

# Florida 2004 Cumulative Arbovirus Activity by County

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*Disclaimer: Please note that data are subject to change with confirmatory information.*

## 1. Human Surveillance

### Eastern Equine Encephalomyelitis (ICD Code 6220)

None.

### West Nile Virus (ICD Codes 6630 and 6631)

As of December 31, 2004, forty-two cases of West Nile virus infection have been confirmed in residents of seven Florida counties, with no new cases identified during recent weeks. Three cases were identified as Sarasota County residents who, during the two weeks prior to onset had travel history to another state where they are presumed to have been infected. Twenty-one of the cases were Miami-Dade residents, with onset dates from mid-June to September. There were seven cases in Duval (late July to October onsets), three cases in Broward (August - September onsets), three cases in Hillsborough (July - September onsets), four cases in Brevard (August - October onsets) and one in Gadsden (August onset) County.

The average age of the individuals is 58. The gender ratio is 17 females: 25 males and the diagnostic classifications are 34 neuro-invasive (6630): 8 fever (6631) cases. There have been two deaths. In addition, three viremic blood donors were identified; they are Miami-Dade County residents.

On December 10, Florida Department of Health Secretary Dr. John O. Agwunobi lifted the medical alerts for WN virus that had covered Brevard, Broward, Duval, Gadsden, Hillsborough and Miami-Dade counties. He also lifted the medical advisory for Pinellas County.

## 2. Animal Surveillance

### Eastern Equine Encephalomyelitis Virus

Thirty-eight counties have reported EEE virus activity. EEE-positive samples from 48 horses\* in 26 counties, no dead birds, 128 (including 5 unspecified alphavirus positive samples) sentinel chickens in 18 counties and 26 live wild birds\*\* in four counties were received. Date of disease onset (horses), date of death (birds), and date of first known positive bleed (sentinels, live wild birds) is shown in parentheses.

Alachua: 2 horses (1/9, 7/31), 9 sentinel chickens (5/10 x3, 6/08, 6/14, 7/26 x3, 8/30)

Bay: 4 sentinel chickens (11/30 x2, 12/14 x2)

Calhoun: 1 horse (11/08)

Citrus: 1 horse (6/25)

Clay: 3 horses (1/06, 4/16, 10/19)

Flagler: 5 sentinel chickens (4/26, 5/10, 5/17, 6/28 x2)

Gadsden: 1 horse (11/28)

Gilchrist: 1 horse (4/11)

Hendry: 1 sentinel chicken (7/06)

Hillsborough: 6 sentinel chickens (7/06, 7/13, 7/27 x3, 12/20)

Holmes: 2 horses (7/31, 9/18)

Indian River: 1 sentinel chicken (5/20)  
Jackson: 2 horses (7/28, 8/19)  
Jefferson: 1 horse (6/8), 1 sentinel chicken (6/20)  
Lafayette: 2 horses (11/09, 12/01)  
Lake: 1 horse (8/3)  
Leon: 19 sentinel chickens (7/30, 8/06 x2, 9/17, 10/08, 10/25 x3, 10/29 x3, 11/08 x3, 11/19 x3, 11/29, 12/10); 4 horses (8/23, 9/04, 11/08, 11/27)  
Levy: 1 horse (6/4)  
Liberty: 1 horse (8/18)  
Madison: 3 horses (7/20, 8/28, 11/08), 4 sentinel chickens (7/11, 8/1, 8/14, 8/22)  
Marion: 6 horses (4/12, 5/16, 6/17, 6/28 x2, 7/16), 1 sentinel chicken (7/17)  
Nassau: 1 horse (4/22), 10 sentinel chickens (7/05, 7/11, 8/01, 8/02 x2, 8/08, 8/15, 8/16, 8/30, 9/17)  
Okaloosa: 10 live wild birds (6 blue jays 2/17, 3/12, 6/4, 6/18, 10/8, 10/25; red-winged black bird 2/25; 2 cardinals 9/11, 9/18; house finch 9/18), 1 horse (11/29)  
Orange: 11 sentinel chickens (2/9, 2/23, 6/14, 6/28 x2, 7/01, 7/06 x2, 7/09, 7/19, 7/26), 1 horse (6/28)  
Osceola: 2 horses (6/9, 7/11)  
Palm Beach: 1 sentinel chicken (11/29)  
Pasco: 2 horses (7/15, 7/17)  
Polk: 1 horse (6/12)  
Pinellas: 1 sentinel chicken (1/26)  
Putnam: 1 horse (7/28), 1 sentinel chicken (8/6)  
Santa Rosa: 3 live wild birds (mockingbird 3/2; cardinal 3/3; blue jay 6/23)  
St Johns: 11 sentinel chickens (6/1 x2, 6/14, 7/5 x2, 7/19, 8/2, 8/9, 8/16, 8/23, 9/13)  
Taylor: 2 horses (1/16, 12/06)  
Union: 2 horses (5/24, 8/10)  
Volusia: 4 sentinel chickens (3/22, 8/09 x2, 12/13)  
Walton: 38 sentinel birds (1/21 x3, 2/12, 2/25 x5, 3/15, 3/16, 3/29, 8/11, 8/23, 9/02, 11/01, 11/02 x2, 11/05, 11/10 x2, 11/15, 11/16 x3, 11/22 x2, 11/29 x2, 12/01 x2, 12/13, 1/03/05, "alphavirus" 7/16 x2, 11/10 x2, 11/15), 5 live wild birds (2 blue jays 3/23, 8/03; 3 cardinals 7/22, 10/13, 10/27), 1 horse (11/28)  
Wakulla: 2 horses (7/22, 8/19)  
Washington: 8 live wild birds (2 mockingbirds 9/22, 10/13; 6 cardinals 9/08, 9/22 x2, 10/6 x2, 10/13)

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### Highlands J Virus

Highlands J is a close relative to EEE but is not as pathogenic in humans or as virulent in animals. To date, fifteen of Florida's 67 counties have reported HJ virus activity in 61 sentinel chickens and a wild bird\*\*. Date of first known positive bleed (sentinels, live wild birds) is shown in parentheses.

Alachua: 1 sentinel chicken (8/30)  
Bay: 3 sentinel chickens (8/17, 11/30, 12/07)  
Charlotte: 1 sentinel chicken (12/03)  
Flagler: 2 sentinel chickens (6/21, 10/4)  
Hillsborough: 5 sentinel chickens (3/16, 6/08, 6/15, 6/22, 6/29)  
Jackson: 1 sentinel chicken (11/??)  
Leon: 19 sentinel chickens (8/13 x2, 9/07, 9/24, 10/08, 10/15, 11/08 x7, 11/12, 11/19 x2, 12/03 x3)  
Marion: 2 sentinel chickens (6/10, 7/09)  
Nassau: 5 sentinel chickens (6/07, 7/18, 8/16, 9/10, 10/03)

Orange: 6 sentinel chickens (3/12, 3/15 x2, 4/05, 6/07 x2)  
Palm Beach: 3 sentinel chickens (12/06 x3)  
Putnam: 2 sentinel chickens (6/25, 8/20)  
Santa Rosa: 1 live wild bird (blue jay 4/3)  
Volusia: 4 sentinel chickens (2/23, 3/15 x2, 3/22)  
Walton: 7 sentinel birds (3/15 x2, 3/29, 4/08, 7/15, 11/15, 12/06)

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### St. Louis Encephalitis Virus

Positive samples from eleven sentinel chickens in four counties were received. Date of first known positive bleed is shown in parentheses.

Brevard: 1 sentinel chicken (8/24)  
Lee: 5 sentinel chickens (1/5 x2, 1/19 x2, 1/20)  
Pinellas: 2 sentinel chickens (5/17 x2)  
St. Lucie: 3 sentinel chickens (8/26, 9/30, 10/01)

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### West Nile Virus

Thirty-five of Florida's 67 counties have reported confirmed WN virus activity. WN-positive samples from 337 sentinel chickens (including 4 unspecified flavivirus positive samples) in 27 counties, six horses\* in four counties, 30 dead birds in four counties, and five live wild birds\*\* in three counties were received. Date of first known positive bleed (sentinels, live wild birds), date of death (birds) and date of disease onset (horses, others) is shown in parentheses.

Alachua: 1 sentinel chicken (8/30)  
Bay: 9 sentinel chickens (8/3, 8/17 x2, 8/24 x4, 9/7, 9/28)  
Brevard: 42 sentinel chickens (7/1, 7/8, 7/9 x3, 7/16 x3, 7/19, 7/22, 7/30 x2, 8/4, 8/16, 8/17 x5, 8/18 x2, 8/20, 8/25 x2, 8/26 x6, 8/27, 8/30, 9/10, 9/13 x2, 9/14 x2, 9/15, 9/17, 9/22, 10/14, 10/21)  
Broward: 2 horses (8/1, 9/2)  
Charlotte: 2 sentinel chickens (12/03 x2)  
Collier: 3 sentinel chickens (2/09, 5/25, 12/13)  
Duval: 8 sentinel chickens (9/16, 9/20 x3, 9/28, 10/5, 10/18, 10/25)  
Gadsden:  
Hendry: 6 sentinel chickens (3/12, 9/8, 9/20, 9/24, 10/8, 10/15)  
Hillsborough: 2 dead birds (crow 6/21, blue jay 7/8), 51 sentinel chickens (4/06 x2, 4/27 x2, 5/11 x5, 6/02 x2, 6/08, 6/15 x3, 6/22 x3, 6/29 x4, 7/06, 7/13 x2, 7/27 x4, 8/10, 8/17, 9/08, 9/13, 9/21 x3, 10/12 x2, 10/19 x2, 10/26 x2, 11/02 x2, 11/16, 11/23, 12/14 x2, 12/20, 12/27 x2)  
Holmes: 1 horse (8/2)  
Indian River: 11 sentinel chickens (1/08 x2, 3/17, 3/25, 4/22, 5/20 x2, 5/27 x2, 8/12, 8/27)  
Lee: 6 sentinel chickens (1/05, 1/06 x2, 1/19, 4/20, 8/9)  
Madison: 3 sentinel chickens (9/11x2, 9/26)  
Manatee: 8 sentinel chickens (1/12 x2, 3/29, 3/30 x2, 4/12, 8/30, 9/20)  
Marion: 1 dead bird (cardinal 2/04)  
Martin: 1 sentinel chicken (5/28)  
Miami-Dade: 26 dead birds (18 blue jays 1/14, 6/19 7/16, 7/19 x3, 7/21 x4, 7/22, 8/2, 8/4, 8/5 x2, 8/9, 8/20, 9/9; 2 canaries 7/10 x2; 1 cuckoo 7/19; 2 mockingbirds 7/19, 8/2; 3 doves 7/19, 8/5, 8/9); 2 horses (~6/23, 7/31), 9 sentinel chickens (7/26, 8/2, 8/9, 8/23 x2, 8/24 x2, 9/13, 9/28)  
Nassau: 8 sentinel chickens (4/19, 8/23 x2, 8/30, 9/10 x2, 10/3, 10/10)  
Okaloosa: 2 live wild birds (blue jay 2/17; brown thrasher 2/6)

Orange: 9 sentinel chickens (1/12, 1/20, 5/10, 8/19, 9/20, 9/24, 10/1, 10/25, 12/10), 1 dead bird (blue jay 10/20)  
Osceola: 13 sentinel chickens (8/24 x4, 9/7 x3, 9/14, 9/21 x2, 9/28, 10/12 x2)  
Palm Beach: 20 sentinel chickens (2/16, 7/12 x2, 7/19 x2, 7/26, 8/2x2, 8/9x4, 8/16 x2, 8/30 x4, 9/13, 9/20)  
Pasco: 2 sentinel chickens (8/9, 10/26)  
Pinellas: 36 sentinel chickens (1/20, 1/26, 2/16 x2, 2/23 x2, 3/15, 8/16 x2, 8/23, 8/30 x2, 9/7 x3, 9/13, 9/20 x2, 10/04 x4, 10/11 x2, 10/18, 10/25 x2, 11/08, 11/15 x3, 11/22 x2, 11/29, 12/20 x2)  
Polk: 1 horse (1/09)  
Putnam: 5 sentinel chickens (5/20, 5/21, 8/5, 9/10, 9/23)  
Santa Rosa: 2 live wild birds (house sparrow 3/17; cardinal 7/22)  
Sarasota: 2 sentinel chickens (1/12, 2/02)  
Seminole: 6 sentinel chickens (8/26 x2, 8/27, 9/16, 9/30, 12/09)  
St Johns: 14 sentinel chickens (8/23 x2, 8/30, 9/20 x2, 9/27, 9/28 x3, 10/4, 10/11, 10/18, 11/08, 11/29)  
St Lucie: 3 sentinel chickens (8/12, 8/26 x2)  
Volusia: 15 sentinel chickens (1/05x6, 1/12x2, 8/30, 9/13 x3, 10/4, 10/11, 10/18)  
Walton: 44 sentinel birds (1/10 x2, 1/12, 1/13 x2, 1/15 x2, 1/20, 1/22, 1/26, 2/02 x2, 2/09 x2, 2/12 x2, 2/18, 2/19 x3, 2/24 x2, 2/25, 3/4 x2, 3/5, 3/22, 3/25, 4/2, 4/5, 4/12, 5/10, 5/12, 5/13, 5/17, 8/30, 9/13, 9/29 & 10/07 "flavivirus", 10/21, 11/08, 11/08 "flavivirus", 12/01 x2 "flavivirus")  
Washington: 1 live wild bird (blue jay 1/27)

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### **3. Mosquito Surveillance**

Duval: West Nile Virus was detected in two pools of *Cx. nigripalpus*, collected on 9/14 and 9/15.

Palm Beach: West Nile Virus was detected in a pool of *Cx. nigripalpus* collected on 8/18.

Sarasota: California Group Virus was detected in a pool of *Oc. atlanticus* collected circa 8/13.

St. Johns: California Group Virus was detected in 2 pools of *Oc. atlanticus* collected on 7/01 and 7/08, and one pool of *Ps. columbiae* collected on 8/16.

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By the end of 2003, 60 of Florida's 67 counties had reported confirmed WN activity (with 94 human cases), 52 had reported EEE activity (including three human cases), five counties had reported SLE activity (no human cases), and one county (Palm Beach) had reported eight locally-acquired cases of malaria. In 2002, 56 counties reported WN (with 35 human WNV cases), 27 counties reported EEE (with one human EEE case), and two counties reported SLE activity (with a single human case).

For more surveillance information, please see the DOH web site at:

<http://www.doh.state.fl.us/environment/community/arboviral/index.htm> or call the Disease Outbreak Information Hotline which offers updates on medical alert status and surveillance at 888-880-5782.

### ***Current Bird Mortality Reporting Guidelines:***

1. Report dead birds to [www.wildflorida.org/bird/](http://www.wildflorida.org/bird/). From that site, you can link to online bird identification sites. Under most circumstances, testing is not warranted. There is value in the reported information submitted even if the bird is not tested. The Florida Fish and Wildlife Conservation Commission (FWCC) tracks all clusters of wild bird mortality in the state.

2. The DOH Lab in Tampa still accepts dead bird specimens for testing, as long as they are shipped in good condition. When there is a need to verify the cause of an increased corvid (i.e. crows and jays) or overall bird mortality, a representative sample may be submitted to the Tampa laboratory for arboviral testing. Instructions for submission of dead birds are found at: <http://www.doh.state.fl.us/environment/community/arboviral/index.htm> Select "How Do I Report?" and then choose "Protocol for Collecting and Shipping Bird Carcasses" under "Dead Birds" subtopic.

3. Clusters of mortality of single non-corvid species or families of birds such as doves, ducks or pelicans are usually not caused by WN virus and should not be submitted for WN virus testing. However, we still want them reported to the FWCC website.

4. If personnel are not able to offer pick-up service, yet they desire to collect specimens, determine a drop-off station and provide the caller with safe handling instructions. A county may modify their testing approach depending on the availability of other surveillance systems in the county.

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Acknowledgements/data sources: county health departments, Department of Health Laboratories, Department of Agriculture and Consumer Services, mosquito control agencies, Florida Fish and Wildlife Conservation Commission, medical providers and veterinarians.

\*Equine cases are determined by the Department of Agriculture and Consumer Services.

\*\*Wild captured bird information is provided by the John A. Mulrennan Public Health Entomology Research and Education Center. For more information, go to <http://www.pherec.org/DECS>, and click on "Arbovirus Ecology" to download the database, then the "Bird Serology" tab.