malawi	2			2
Mexico			2	2
Nicaragua			1	1
Nigeria	15			15
Republic of the Congo		1		1
Sierra Leone	1			1
Solomon Islands			1	1
Sudan	1			1
Tanzania	2			2
Togo	1			1
Uganda/Rwanda	1			1
Total	37	1	17	55

Veterinary Cases**

**Veterinary cases are reported by date of onset. Only mammalian veterinary cases are included in the graphs. One horse with WNV infection was reported this week in Marion County.



Veterinary EEEV Disease in Florida, September 2023-2024



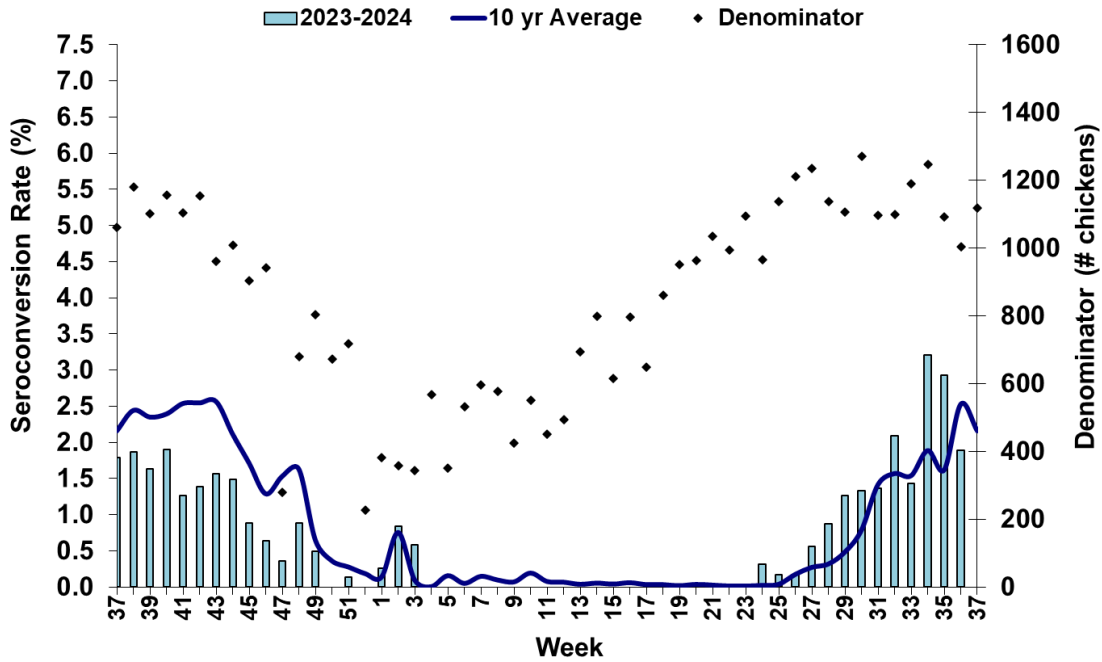
Sentinel Chickens

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.

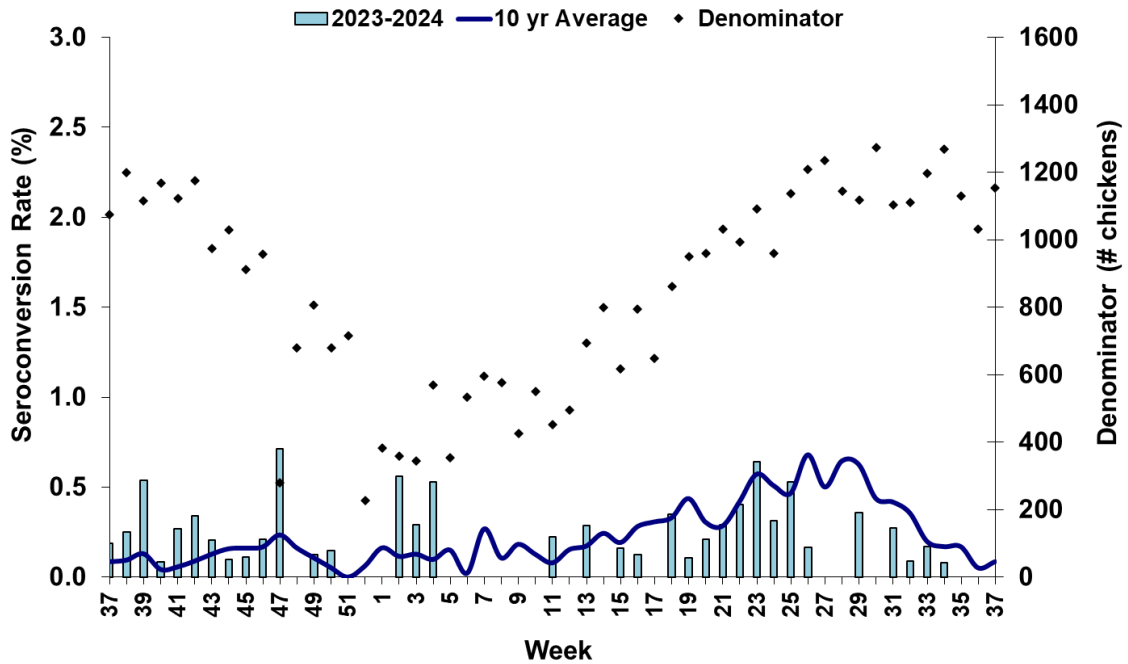
Twenty-seven sentinel chickens tested positive for antibodies to WNV this week in Brevard, Citrus, Hillsborough, Orange, Pasco, Pinellas, Polk, Sarasota, St. Johns, Volusia, and Walton counties. Three sentinel chicken tested positive for antibodies to SLEV this week in Nassau and Polk counties. One sentinel chicken tested positive for antibodies to EEEV this week in Orange County.

County	Collection Date	Seroconversion Rates (%)						County Totals	
		Flavi	SLEV	WNV	Alpha	EEEV	HJV	Collection Week	YTD
Brevard	8/28 - 8/30/2024	4.62		4.62				3 WNV	10 WNV, 1 SLEV
Citrus	8/19/2024	1.52		1.52				1 WNV	9 WNV, 6 EEEV, 1 Alphavirus, 1 SLEV
Hillsborough	9/3/2024	2.08		2.08				1 WNV	1 EEEV, 4 WNV
Nassau	8/23/2024	5.56	5.56					2 SLEV	3 EEEV, 5 Flavivirus, 4 WNV, 2 SLEV
Orange	8/19/2024				0.87	0.87		1 EEEV	9 EEEV, 14 WNV, 1 SLEV
	9/3/2024	2.83		2.83				3 WNV	
Pasco	8/19/2024	1.69		1.69				1 WNV	1 EEEV, 4 SLEV, 9 WNV
	9/3/2024	9.62		9.62				5 WNV	
Pinellas	9/3/2024	7.89		7.89				3 WNV	2 EEEV, 19 WNV
Polk	9/3/2024	5.13	2.56	2.56				1 WNV, 1 SLEV	1 EEEV, 13 WNV, 1 SLEV
Sarasota	9/2/2024	2.99		2.99				2 WNV	7 WNV, 1 SLEV
St. Johns	8/19/2024	2.17		2.17				1 WNV	2 EEEV, 1 WNV
Volusia	8/19/2024	2.13		2.13				1 WNV	2 EEEV, 12 WNV
Walton	8/19/2024	2.35		2.35				2 WNV	19 EEEV, 4 SLEV, 1 Alphavirus, 48 WNV, 1 HJV
	9/3/2024	9.09		9.09				3 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

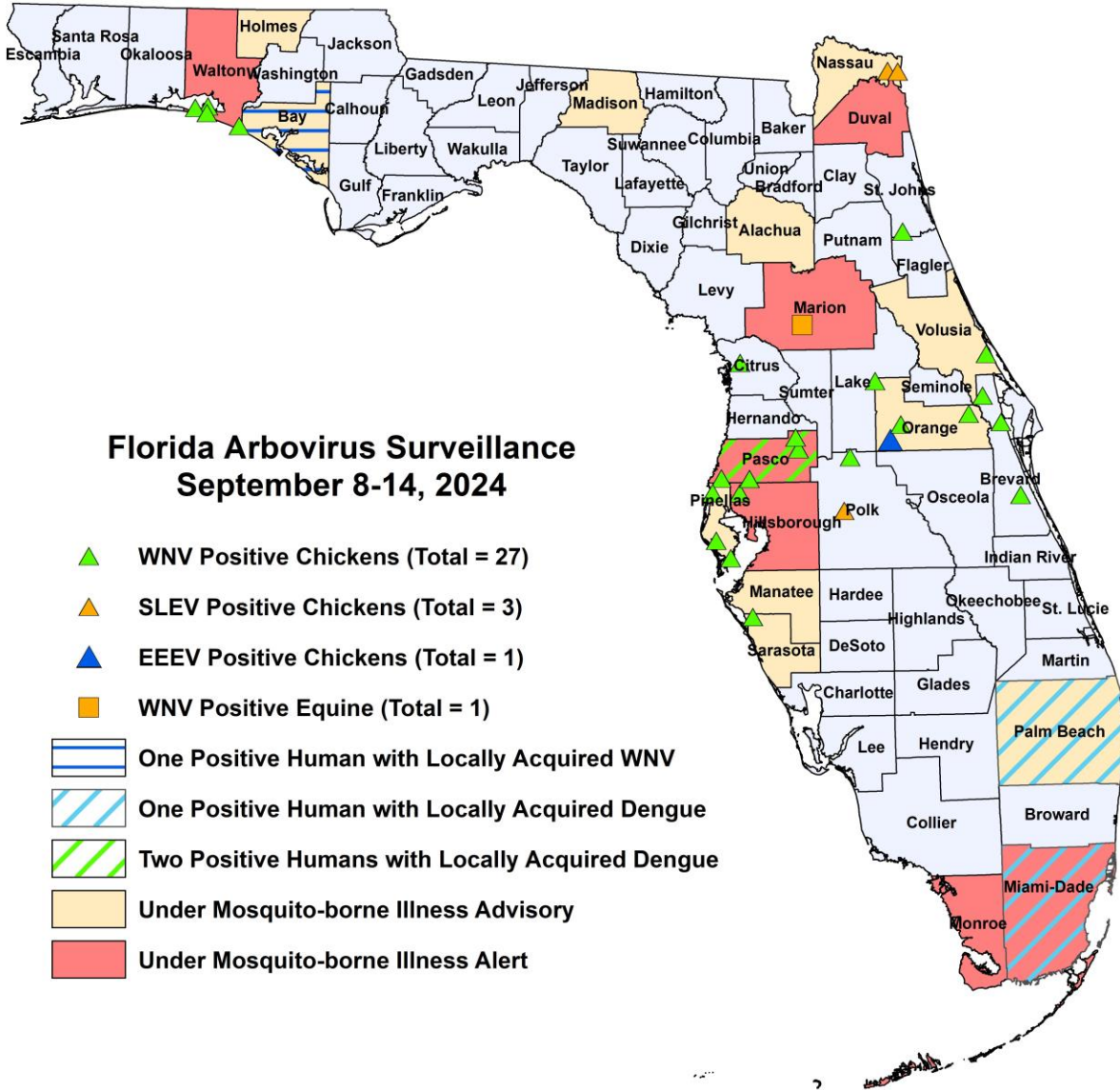
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 19 reports representing a total of 30 dead birds, including three raptors and one dove, were received from 11 counties.

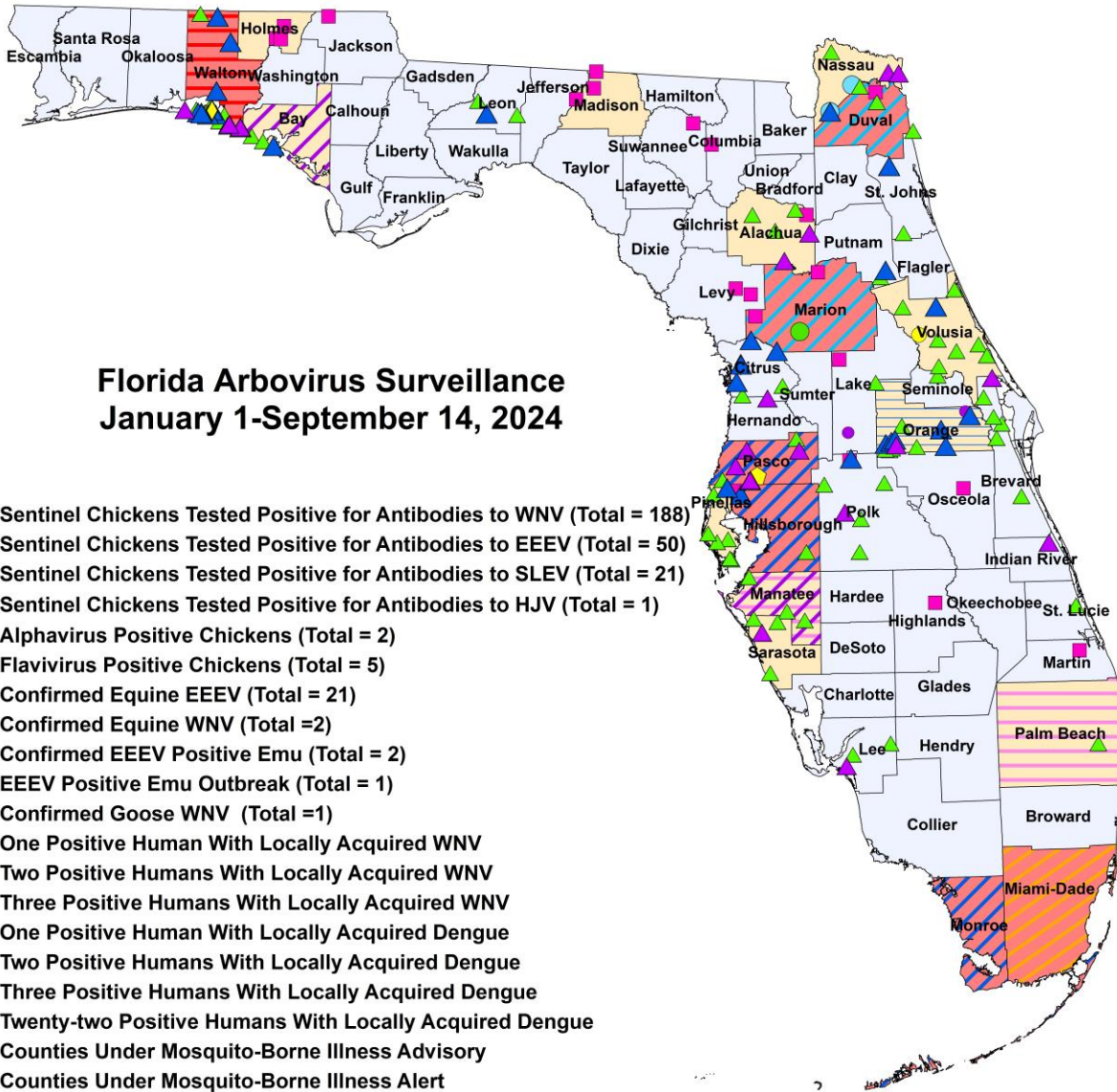
In 2024, 812 reports representing a total of 1757 dead birds (57 crows, 21 jays, 132 raptors, 88 doves) were received from 50 of Florida's 67 counties.

2024

County	Total Dead Birds	Crows	Jays	Raptors	Doves
Bay	14	0	0	0	0
Duval	1	0	0	0	0
Escambia	1	0	0	1	0
Gulf	1	0	0	1	0
Lee	1	0	0	0	0
Orange	3	0	0	0	1
Palm Beach	1	0	0	0	0
Pinellas	2	0	0	0	0
Sarasota	2	0	0	0	0
Sumter	3	0	0	0	0
Volusia	1	0	0	1	0

Maps





Florida Arbovirus Surveillance January 1-September 14, 2024

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 188)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 50)
- ▲ Sentinel Chickens Tested Positive for Antibodies to SLEV (Total = 21)
- ◆ Sentinel Chickens Tested Positive for Antibodies to HJV (Total = 1)
- ◆ Alphasvirus Positive Chickens (Total = 2)
- Flavivirus Positive Chickens (Total = 5)
- Confirmed Equine EEEV (Total = 21)
- Confirmed Equine WNV (Total = 2)
- Confirmed EEEV Positive Emu (Total = 2)
- ◆ EEEV Positive Emu Outbreak (Total = 1)
- Confirmed Goose WNV (Total = 1)
- ▨ One Positive Human With Locally Acquired WNV
- ▨ Two Positive Humans With Locally Acquired WNV
- ▨ Three Positive Humans With Locally Acquired WNV
- ▨ One Positive Human With Locally Acquired Dengue
- ▨ Two Positive Humans With Locally Acquired Dengue
- ▨ Three Positive Humans With Locally Acquired Dengue
- ▨ Twenty-two 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)	11 WNV (7/2, 7/24, 8/2, 8/19) 4 SLEV (8/15)	
Bay	1 WNV (August)		2 EEEV (5/28, 6/10) 10 WNV (7/22, 8/5, 8/12, 8/19, 8/26)	
Brevard			10 WNV (1/3, 7/19, 7/26, 8/13, 8/14, 8/15, 8/28, 8/30) 1 SLEV (8/23)	
Citrus			9 WNV (1/9, 1/15, 6/25, 7/8, 8/19) 6 EEEV (1/9, 1/15, 2/26, 3/11, 5/20) 1 Alphasvirus (5/20) 1 SLEV (8/19)	
Columbia		1 EEEV (6/16)		

County	Humans	Equines	Sentinel Chickens	Other
Duval	1 WNV (July) 1 asymptomatic WNV blood donor (August)	1 EEEV (5/25)	5 WNV (7/8, 7/15, 8/19)	
Highlands		1 EEEV (5/25)		
Hillsborough	3 dengue (June (2), August)	1 EEEV (5/26)	1 EEEV (6/3) 4 WNV (6/10, 8/19, 8/26, 9/3)	
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)
Lee			1 SLEV (8/5) 2 WNV (8/12, 8/26)	
Leon			1 EEEV (6/18) 3 WNV (8/27)	
Levy		2 EEEV (5/21, 7/4)		
Madison		3 EEEV (6/20, 6/29, 7/24)		
Mantatee	1 dengue (July) 1 WNV (August)		3 WNV (8/7, 8/20, 8/27)	
Marion	1 asymptomatic WNV blood donor (July) 1 WNV (July)	2 EEEV (1/31, 3/29) 2 WNV (8/14, 9/9)		
Martin		1 EEEV (5/27)		
Miami-Dade	22 dengue (January (2), February, March (2), April, June (6), July (6), August (4))			
Monroe	3 dengue (June (3))			
Nassau			3 EEEV (5/3) 5 Flavivirus (5/3, 5/18, 5/23) 4 WNV (8/9, 8/17) 2 SLEV (8/23)	
Orange	2 dengue (August)		9 EEEV (2/26, 3/25, 5/6, 5/28, 6/3, 7/15, 7/29, 8/5, 8/19) 14 WNV (8/5, 8/6, 8/12, 8/19, 8/26, 9/3) 1 SLEV (8/19)	1 EEEV emu (3/16)
Osceola		1 EEEV (5/2)		
Palm Beach	1 dengue (August)		1 WNV (3/18)	
Pasco	3 dengue (January, August (2))		1 EEEV (5/13) 4 SLEV (6/10, 8/13, 8/19) 9 WNV (8/19, 8/26, 9/3)	1 EEEV emu flock outbreak (4/22 for first emu)
Pinellas			2 EEEV (5/20, 5/28) 19 WNV (7/29, 8/5, 8/12, 8/19, 8/26, 9/3)	
Polk		1 EEEV (4/9)	1 EEEV (6/10) 13 WNV (6/10, 7/22, 7/29, 8/6, 8/19, 8/26, 9/3) 1 SLEV (9/3)	
Putnam			1 EEEV (7/15) 1 WNV (8/26)	
Sarasota			7 WNV (7/12, 7/26, 8/20, 8/27, 9/2) 1 SLEV (8/20)	
Seminole			1 WNV (8/19)	
St. Johns			2 EEEV (6/3, 6/10) 1 WNV (8/19)	

County	Humans	Equines	Sentinel Chickens	Other
St. Lucie			1 WNV (7/2)	
Suwannee		1 EEEV (6/3)		
Volusia			2 EEEV (1/22, 4/8) 12 WNV (7/8, 7/22, 7/29, 8/12, 8/19, 8/26)	1 WNV goose (8/14)
Walton	2 asymptomatic WNV blood donors (July, August) 1 WNV (July)		19 EEEV (3/25, 4/15, 5/13, 5/28, 6/3, 6/4, 6/17, 6/24, 7/15, 7/16, 7/30, 8/13) 4 SLEV (4/1, 7/29, 8/12, 8/19) 1 Alphavirus (6/3) 48 WNV (6/17, 7/1, 7/8, 7/15, 7/16, 7/22, 7/29, 7/30, 8/5, 8/6, 8/12, 8/19, 8/26, 9/3) 1 HJV (8/12)	

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.