



Florida Arbovirus Surveillance Week 34: August 18-24, 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 18-24, 2024, the following arboviral activity was recorded in Florida.

WNV activity: One human case of WNV infection was reported this week in Manatee County. One horse with WNV infection was reported this week in Marion County. One goose with WNV infection was reported this week in Volusia County. Twenty-one sentinel chickens tested positive for antibodies to WNV this week in Alachua, Bay, Brevard, Lee, Orange, Polk, Sarasota, Volusia, and Walton counties. No mosquito pools tested positive for WNV this week. In 2024, positive samples from three humans, four asymptomatic blood donors, one horse, one goose, and 84 sentinel chickens have been reported from 16 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 Lee, Pasco, and Walton counties. In 2024, seven sentinel chickens have been reported from four counties.

EEEV activity: No human cases of EEEV infection were reported this week. No horses with EEEV infection were reported this week. Two sentinel chickens tested positive for antibodies to EEEV this week in Orange and Walton counties. In 2024, positive samples from 47 sentinel chickens, 21 horses, two emus, and one emu flock have been reported from 26 counties.

International Travel-Associated Dengue: Thirty-nine cases of dengue were reported this week in persons that had international travel. In 2024, 417 travel-associated dengue cases have been reported.

Dengue Cases Acquired in Florida: Two cases of locally acquired dengue were reported this week. In 2024, 25 cases of locally acquired dengue have been reported from six 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: Ten cases of Oropouche fever were reported this week in persons that had international travel. In 2024, 30 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, Manatee, Nassau, Orange, and Pasco counties are currently under a mosquito-borne illness advisory. Hillsborough, Marion, Miami-Dade, Monroe, 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 | French Guiana | | | | | |
| Mauritius | Guatemala | | | | | |
| Sudan | 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, three human cases of WNV illness acquired in Florida have been reported in Duval (July), Marion (July), and Walton (July) counties. Four asymptomatic positive blood donors were reported from Manatee (August), Marion (July), and Walton (July, August) 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: Thirty 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, Duval, Hillsborough (5), Lee (2), Miami-Dade (14), Orange (2), Palm Beach, Pasco, Polk (2), and Sarasota. Country of origin was Cuba (30).

2024 International Travel-Associated Dengue Cases: Four hundred and seventeen 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 (60), Charlotte (2), Collier (5), Duval (7), Escambia (2), Flagler, Hernando, Hillsborough (31), Indian River, Lake (3), Lee (14), Levy (2), Manatee, Marion (3), Martin, Miami-Dade (175), Monroe (2), Okaloosa, Okeechobee (2), Orange (27), Osceola (13), Palm Beach (23), Pasco (5), Pinellas (3), Polk (10), Santa Rosa, Sarasota (4), Seminole (3), St. Lucie (3), and Volusia (4). Forty-four 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, 335 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 | 36 | 12 | 1 | | | 13 | 62 |
| Brazil/Paraguay | | 1 | | | | | 1 |
| Colombia | 5 | 9 | 6 | 1 | | 7 | 28 |
| Colombia/Panama | | | | | | 1 | 1 |

| | | | | | | | |
|-------------------------------|-----------|-----------|------------|-----------|----------|-----------|------------|
| Costa Rica | | | 4 | 1 | | | 5 |
| Cuba | | 1 | 100 | 29 | 1 | 22 | 153 |
| Dominican Republic | | | 11 | | | 4 | 15 |
| El Salvador | 2 | | 5 | | | | 7 |
| Guatemala | | | 7 | | | 3 | 10 |
| Guyana | | | 3 | | | | 3 |
| Honduras | | | 15 | | 1 | 3 | 19 |
| India | 2 | | | | | | 2 |
| Indonesia | | 1 | | | | 1 | 2 |
| Jamaica | | 1 | | | | 1 | 2 |
| Maldives | | 1 | | | | | 1 |
| Mexico | 2 | 1 | 10 | 1 | | 1 | 15 |
| Netherlands Antilles | | 1 | | | | | 1 |
| Nicaragua | | | 1 | 1 | | 2 | 4 |
| Paraguay | | 3 | | | | | 3 |
| Peru | 2 | 2 | 1 | | | | 5 |
| Philippines | | | | 1 | | 1 | 2 |
| Puerto Rico | 5 | 7 | 10 | | | 4 | 26 |
| Puerto Rico/US Virgin Islands | | | 1 | | | | 1 |
| Saint Barthélemy | | 2 | | | | 1 | 3 |
| Surinam | | 1 | | | | | 1 |
| Trinidad and Tobago | | 1 | 11 | | | 5 | 17 |
| US Virgin Islands | | 2 | | | | 1 | 3 |
| Venezuela | | | 3 | | | 4 | 7 |
| Total | 58 | 52 | 189 | 33 | 3 | 82 | 417 |

2024 Dengue Cases Acquired in Florida: In 2024, 25 cases of locally acquired dengue have been reported in Hillsborough (2), Manatee, Miami-Dade (16), Monroe (3), Orange (2) and Pasco counties with onset in January (3), February, March (2), April, June (10), July (6) and August (2). Twenty-two 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 |
| Manatee | | 1 | | 1 |
| Miami-Dade | | 14 | 2 | 16 |
| Monroe | 2 | | 1 | 3 |
| Orange | | 2 | | 2 |
| Pasco | | 1 | | 1 |
| Total | 4 | 18 | 3 | 25 |

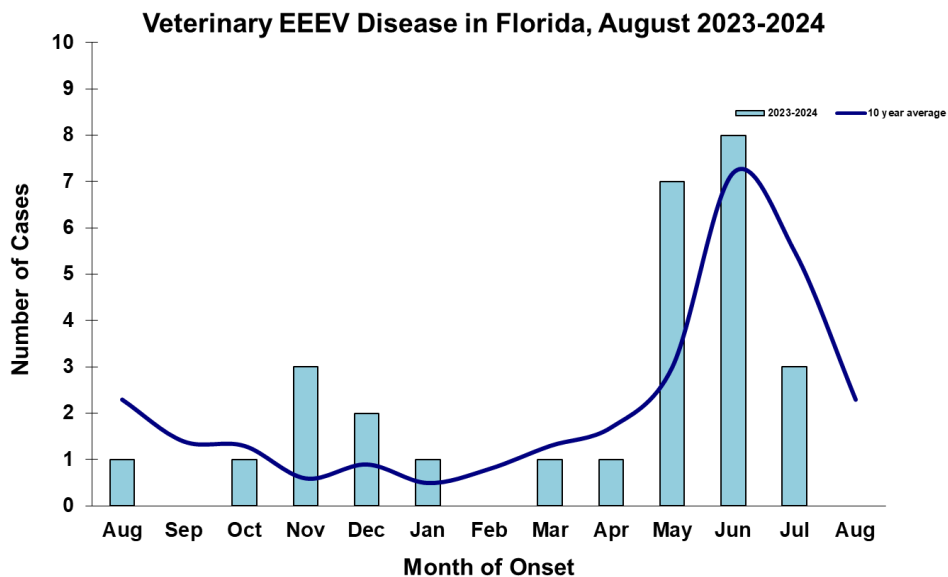
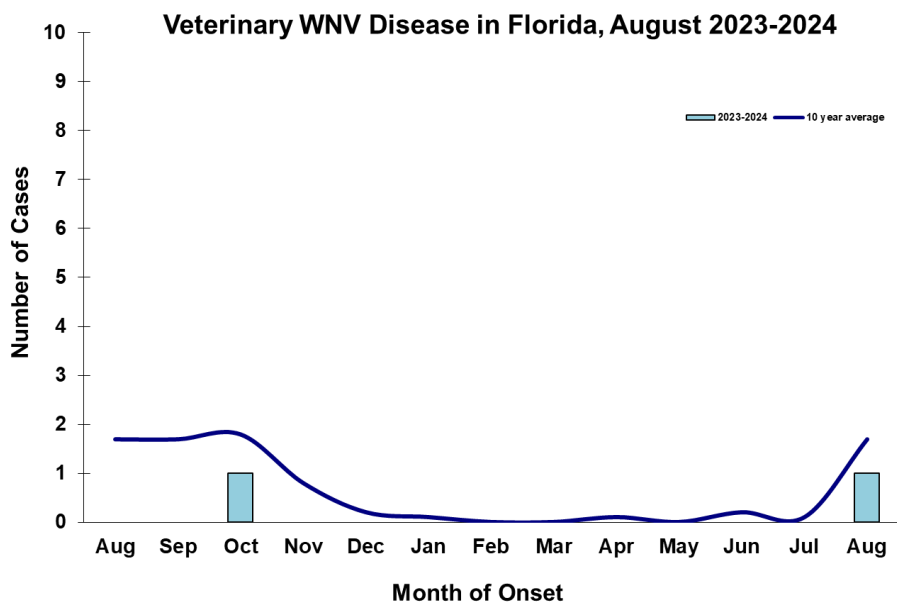
2024 International Travel-Associated Malaria Cases: Thirty-eight cases of malaria with onset in 2024 have been reported in individuals with a travel history to a malaria-endemic area. Counties reporting cases were: Brevard, Broward (4), Clay, Collier, Duval (4), Escambia, Hillsborough (3), Indian River, Lee, Marion, Miami-Dade (3), Okaloosa, Orange (7), Osceola (2), Palm Beach, Pasco, Pinellas (2), Polk, Sarasota, and Seminole. Three 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 | | | 8 | 8 |
| Chad | 1 | | | 1 |
| Ecuador | | | 1 | 1 |
| Ethiopia | 1 | | 1 | 2 |
| Gabon | 1 | | 1 | 2 |
| Ghana | 1 | | | 1 |
| Honduras | | | 1 | 1 |
| Kenya | 1 | | | 1 |
| Malawi | 1 | | | 1 |

| | | | | |
|-----------------------|-----------|----------|-----------|-----------|
| Mexico | | | 2 | 2 |
| Nicaragua | | | 1 | 1 |
| Nigeria | 7 | | | 7 |
| Republic of the Congo | | 1 | | 1 |
| Sierra Leone | 1 | | | 1 |
| Solomon Islands | | | 1 | 1 |
| Sudan | 1 | | | 1 |
| Tanzania | 1 | | | 1 |
| Uganda/Rwanda | 1 | | | 1 |
| Total | 21 | 1 | 16 | 38 |

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.



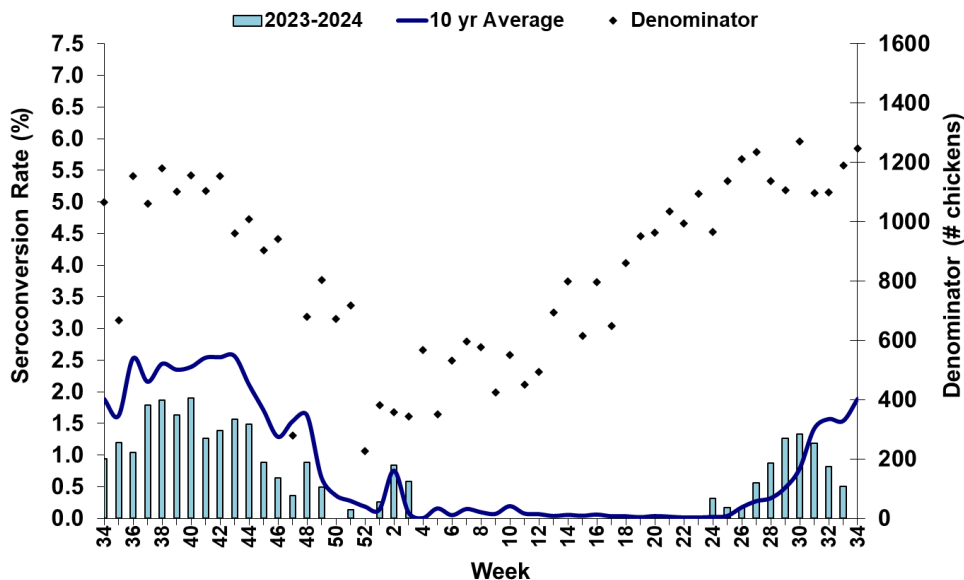
Sentinel Chickens

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.

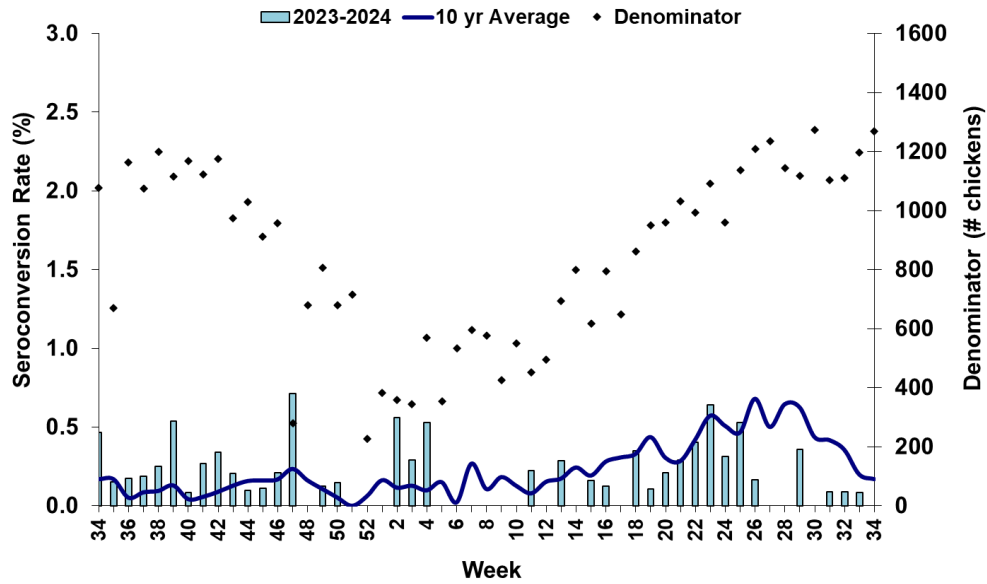
Twenty-one sentinel chickens tested positive for antibodies to WNV this week in Alachua, Bay, Brevard, Lee, Orange, Polk, Sarasota, Volusia, and Walton counties. Three sentinel chickens tested positive for antibodies to SLEV this week in Lee, Pasco and Walton counties. Two sentinel chickens tested positive for antibodies to EEEV this week in Orange and Walton counties.

| County | Collection Date | Seroconversion Rates (%) | | | | | | County Totals | |
|----------|---------------------|--------------------------|------|-------|-------|------|-----|-----------------------|---------------------------------------|
| | | Flavi | SLEV | WNV | Alpha | EEEV | HJV | Collection Week | YTD |
| Alachua | 7/24/2024 | 27.78 | | 27.78 | | | | 5 WNV | 10 WNV |
| Bay | 7/22/2024 | 5.56 | | 5.56 | | | | 1 WNV | 2 EEEV, 5 WNV |
| | 8/12/2024 | 6.67 | | 6.67 | | | | 1 WNV | |
| Brevard | 7/26/2024 | 1.39 | | 1.39 | | | | 1 WNV | 4 WNV |
| Lee | 8/5/2024 | 0.98 | 0.98 | | | | | 1 SLEV | 1 SLEV, 2 WNV |
| | 8/12/2024 | 0.93 | | 0.93 | | | | 1 WNV | |
| Orange | 7/29/2024 | | | | 0.85 | 0.85 | | 1 EEE | 8 EEEV, 1 WNV |
| | 8/12/2024 | 0.85 | | 0.85 | | | | 1 WNV | |
| Pasco | 8/13/2024 | 1.67 | 1.67 | | | | | 1 SLEV | 1 EEEV, 2 SLEV |
| Polk | 7/22/2024 | 4.26 | | 4.26 | | | | 2 WNV | 1 EEEV, 7 WNV |
| | 7/29/2024 | 2.13 | | 2.13 | | | | 1 WNV | |
| Sarasota | 7/12/2024 | 1.39 | | 1.39 | | | | 1 WNV | 2 WNV |
| Volusia | 7/29/2024 | 10.64 | | 10.64 | | | | 5 WNV | 2 EEEV, 8 WNV |
| Walton | 7/16/2024 | 2.56 | | 2.56 | | | | 1 WNV | 17 EEEV, 3 SLEV, 1 Alphavirus, 27 WNV |
| | 8/12/2024-8/13/2024 | 2.47 | 1.23 | 1.23 | 1.20 | 1.20 | | 1 SLEV, 1 WNV, 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

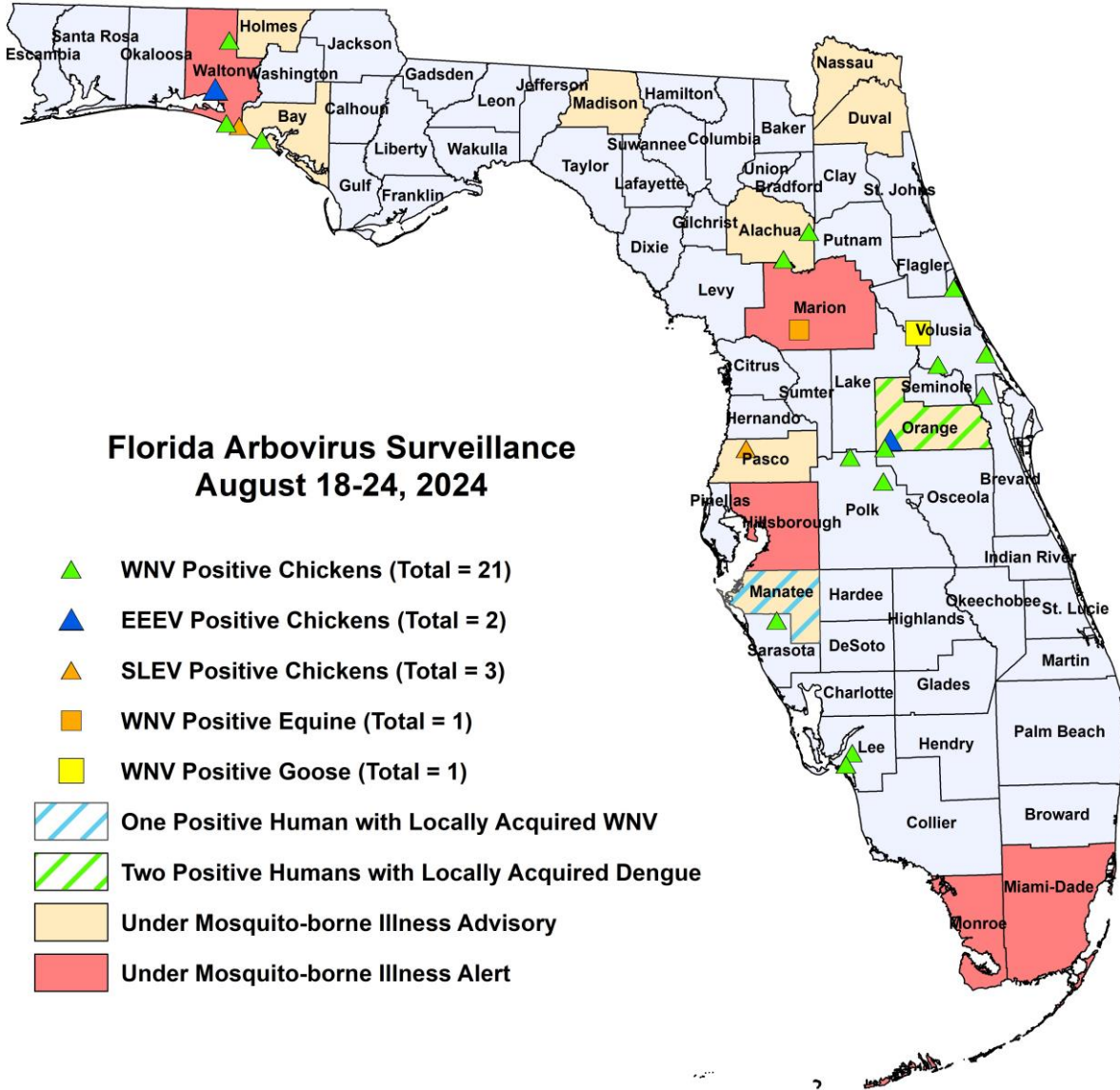
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 18 reports representing a total of 53 dead birds, including one jay and 16 raptors, were received from nine counties.

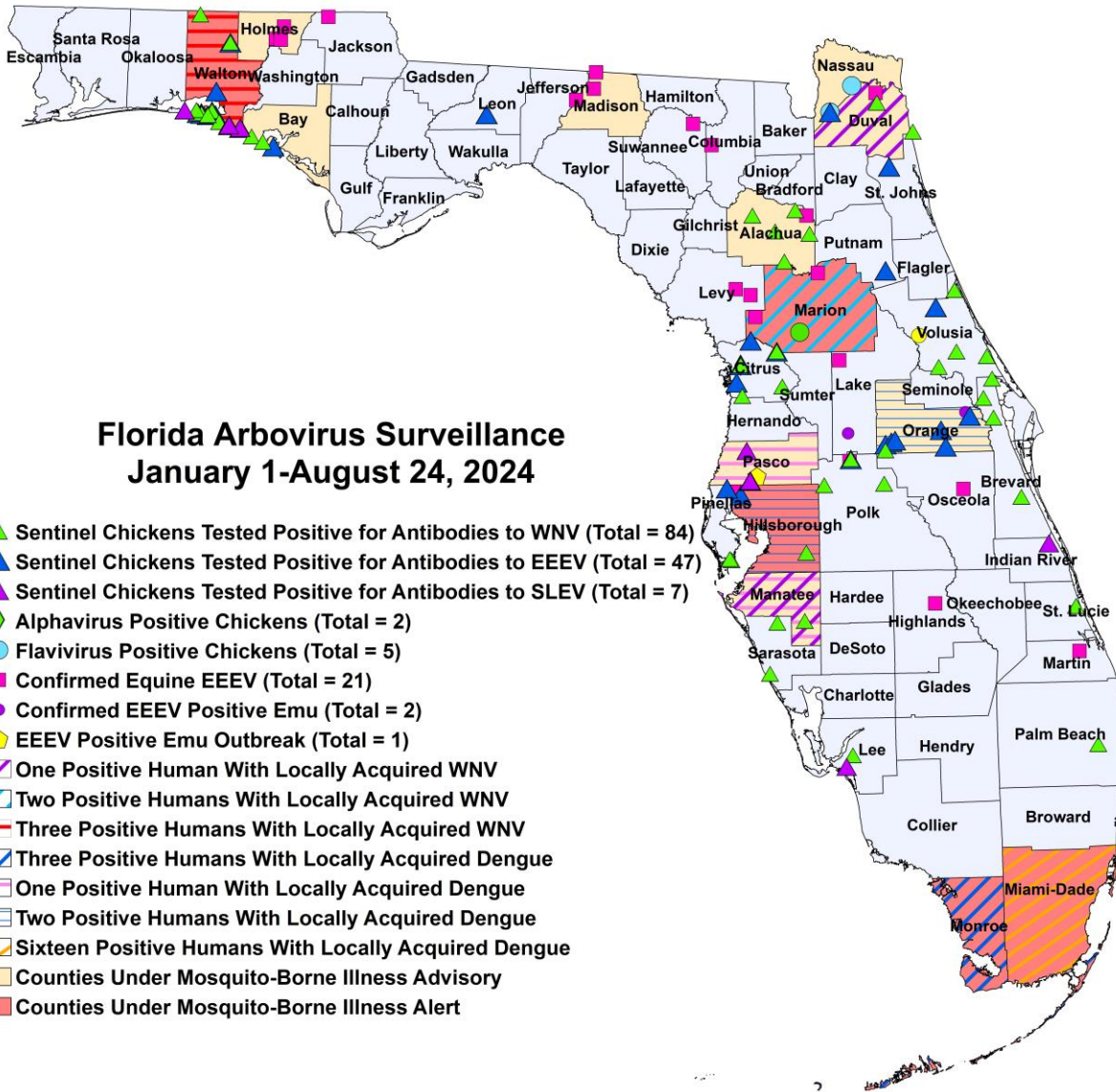
In 2024, 759 reports representing a total of 1664 dead birds (56 crows, 21 jays, 123 raptors, 86 doves) were received from 50 of Florida's 67 counties.

2024

| County | Total Dead Birds | Crows | Jays | Raptors | Doves |
|-----------|------------------|-------|------|---------|-------|
| Bay | 11 | 0 | 0 | 0 | 0 |
| Brevard | 1 | 0 | 0 | 0 | 0 |
| Broward | 13 | 0 | 1 | 0 | 0 |
| Duval | 3 | 0 | 0 | 0 | 0 |
| Lee | 1 | 0 | 0 | 0 | 0 |
| Orange | 2 | 0 | 0 | 0 | 0 |
| Pinellas | 1 | 0 | 0 | 0 | 0 |
| St. Johns | 16 | 0 | 0 | 16 | 0 |
| Volusia | 5 | 0 | 0 | 0 | 0 |

Maps





2024 Mosquito-Borne Disease Activity by County

| County | Humans | Equines | Sentinel Chickens | Other |
|--------------|-----------------|---------------------|---|-------|
| Alachua | | 1 EEEV (6/21) | 10 WNV (7/2, 7/24, 8/19) | |
| Bay | | | 2 EEEV (5/28, 6/10) 5 WNV (7/22, 8/5, 8/12) | |
| Brevard | | | 4 WNV (1/3, 7/19, 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) | | |

| County | Humans | Equines | Sentinel Chickens | Other |
|------------|---|-------------------------------------|--|--|
| Lake | | 1 EEEV (7/31) | | 1 EEEV emu (2/6) |
| Lee | | | 1 SLEV (8/5) 1 WNV (8/12) | |
| Leon | | | 1 EEEV (6/18) | |
| Levy | | 2 EEEV (5/21, 7/4) | | |
| Madison | | 3 EEEV (6/20, 6/29, 7/24) | | |
| Mantatee | 1 dengue (July) 1 WNV (August) | | 1 WNV (8/7) | |
| Marion | 1 asymptomatic WNV blood donor (July) 1 WNV (July) | 2 EEEV (1/31, 3/29) 1 WNV (8/14) | | |
| Martin | | 1 EEEV (5/27) | | |
| Miami-Dade | 16 dengue (January (2), February, March (2), April, June (5), July (5)) | | | |
| Monroe | 3 dengue (June (3)) | | | |
| Nassau | | | 3 EEEV (5/3) 5 Flavivirus (5/3, 5/18, 5/23) | |
| Orange | 2 dengue (August) | | 8 EEEV (2/26, 3/25, 5/6, 5/28, 6/3, 7/15, 7/29, 8/5) 1 WNV (8/12) | 1 EEEV emu (3/16) |
| Osceola | | 1 EEEV (5/2) | | |
| Palm Beach | | | 1 WNV (3/18) | |
| Pasco | 1 dengue (January) | | 1 EEEV (5/13) 2 SLEV (6/10, 8/13) | 1 EEEV emu flock outbreak (4/22 for first emu) |
| Pinellas | | | 2 EEEV (5/20, 5/28) 3 WNV (7/29, 8/5) | |
| Polk | | 1 EEEV (4/9) | 1 EEEV (6/10) 7 WNV (6/10, 7/22, 7/29, 8/6) | |
| Putnam | | | 1 EEEV (7/15) | |
| Sarasota | | | 2 WNV (7/12, 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) 8 WNV (7/8, 7/22, 7/29) | 1 WNV goose (8/14) |
| Walton | 2 asymptomatic WNV blood donors (July, August) 1 WNV (July) | | 17 EEEV (3/25, 4/15, 5/13, 5/28, 6/3, 6/4, 6/17, 6/24, 7/15, 7/16, 8/13) 3 SLEV (4/1, 7/29, 8/12) 1 Alphavirus (6/3) 27 WNV (6/17, 7/1, 7/8, 7/15, 7/16, 7/22, 7/29, 7/30, 8/5, 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.