



Florida Arbovirus Surveillance Week 25: June 16-22, 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 June 16-22, 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 seven sentinel chickens have been reported from three 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 Pasco County. In 2024, two sentinel chickens have been reported from two 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 Bay and Polk counties. In 2024, positive samples from 31 sentinel chickens, 11 horses, two emus, and one emu flock have been reported from 20 counties.

International Travel-Associated Dengue: Fifteen cases of dengue were reported this week in persons that had international travel. In 2024, 237 travel-associated dengue cases have been reported.

Dengue Cases Acquired in Florida: One case of locally acquired dengue was reported this week. In 2024, eight cases of locally acquired dengue have been reported from three 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: Hillsborough, Nassau, and Pasco counties are currently under a mosquito-borne illness advisory. Miami-Dade County is 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 | Cambodia | Argentina | Bolivia | Timor-Leste | Nigeria |
| Ethiopia | Brazil | Fiji | Uruguay | Brazil | Maldives | |
| Mali | Colombia | Indonesia | | Colombia | | |
| Mauritius | Costa Rica | Laos | | Cuba | | |
| Sudan | Curaçao | Samoa | | Peru | | |
| | Ecuador | Singapore | | | | |
| | French Guiana | Sri Lanka | | | | |
| | Guadeloupe | | | | | |
| | Guatemala | | | | | |
| | Guyana | | | | | |
| | 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

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: Two hundred and thirty-seven 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 (39), Charlotte (2), Collier, Duval (5), Flagler, Hernando, Hillsborough (17), Lake, Lee (9), Miami-Dade (103), Okaloosa, Orange (16), Osceola (10), Palm Beach (13), Pasco (2), Pinellas (3), Polk (3), Santa Rosa, Seminole, St. Lucie (2), and Volusia (2). Thirty-four 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, 187 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 | 34 | 11 | | | | 11 | 56 |
| Brazil/Paraguay | | 1 | | | | | 1 |
| Colombia | 4 | 7 | 3 | 1 | | 5 | 20 |
| Costa Rica | | | 3 | | | | 3 |
| Cuba | | 1 | 55 | 7 | 1 | 12 | 76 |
| Dominican Republic | | | 9 | | | 2 | 11 |

| | | | | | | | |
|----------------------|-----------|-----------|-----------|----------|----------|-----------|------------|
| El Salvador | 2 | | | | | | 2 |
| Guatemala | | | 2 | | | | 2 |
| Guyana | | | 1 | | | | 1 |
| Honduras | | | 2 | | 1 | 1 | 4 |
| Indonesia | | 1 | | | | 1 | 2 |
| Jamaica | | 1 | | | | 1 | 2 |
| Mexico | 2 | 1 | 4 | | | | 7 |
| Netherlands Antilles | | 1 | | | | | 1 |
| Nicaragua | | | | 1 | | 2 | 3 |
| Paraguay | | 3 | | | | | 3 |
| Peru | 2 | 2 | | | | | 4 |
| Philippines | | | | | | 1 | 1 |
| Puerto Rico | 1 | 3 | 4 | | | 2 | 10 |
| Saint Barthélemy | | 2 | | | | 1 | 3 |
| Trinidad and Tobago | | 1 | 2 | | | | 3 |
| US Virgin Islands | | | | | | 1 | 1 |
| Venezuela | | | 1 | | | 2 | 3 |
| Total | 49 | 41 | 86 | 9 | 2 | 50 | 237 |

2024 Dengue Cases Acquired in Florida: In 2024, eight cases of locally acquired dengue have been reported in Hillsborough, Miami-Dade (6) and Pasco counties with onset in January (3), February, March (2), April, and June. Six 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 | 1 | | | 1 |
| Miami-Dade | | 4 | 2 | 6 |
| Pasco | | 1 | | 1 |
| Total | 1 | 5 | 2 | 8 |

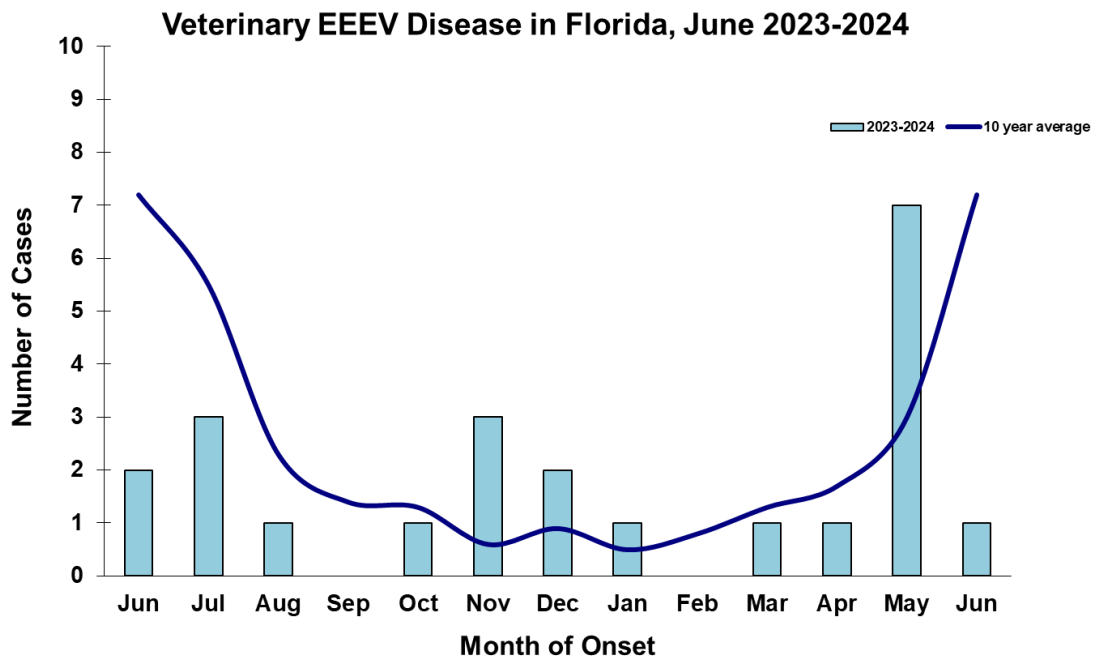
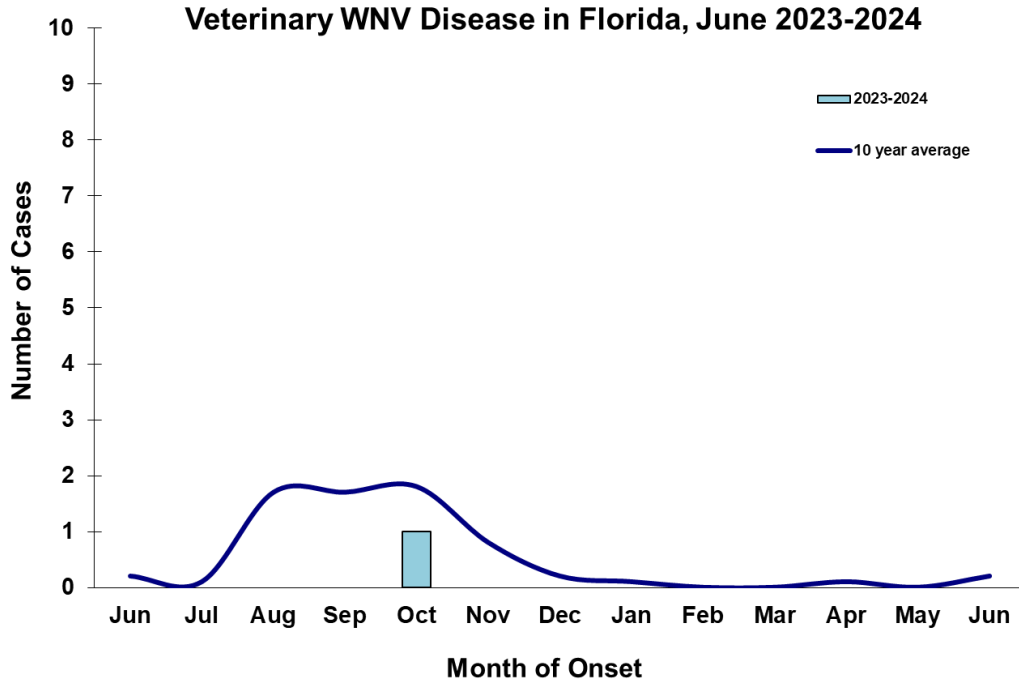
2024 International Travel-Associated Malaria Cases: Twenty-seven cases of malaria with onset in 2024 have been reported in individuals with a travel history to a malaria-endemic area. Counties reporting cases were: Broward (3), Collier, Duval (3), Escambia, Hillsborough, Lee, Marion, Miami-Dade (3), 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 |
| 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 | 13 | 1 | 13 | 27 |

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.



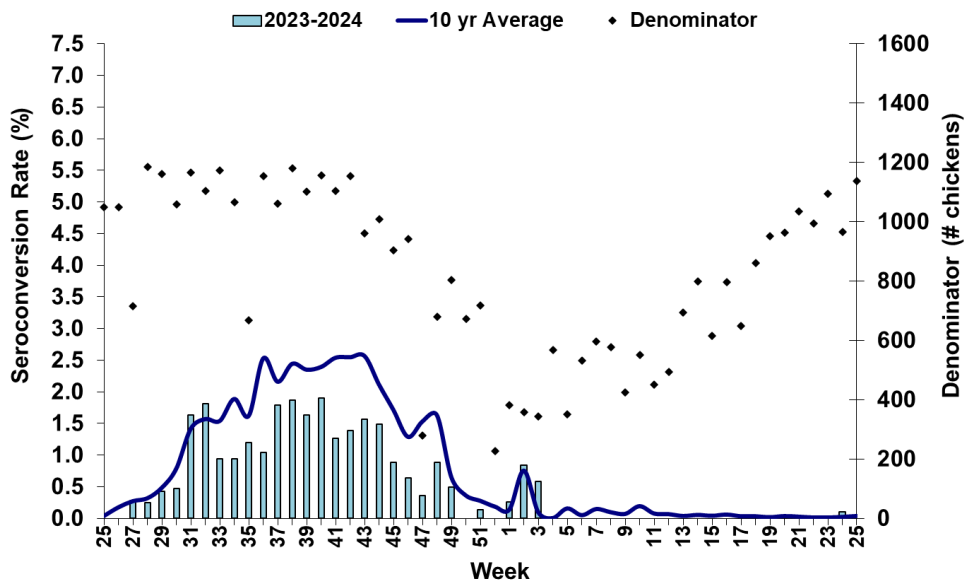
Sentinel Chickens

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.

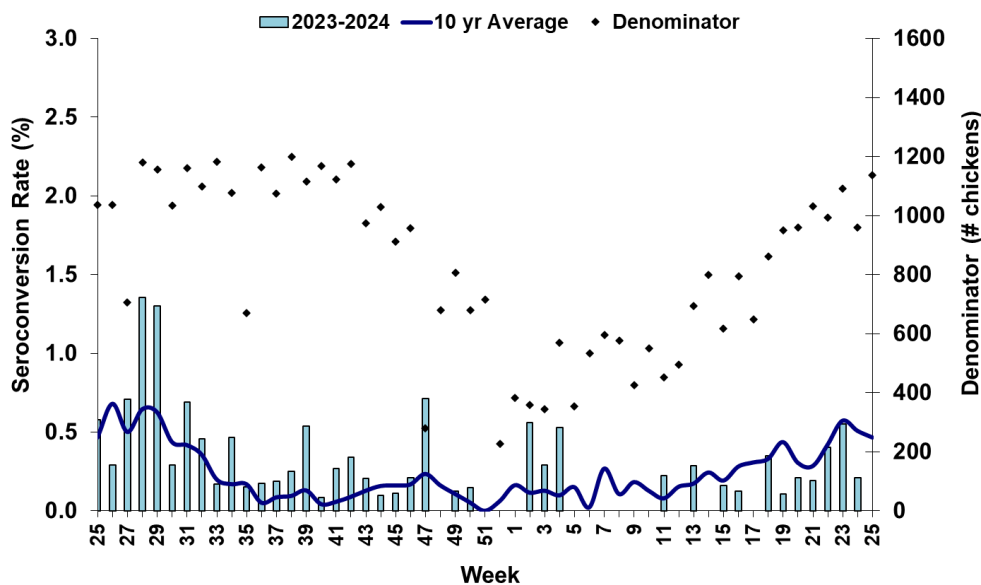
One sentinel chicken tested positive for antibodies to SLEV this week in Pasco County. Two sentinel chickens tested positive for antibodies to EEEV this week in Bay and Polk counties.

| County | Collection Date | Seroconversion Rates (%) | | | | | | County Totals | |
|--------|-----------------|--------------------------|------|-----|-------|------|-----|-----------------|----------------|
| | | Flavi | SLEV | WNV | Alpha | EEEV | HJV | Collection Week | YTD |
| Bay | 6/10/2024 | | | | 5.88 | 5.88 | | 1 EEEV | 2 EEEV |
| Pasco | 6/10/2024 | 1.72 | 1.72 | | | | | 1 SLEV | 1 EEEV, 1 SLEV |
| Polk | 6/10/2024 | | | | 2.13 | 2.13 | | 1 EEEV | 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

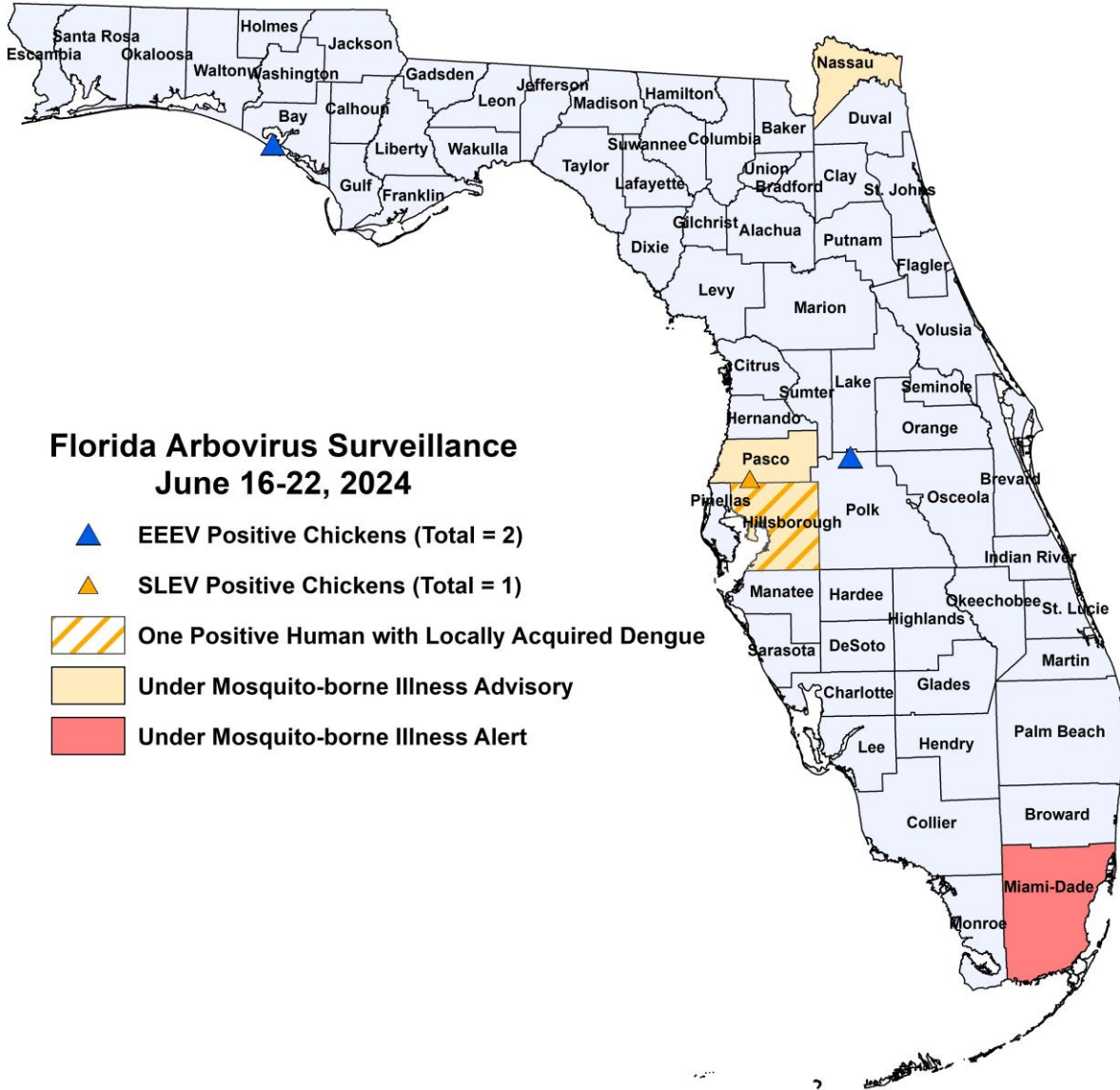
The Fish and Wildlife Conservation Commission (FWC) collects reports of dead birds, which can be an indication of arbovirus circulation in an area. This week, 42 reports representing a total of 117 dead birds, including one crow, one jay, three raptors, and four doves, were received from 16 counties.

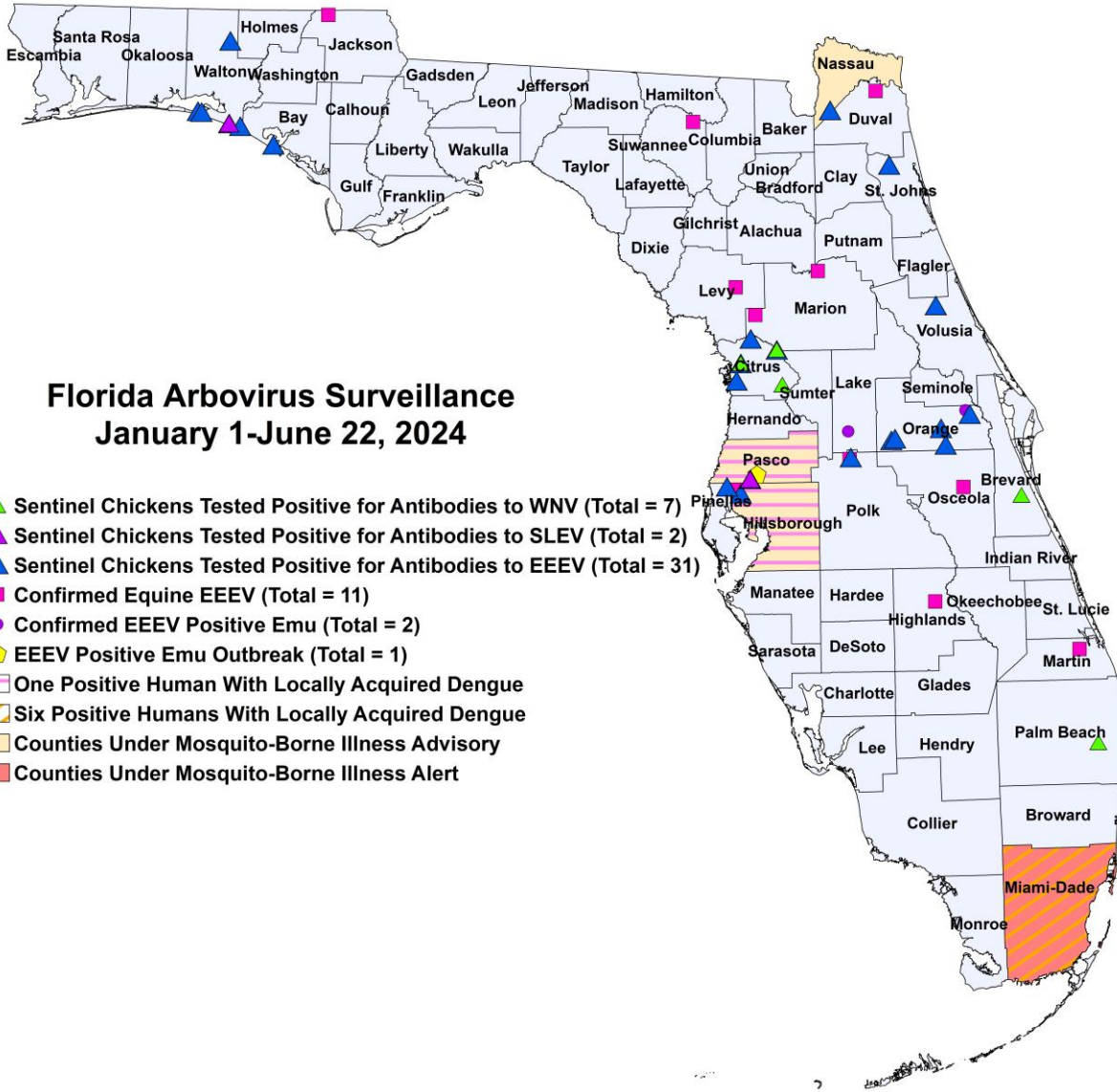
In 2024, 620 reports representing a total of 1325 dead birds (48 crows, 15 jays, 90 raptors, 60 doves) were received from 47 of Florida's 67 counties.

2024

| County | Total Dead Birds | Crows | Jays | Raptors | Doves |
|--------------|------------------|-------|------|---------|-------|
| Brevard | 8 | 0 | 1 | 0 | 0 |
| Broward | 1 | 0 | 0 | 0 | 0 |
| Clay | 9 | 0 | 0 | 0 | 0 |
| Escambia | 4 | 0 | 0 | 0 | 0 |
| Flagler | 6 | 0 | 0 | 2 | 0 |
| Hillsborough | 4 | 1 | 0 | 0 | 0 |
| Indian River | 4 | 0 | 0 | 0 | 0 |
| Lee | 4 | 0 | 0 | 0 | 0 |
| Miami-Dade | 4 | 0 | 0 | 0 | 4 |
| Nassau | 22 | 0 | 0 | 0 | 0 |
| Okaloosa | 4 | 0 | 0 | 0 | 0 |
| Orange | 1 | 0 | 0 | 0 | 0 |
| Palm Beach | 2 | 0 | 0 | 0 | 0 |
| Pasco | 2 | 0 | 0 | 0 | 0 |
| Pinellas | 3 | 0 | 0 | 1 | 0 |
| St. Johns | 39 | 0 | 0 | 0 | 0 |

Maps





Florida Arbovirus Surveillance January 1-June 22, 2024

- ▲ Sentinel Chickens Tested Positive for Antibodies to WNV (Total = 7)
- ▲ Sentinel Chickens Tested Positive for Antibodies to SLEV (Total = 2)
- ▲ Sentinel Chickens Tested Positive for Antibodies to EEEV (Total = 31)
- Confirmed Equine EEEV (Total = 11)
- Confirmed EEEV Positive Emu (Total = 2)
- ◆ EEEV Positive Emu Outbreak (Total = 1)
- One Positive Human With Locally Acquired Dengue
- Six 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 | | | 5 WNV (1/9, 1/15) 6 EEEV (1/9, 1/15, 2/26, 3/11, 5/20) | |
| Duval | | 1 EEEV (5/25) | | |
| Highlands | | 1 EEEV (5/25) | | |
| Hillsborough | 1 dengue (June) | 1 EEEV (5/26) | 1 EEEV (6/3) | |
| Jackson | | 1 EEEV (5/30) | | |
| Lake | | | | 1 EEEV emu (2/6) |
| Levy | | 1 EEEV (5/21) | | |
| Marion | | 1 EEEV (1/31, 3/29) | | |
| Martin | | 1 EEEV (5/27) | | |

| County | Humans | Equines | Sentinel Chickens | Other |
|------------|--|--------------|---|--|
| Miami-Dade | 6 dengue (January (2), February, March (2), April) | | | |
| Nassau | | | 3 EEEV (5/3) | |
| 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 | | | 7 EEEV (3/25, 4/15, 5/13, 5/28, 6/3, 6/4) 1 SLEV (4/1) | |

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.