RUTGERS
New Jersey Agricultural Experiment Station

# VECTOR SURVEILLANCE IN NEW JERSEY

## EEE, WNV, SLE and LAC

CDC WEEK 41: October 10 to October 16, 2010

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Prepared by Lisa M. Reed, Scott Crans and Mark Robson at the Center for Vector Biology, Rutgers University.
Supported by funding from the NJ State Mosquito Control Commission.

## *Culiseta melanura* and Eastern Equine Encephalitis

| SITE | Inland / Coastal | Historic Mean | Current Weekly Mean | Total Tested to Date* | Total Pools Submitted | EEE Isolations | MFIR |
|---|---|---|---|---|---|---|---|
| **Green Bank** (Burlington County) | Coastal | 0.87 | 0.74 | 239†† | 19 | 0 | 0 |
| **Corbin City** (Atlantic County) | Coastal | 0.32 | 0.08 | 369 | 21 | 0 | 0 |
| **Dennisville** (Cape May County) | Coastal | 1.41 | 0.06 | 725 | 28 | 2 | 2.76 |
| **Winslow** (Camden County) | Inland | 0.92 | 0.12 | 2166† | 52 | 3 | 1.39 |
| **Centerton** (Salem County) | Inland | 0.83 | 0.10 | 1612 | 42 | 3 | 1.86 |
| **Turkey Swamp** (Monmouth County) | Inland | 0.09 | 0.02 | 763† | 66 | 0 | 0 |
| **Glassboro** (Gloucester County) | Inland | 1.47 | 0.00 | 513 | 19 | 0 | 0 |

*Including trial run last week in May. † adjusted from previous week †† this weeks total not included, to be in next week's report

**Remarks**: There are **21 positive EEE pools** to report at this time, no changes from last week. Nineteen positive pools are from *Cs. melanura*, from both traditional resting box monitoring sites (8 positives) and county-run traps (11 positives). *Culiseta melanura* mosquitoes forming 245 pools from 6386 mosquitoes out of the resting box sites have been tested. An additional 7015 *Cs. melanura* forming 415 pools have been sampled by the counties using a variety of traps (table to the left), producing a total of 11 positive pools. The remaining two pools were from *Culex erraticus*, collected previously.

**Additional *Cs. melanura* trapped by counties**
*traps with positives indicated in **BOLD**.

| County | Trap types* | Number collected | Number of positives | MFIR |
|---|---|---|---|---|
| Atlantic | $CO_2$ | 17 | | |
| Burlington | **$CO_2$** | 2582 | 4 | 1.55 |
| Camden | Gravid | 3 | | |
| Cape May | $CO_2$, Gravid, **RB** | 2123 | 2 | 0.94 |
| Cumberland | Gravid, **RB** | 509 | 2 | 3.93 |
| Gloucester | **RB** | 1516 | 3 | 1.98 |
| Ocean | $CO_2$, Gravid, RB | 232 | | |
| Salem | $CO_2$ | 1 | | |
| Sussex | $CO_2$, NJLT | 32 | | |
| **TOTAL** | | **7015** | **11** | **1.57** |

The table below indicates non-*melanura* species tested for EEE:

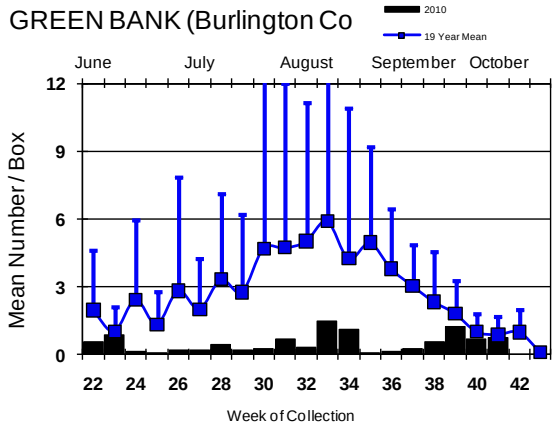
| Species other than *Cs. melanura* | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|
| *Aedes albopictus* | 39 | 313 | | |
| *Aedes canadensis canadensis* | 8 | 117 | | |
| *Aedes cantator* | 3 | 3 | | |
| *Aedes japonicus* | 6 | 23 | | |
| *Aedes sollicitans* | 15 | 265 | | |
| *Aedes taeniorhynchus* | 3 | 10 | | |
| *Aedes triseriatus* | 18 | 57 | | |
| *Aedes trivittatus* | 1 | 2 | | |
| *Aedes vexans* | 28 | 374 | | |
| *Anopheles bradleyi* | 44 | 481 | | |
| *Anopheles crucians* | 2 | 122 | | |
| *Anopheles punctipennis* | 12 | 85 | | |
| *Anopheles quadrimaculatus* | 18 | 177 | | |
| *Coquillettidia perturbans* | 54 | 897 | | |
| *Culex erraticus* | 167 | 4459 | 2 | 0.45 |
| *Culex pipiens* | 419 | 3013 | | |
| *Culex restuans* | 15 | 32 | | |
| *Culex salinarius* | 59 | 698 | | |
| *Culex* spp. | 250 | 5029 | | |
| *Culex territans* | 2 | 2 | | |
| *Culiseta minnesotae* | 2 | 2 | | |
| *Psorophora columbiae* | 1 | 5 | | |
| *Uranotaenia sapphirina* | 1 | 6 | | |
| **State Total** | **1165** | **16172** | **2** | **0.12** |

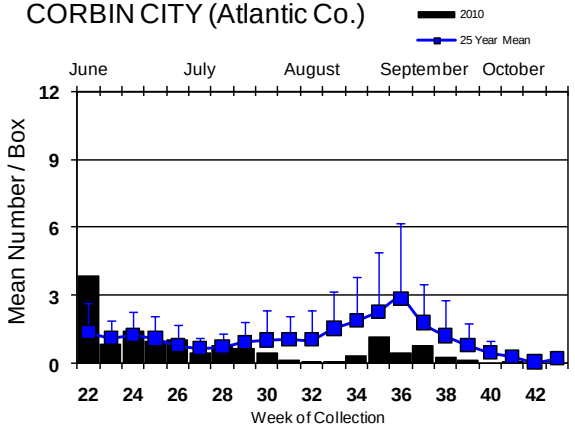
**Horses and Humans:** There are no positive horses or human cases to date.

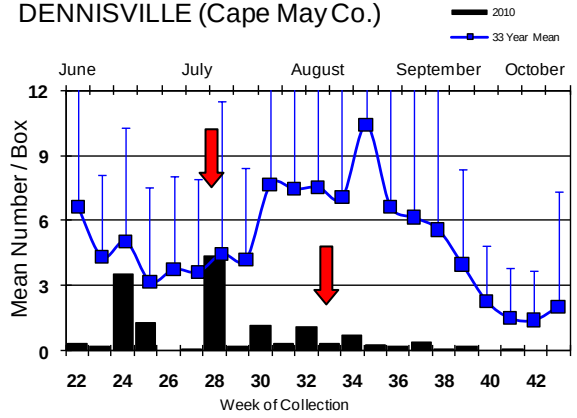
**Horses and Vaccinations:** The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

# *Culiseta melanura* Population Graphs

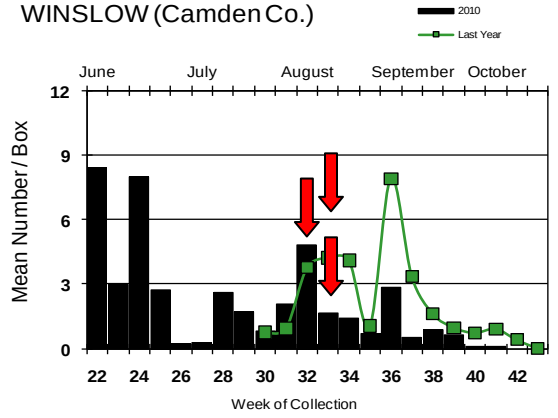
## Coastal

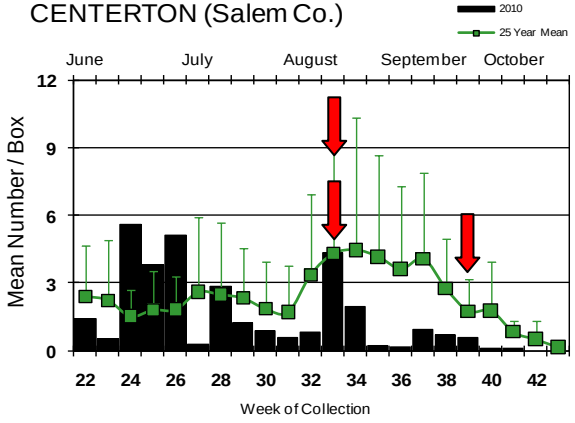


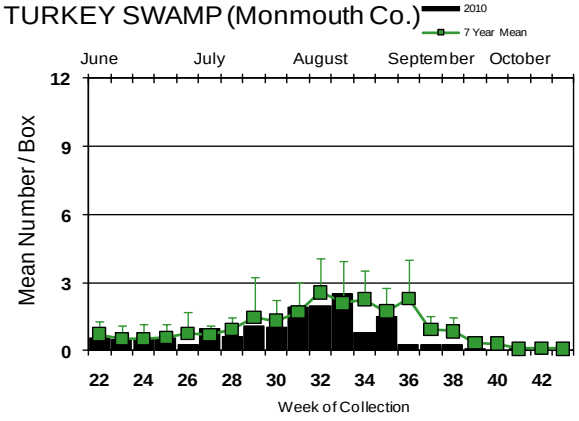




## Inland

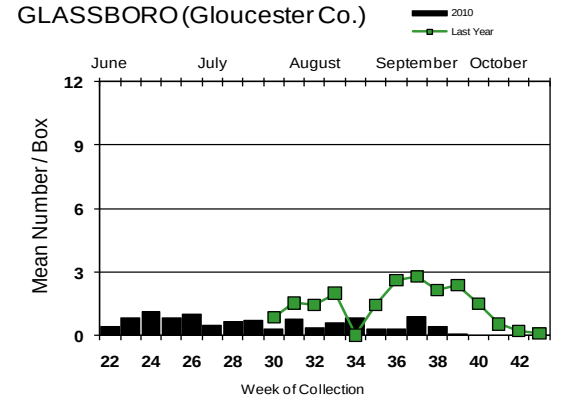



Green Bank still showed higher populations in *Cs. melanura* atypical for the site, in contrast to the other traditional monitoring sites. Now, populations from there are near historical values. Both Dennisville and Corbin City increased from their zero values of last week, but continue to show very low numbers. Light trap data for this species are also showing a seasonal decline.

= Positive pool(s) detected.



**EEE in US (2010 cumulative cases)**: (Black or Red = previous + new reported cases occurring)

- equine: 8(AL) 91(FL) 9(GA) 11(IN) 4(MA) 24(MS) 56(MI) 4(NC) 1(NE) 1(NH) 8(NY) 4(OH) 1(SC) 1(TX) 1(VA) 1(WI)
- mosquito: 3(CT) 2(GA) 6(FL) 3(IN) 65(MA) 1(NH) 21(NJ) 65(NY) 2(RI) 8(VA)
- sentinel: 2(AL) 156/34(FL chickens/wild) 1 turkey(ME) 3(SC) 19(TX) 5(VA)
- human: 1(TX-out of country acquired case) 4(FL) 1(MA>RI) 1(MA) 3(MI) 1(NY)

# West Nile Virus

**West Nile in US (2010 cumulative cases)**: Single black values indicate no change from previous week. Black values / red values equals previous week/New totals.
Note: Data reported by all states should be considered provisional and subject to change. Sources for this table can be found here.

| | Birds | Mosquito Pools | Sentinels | Horses | Humans |
|---|---|---|---|---|---|
| Alabama | | | | | 3 |
| Alaska | | | | | |
| Arizona | 5 | 317 | 3 | 2 | 126 |
| Arkansas | | | | | 5/6 |
| California | 385/30 | 1244/1267 | 241/253 | 18 | 66/68 |
| Colorado | 9 | 47 | | 7 | 68/76 |
| Connecticut | | 217/219 | | | 8 |
| Delaware | | 1 | 13/15 | | |
| DC | | | | | |
| Florida | 1Flavi | | 247/325 | 16/17 | 7/8 |
| Georgia | 3/4 | 85/93 | | 1/2 | 11 |
| Hawaii | | | | | |
| Idaho | | | | 1/3 | 1 |
| Illinois | 63 | 2187/2206 | | 1 | 34/44 |
| Indiana | 1 | 318/322 | | 6 | 8 |
| Iowa | | 7 | 12/14 | 1 | 6/7 |
| Kansas | | | | | 6 |
| Kentucky | 1 | 5 | | 5/6 | 2/3 |
| Louisiana | | 516/550 | 18/21 | 3 | 27/29 |
| Maine | | 1 | | | |
| Maryland | | 8 | | 1 | 10/12 |
| Mass. | | 121 | | 1 | 5/6 |
| Michigan | 3 | 1 | | 1 | 21/23 |
| Minnesota | 3 | 9/10 | | | 5 |
| Mississippi | | 5/6 | | 2 | 6 |
| Missouri | | 54 | | 1 | 3 |

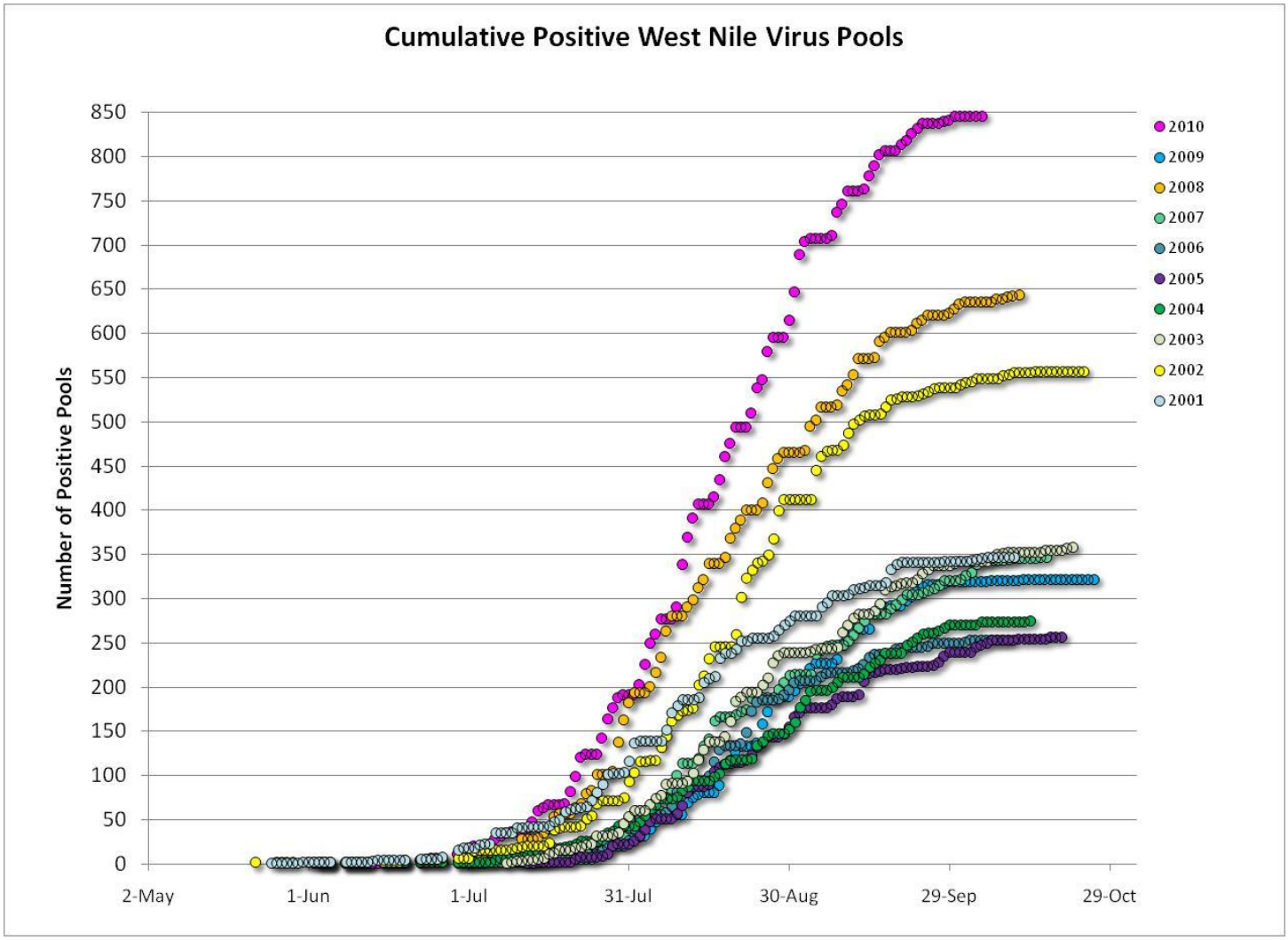
| | Birds | Mosquito Pools | Sentinels | Horses | Humans |
|---|---|---|---|---|---|
| Montana | | 2 | | | |
| Nebraska | 9 | 111 | | 0 | 38/39 |
| Nevada | 1 | 19 | | 2 | 3 |
| New Hampshire | | 1 | | 0 | 1 |
| New Jersey | 128/129 | 845/846 | 0 | 2 | 24 |
| New Mexico | | | | | 17 |
| New York | 13 | 895/900 | | 0 | 115/125 |
| North Carolina | | | 1 | 1 | |
| North Dakota | | | | 3 | 8 |
| Ohio | | 228 | | 0 | 2 |
| Oklahoma | | 3 | | | |
| Oregon | 0 | 3 | 0 | 0 | 0 |
| Pennsylvania | 20 | 1053/1057 | | 7 | 18/21 |
| Rhode Island | | 2 | | | |
| South Carolina | | 12 | | | |
| South Dakota | | 1 | | | 20 |
| Tennessee | 0 | 335/359 | | 2 | 1/2 |
| Texas | 1/2 | 120 | | 6 | 45/60 |
| Utah | | 29/31 | 1 | 3 | 1 |
| Vermont | 1 | 9 | | 0 | 0 |
| Virginia | | 104 | 13 | | 2 |
| Washington | 2 | 126 | | 0 | 0 |
| West Virginia | 0 | 26 | | 0 | 0 |
| Wisconsin | 4 | 3 | | 0 | 1 |
| Wyoming | | 16 | | 1 | 5/6 |

**Protocol:** New Jersey Department of Health and Senior Services (NJDHSS Public Health and Environmental Laboratories, PHEL) and the Cape May County Division of Mosquito Control tests mosquito pools using RT-PCR Taqman techniques.

**Mosquito Species Submitted for West Nile Virus Testing through 18 Oct 2010**

| Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|
| *Aedes albopictus* | 695 | 3966 | 9 | 2.269 |
| *Aedes canadensis canadensis* | 29 | 485 | | |
| *Aedes cantator* | 10 | 24 | | |
| *Aedes japonicus* | 392 | 1753 | | |
| *Aedes sollicitans* | 24 | 323 | | |
| *Aedes sticticus* | 1 | 1 | | |
| *Aedes stimulans* | 3 | 8 | | |
| *Aedes taeniorhynchus* | 9 | 116 | | |
| *Aedes triseriatus* | 178 | 387 | | |
| *Aedes trivittatus* | 9 | 41 | | |
| *Aedes vexans* | 144 | 1571 | | |
| *Anopheles barberi* | 2 | 2 | | |
| *Anopheles bradleyi* | 59 | 529 | | |
| *Anopheles crucians* | 3 | 124 | | |
| *Anopheles punctipennis* | 62 | 434 | | |
| *Anopheles quadrimaculatus* | 122 | 1217 | | |
| *Anopheles walkeri* | 5 | 29 | | |
| *Coquillettidia perturbans* | 108 | 1655 | 1 | 0.604 |
| *Culex erraticus* | 181 | 4512 | | |
| *Culex pipiens* | 1047 | 20069 | 173 | 8.620 |
| *Culex restuans* | 382 | 1897 | 6 | 3.163 |
| *Culex salinarius* | 84 | 1065 | 1 | 0.939 |
| *Culex spp.* | 3023 | 103490 | 641 | 6.194 |
| *Culex territans* | 3 | 4 | | |
| *Culiseta inornata* | 1 | 1 | | |
| *Culiseta melanura* | 659 | 11977 | 15 | 1.252 |
| *Culiseta minnesotae* | 2 | 2 | | |
| *Orthopodomyia signifera* | 5 | 6 | | |
| *Psorophora ciliata* | 1 | 1 | | |
| *Psorophora columbiae* | 5 | 13 | | |
| *Psorophora cyanescens* | 1 | 1 | | |
| *Psorophora ferox* | 4 | 5 | | |
| *Uranotaenia sapphirina* | 3 | 13 | | |
| State Total | **7256** | **155721** | **846** | **5.433** |

**Remarks:** The number of positive WNV mosquito pools to date is 846 with the addition of one positive *Culex* Mix pool. This year continues to be ahead of previous years (see graph next page – note that 2008 was adjusted to account for the results of additional pools tested after the end of the season). This week, the trend for new positive pools continues to level out.




**Humans, Horses and Wild Birds:** To date in 2010, twenty-four human cases of West Nile virus have been detected (four additional from last week) and include the following counties: Atlantic (1 case), Burlington (2), Camden (5), Cumberland (1), Essex (1), Hudson (2), Mercer (3), Monmouth (2), Ocean (2), Passaic County (3), Salem (1) and Union (1). For more details plus information about WNV, see the West Nile Virus Alert and FAQ Sheets from the NJ Department of Health and Senior Services, Communicable Disease Service, Infectious and Zoonotic Disease Program: http://www.state.nj.us/health/cd/westnile/enceph.htm

To date, two horses have been infected with WNV. One is in Gloucester County, with an onset of symptoms on 18 Sept, and the other in Atlantic County with onset date of 17 August. No vaccinations were done for either horse.

One hundred and twenty-nine dead, wild birds out of 239 tested are been positive for WNV, continuing to be well ahead of last year's results in terms of number and timing. This year's positive birds include 115/160 corvids (25 positives/32 tested American Crows, 33/46 Fish Crows, 46/61 Blue Jays and 11/21 unidentified Crows), 2/7 Hawks (unknown species) and 12/70 unknown species. Fish Crows, *Corvus ossifragus*, have appeared in number this year as compared to last year.

| 2010 Positive Mosquito pools to date / Total Mosquito Pools Submitted | This time last year |
|---|---|
| 846/ 7256 (11.7%) | 310/ 7534 (4.1%) |
| 2010 Positive Birds to date / Total Birds Submitted | This time last year |
| 129/ 239 (54.0%) | 31/ 116 (26.7%) |

**WNV Results by County through 18 Oct 2010**

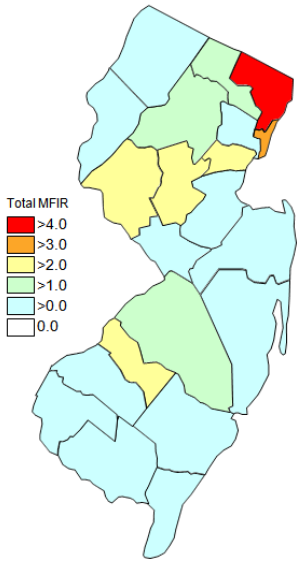
| County | Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|---|
| **Atlantic** | | **287** | **6684** | **60** | **8.977** |
| | *Aedes albopictus* | 36 | 312 | 1 | 3.205 |
| | *Aedes canadensis canadensis* | 3 | 56 | | |
| | *Aedes cantator* | 3 | 14 | | |
| | *Aedes japonicus* | 11 | 23 | | |
| | *Aedes sollicitans* | 3 | 11 | | |
| | *Aedes taeniorhynchus* | 1 | 24 | | |
| | *Aedes triseriatus* | 4 | 8 | | |
| | *Aedes trivittatus* | 3 | 26 | | |
| | *Aedes vexans* | 29 | 434 | | |
| | *Anopheles bradleyi* | 7 | 18 | | |
| | *Anopheles punctipennis* | 7 | 110 | | |
| | *Anopheles quadrimaculatus* | 5 | 9 | | |
| | *Coquillettidia perturbans* | 10 | 37 | | |
| | *Culex erraticus* | 8 | 28 | | |
| | *Culex* spp. | 123 | 5099 | 57 | 11.179 |
| | *Culex territans* | 1 | 1 | | |
| | *Culiseta melanura* | 32 | 473 | 2 | 4.228 |
| | *Orthopodomyia signifera* | 1 | 1 | | |
| **Bergen** | | **223** | **15612** | **140** | **8.967** |
| | *Aedes albopictus* | 5 | 30 | | |
| | *Aedes japonicus* | 3 | 14 | | |
| | *Aedes triseriatus* | 1 | 1 | | |
| | *Culex* spp. | 214 | 15567 | 140 | 8.993 |
| **Burlington** | | **337** | **9480** | **46** | **4.852** |
| | *Aedes albopictus* | 30 | 289 | | |
| | *Aedes canadensis canadensis* | 5 | 111 | | |
| | *Aedes japonicus* | 4 | 17 | | |
| | *Aedes sollicitans* | 6 | 185 | | |
| | *Aedes taeniorhynchus* | 2 | 9 | | |
| | *Aedes triseriatus* | 1 | 7 | | |
| | *Aedes vexans* | 25 | 367 | | |
| | *Anopheles bradleyi* | 8 | 190 | | |
| | *Anopheles crucians* | 2 | 122 | | |
| | *Anopheles punctipennis* | 1 | 13 | | |
| | *Anopheles quadrimaculatus* | 4 | 11 | | |
| | *Coquillettidia perturbans* | 9 | 352 | | |
| | *Culex erraticus* | 17 | 635 | | |
| | *Culex pipiens* | 8 | 107 | 1 | 9.346 |
| | *Culex restuans* | 1 | 1 | | |
| | *Culex salinarius* | 9 | 51 | | |
| | *Culex* spp. | 113 | 4180 | 42 | 10.048 |
| | *Culiseta melanura* | 89 | 2821 | 3 | 1.063 |
| | *Culiseta minnesotae* | 1 | 1 | | |
| | *Psorophora columbiae* | 1 | 5 | | |
| | *Uranotaenia sapphirina* | 1 | 6 | | |
| **Camden** | | **260** | **5979** | **76** | **12.711** |
| | *Aedes albopictus* | 45 | 152 | 3 | 19.737 |
| | *Aedes canadensis canadensis* | 1 | 1 | | |
| | *Aedes japonicus* | 22 | 35 | | |

| | | | | | |
|---|---|---|---|---|---|
| | *Aedes triseriatus* | 2 | 2 | | |
| | *Aedes trivittatus* | 1 | 1 | | |
| | *Aedes vexans* | 3 | 50 | | |
| | *Anopheles punctipennis* | 5 | 7 | | |
| | *Anopheles quadrimaculatus* | 2 | 2 | | |
| | *Culex erraticus* | 2 | 8 | | |
| | *Culex pipiens* | 1 | 28 | | |
| | *Culex* spp. | 139 | 4625 | 71 | 15.351 |
| | *Culex territans* | 1 | 2 | | |
| | *Culiseta melanura* | 31 | 1055 | 2 | 1.896 |
| | *Othopodomyia signifera* | 2 | 3 | | |
| | *Uranotaenia sapphirina* | 1 | 1 | | |
| **Cape May** | | **1882** | **19158** | **11** | **0.574** |
| | *Aedes albopictus* | 125 | 223 | | |
| | *Aedes canadensis canadensis* | 3 | 6 | | |
| | *Aedes cantator* | 3 | 3 | | |
| | *Aedes japonicus* | 50 | 82 | | |
| | *Aedes sollicitans* | 9 | 80 | | |
| | *Aedes taeniorhynchus* | 6 | 83 | | |
| | *Aedes triseriatus* | 43 | 70 | | |
| | *Aedes vexans* | 10 | 201 | | |
| | *Anopheles bradleyi* | 33 | 306 | | |
| | *Anopheles punctipennis* | 5 | 13 | | |
| | *Anopheles quadrimaculatus* | 59 | 807 | | |
| | *Coquillettidia perturbans* | 16 | 157 | | |
| | *Culex erraticus* | 133 | 3743 | | |
| | *Culex pipiens* | 600 | 6437 | 6 | 0.932 |
| | *Culex restuans* | 316 | 1372 | 2 | 1.458 |
| | *Culex salinarius* | 54 | 737 | 1 | 1.357 |
| | *Culex* spp. | 193 | 1436 | 1 | 0.696 |
| | *Culiseta melanura* | 224 | 3402 | 1 | 0.294 |
| **Cumberland** | | **81** | **720** | **1** | **1.389** |
| | *Aedes albopictus* | 13 | 58 | | |
| | *Aedes triseriatus* | 7 | 10 | | |
| | *Anopheles bradleyi* | 3 | 4 | | |
| | *Anopheles punctipennis* | 3 | 4 | | |
| | *Anopheles quadrimaculatus* | 5 | 13 | | |
| | *Culex erraticus* | 9 | 61 | | |
| | *Culex pipiens* | 10 | 45 | | |
| | *Culex restuans* | 6 | 15 | | |
| | *Culex territans* | 1 | 1 | | |
| | *Culiseta melanura* | 24 | 509 | 1 | 1.965 |
| **Essex** | | **323** | **3612** | **25** | **6.921** |
| | *Aedes albopictus* | 58 | 195 | | |
| | *Aedes japonicus* | 40 | 300 | | |
| | *Aedes sollicitans* | 1 | 18 | | |
| | *Aedes stimulans* | 1 | 3 | | |
| | *Aedes triseriatus* | 21 | 42 | | |
| | *Aedes vexans* | 23 | 139 | | |
| | *Culex* spp. | 179 | 2915 | 25 | 8.576 |
| **Gloucester** | | **462** | **11421** | **117** | **10.244** |
| | *Aedes albopictus* | 36 | 324 | 1 | 3.086 |

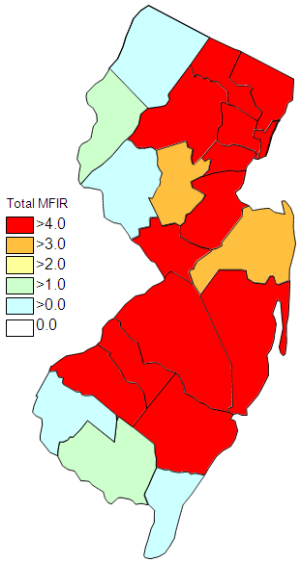
| | | | | | |
|---|---|---|---|---|---|
| | *Aedes japonicus* | 6 | 27 | | |
| | *Aedes vexans* | 4 | 70 | | |
| | *Anopheles barberi* | 1 | 1 | | |
| | *Anopheles punctipennis* | 6 | 64 | | |
| | *Anopheles quadrimaculatus* | 4 | 46 | | |
| | *Coquillettidia perturbans* | 5 | 15 | 1 | 66.667 |
| | *Culex pipiens* | 291 | 9025 | 112 | 12.410 |
| | *Culiseta melanura* | 109 | 1849 | 3 | 1.622 |
| **Hudson** | | **225** | **11266** | **94** | **8.344** |
| | *Aedes albopictus* | 1 | 25 | | |
| | *Culex* spp. | 224 | 11241 | 94 | 8.362 |
| **Hunterdon** | | **268** | **12100** | **11** | **0.909** |
| | *Aedes albopictus* | 2 | 61 | | |
| | *Culex* spp. | 266 | 12039 | 11 | 0.914 |
| **Mercer** | | **241** | **5302** | **59** | **11.128** |
| | *Aedes albopictus* | 52 | 143 | 1 | 6.993 |
| | *Aedes japonicus* | 25 | 38 | | |
| | *Aedes triseriatus* | 4 | 5 | | |
| | *Aedes vexans* | 3 | 75 | | |
| | *Culex pipiens* | 105 | 4321 | 54 | 12.497 |
| | *Culex restuans* | 37 | 389 | 3 | 7.712 |
| | *Culex salinarius* | 12 | 264 | | |
| | *Culex* spp. | 3 | 67 | 1 | 14.925 |
| **Middlesex** | | **251** | **9876** | **53** | **5.367** |
| | *Aedes albopictus* | 11 | 74 | | |
| | *Aedes japonicus* | 3 | 21 | | |
| | *Aedes triseriatus* | 1 | 6 | | |
| | *Culex* spp. | 236 | 9775 | 53 | 5.422 |
| **Monmouth** | | **352** | **2633** | **9** | **3.418** |
| | *Aedes albopictus* | 68 | 426 | | |
| | *Aedes canadensis canadensis* | 10 | 89 | | |
| | *Aedes cantator* | 3 | 6 | | |
| | *Aedes japonicus* | 42 | 109 | | |
| | *Aedes sollicitans* | 4 | 27 | | |
| | *Aedes triseriatus* | 14 | 22 | | |
| | *Aedes vexans* | 5 | 12 | | |
| | *Anopheles barberi* | 1 | 1 | | |
| | *Anopheles crucians* | 1 | 2 | | |
| | *Anopheles punctipennis* | 4 | 8 | | |
| | *Anopheles quadrimaculatus* | 7 | 12 | | |
| | *Coquillettidia perturbans* | 6 | 10 | | |
| | *Culex erraticus* | 7 | 25 | | |
| | *Culex pipiens* | 1 | 1 | | |
| | *Culex restuans* | 2 | 2 | | |
| | *Culex salinarius* | 2 | 2 | | |
| | *Culex* spp. | 103 | 1107 | 8 | 7.227 |
| | *Culiseta melanura* | 69 | 769 | 1 | 1.300 |
| | *Orthopodomyia signifera* | 2 | 2 | | |
| | *Psorophora cyanescens* | 1 | 1 | | |

| | | | | | |
|---|---|---|---|---|---|
| **Morris** | | **251** | **7906** | **47** | **5.945** |
| | *Aedes albopictus* | 4 | 17 | | |
| | *Aedes japonicus* | 25 | 204 | | |
| | *Aedes triseriatus* | 1 | 1 | | |
| | *Aedes vexans* | 1 | 5 | | |
| | *Anopheles punctipennis* | 2 | 6 | | |
| | *Anopheles quadrimaculatus* | 3 | 82 | | |
| | *Coquillettidia perturbans* | 6 | 207 | | |
| | *Culex* spp. | 209 | 7384 | 47 | 6.365 |
| **Ocean** | | **327** | **4081** | **18** | **4.411** |
| | *Aedes albopictus* | 86 | 1004 | 1 | 0.996 |
| | *Aedes canadensis canadensis* | 7 | 222 | | |
| | *Aedes japonicus* | 33 | 96 | | |
| | *Aedes sollicitans* | 1 | 2 | | |
| | *Aedes sticticus* | 1 | 1 | | |
| | *Aedes triseriatus* | 12 | 29 | | |
| | *Aedes trivittatus* | 2 | 2 | | |
| | *Aedes vexans* | 6 | 19 | | |
| | *Anopheles bradleyi* | 4 | 6 | | |
| | *Anopheles punctipennis* | 5 | 8 | | |
| | *Anopheles quadrimaculatus* | 4 | 4 | | |
| | *Coquillettidia perturbans* | 13 | 103 | | |
| | *Culex erraticus* | 2 | 2 | | |
| | *Culex pipiens* | 1 | 2 | | |
| | *Culex restuans* | 5 | 6 | 1 | 166.667 |
| | *Culex salinarius* | 5 | 7 | | |
| | *Culex* spp. | 100 | 2332 | 15 | 6.432 |
| | *Culiseta inornata* | 1 | 1 | | |
| | *Culiseta melanura* | 37 | 232 | 1 | 4.310 |
| | *Psorophora ferox* | 2 | 3 | | |
| **Passaic** | | **146** | **1851** | **11** | **5.943** |
| | *Aedes albopictus* | 30 | 138 | | |
| | *Aedes japonicus* | 25 | 178 | | |
| | *Aedes triseriatus* | 10 | 21 | | |
| | *Aedes trivittatus* | 1 | 1 | | |
| | *Aedes vexans* | 1 | 3 | | |
| | *Anopheles punctipennis* | 4 | 8 | | |
| | *Anopheles quadrimaculatus* | 1 | 2 | | |
| | *Coquillettidia perturbans* | 4 | 44 | | |
| | *Culex* spp. | 69 | 1455 | 11 | 7.560 |
| | *Psorophora ferox* | 1 | 1 | | |
| **Salem** | | **309** | **2703** | **1** | **0.370** |
| | *Aedes albopictus* | 58 | 235 | | |
| | *Aedes cantator* | 1 | 1 | | |
| | *Aedes japonicus* | 23 | 29 | | |
| | *Aedes triseriatus* | 18 | 20 | | |
| | *Aedes vexans* | 27 | 148 | | |
| | *Anopheles bradleyi* | 4 | 5 | | |
| | *Anopheles punctipennis* | 5 | 5 | | |
| | *Anopheles quadrimaculatus* | 24 | 162 | | |
| | *Anopheles walkeri* | 4 | 5 | | |

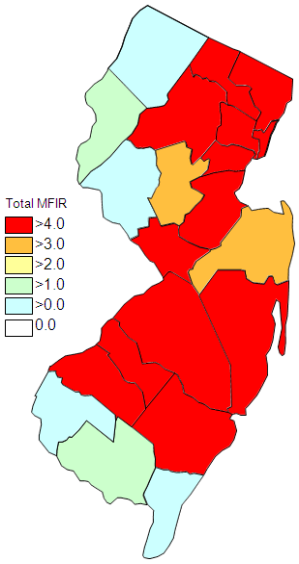
| | | | | | |
|---|---|---|---|---|---|
| | *Coquillettidia perturbans* | 11 | 22 | | |
| | *Culex erraticus* | 3 | 10 | | |
| | *Culex pipiens* | 12 | 26 | | |
| | *Culex restuans* | 7 | 9 | | |
| | *Culex* spp. | 84 | 1188 | | |
| | *Culiseta melanura* | 26 | 835 | 1 | 1.198 |
| | *Psorophora columbiae* | 2 | 3 | | |
| **Somerset** | | **266** | **3060** | **10** | **3.268** |
| | *Aedes albopictus* | 16 | 54 | | |
| | *Aedes japonicus* | 21 | 132 | | |
| | *Aedes triseriatus* | 18 | 77 | | |
| | *Anopheles punctipennis* | 11 | 35 | | |
| | *Anopheles quadrimaculatus* | 2 | 4 | | |
| | *Culex* spp. | 197 | 2754 | 10 | 3.631 |
| **Sussex** | | **385** | **9538** | **6** | **0.629** |
| | *Aedes japonicus* | 46 | 354 | | |
| | *Aedes stimulans* | 2 | 5 | | |
| | *Aedes triseriatus* | 16 | 48 | | |
| | *Coquillettidia perturbans* | 17 | 321 | | |
| | *Culex pipiens* | 18 | 77 | | |
| | *Culex restuans* | 8 | 103 | | |
| | *Culex salinarius* | 2 | 4 | | |
| | *Culex* spp. | 257 | 8593 | 6 | 0.698 |
| | *Culiseta melanura* | 18 | 32 | | |
| | *Culiseta minnesotae* | 1 | 1 | | |
| **Union** | | **168** | **5932** | **44** | **7.417** |
| | *Aedes albopictus* | 19 | 206 | 2 | 9.709 |
| | *Aedes japonicus* | 10 | 88 | | |
| | *Coquillettidia perturbans* | 1 | 9 | | |
| | *Culex* spp. | 138 | 5629 | 42 | 7.461 |
| **Warren** | | **212** | **6807** | **7** | **1.028** |
| | *Aedes japonicus* | 3 | 6 | | |
| | *Aedes triseriatus* | 5 | 18 | | |
| | *Aedes trivittatus* | 2 | 11 | | |
| | *Aedes vexans* | 7 | 48 | | |
| | *Anopheles punctipennis* | 4 | 153 | | |
| | *Anopheles quadrimaculatus* | 2 | 63 | | |
| | *Anopheles walkeri* | 1 | 24 | | |
| | *Coquillettidia perturbans* | 10 | 378 | | |
| | *Culex* spp. | 176 | 6104 | 7 | 1.147 |
| | *Psorophora ciliata* | 1 | 1 | | |
| | *Psorophora ferox* | 1 | 1 | | |
| **Grand Total** | | **7256** | **155721** | **846** | **5.433** |



Cumulative WNV activity in 2009.



WNV activity to 18 Oct, 2010.



WNV activity last week, 2010.

## Saint Louis Encephalitis (SLE) through 18 Oct 2010.

New Jersey will be selectively testing for SLE this year. SLE has had previous activity in New Jersey, most notably in 1964 and 1975 (CDC's SLE website), the latter prompting the surveillance reporting by Rutgers. SLE is a flavivirus and has a similar transmission pattern to West Nile, with *Culex* species as the predominant vectors.

No pools tested positive to date for 2010.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|---|
| **Burlington** | | **316** | **9238** | | |
| | *Aedes albopictus* | 30 | 289 | | |
| | *Aedes canadensis canadensis* | 4 | 109 | | |
| | *Aedes japonicus* | 4 | 17 | | |
| | *Aedes sollicitans* | 6 | 185 | | |
| | *Aedes taeniorhynchus* | 2 | 9 | | |
| | *Aedes triseriatus* | 1 | 7 | | |
| | *Aedes vexans* | 25 | 367 | | |
| | *Anopheles bradleyi* | 8 | 190 | | |
| | *Anopheles crucians* | 2 | 122 | | |
| | *Anopheles punctipennis* | 1 | 13 | | |
| | *Anopheles quadrimaculatus* | 3 | 10 | | |
| | *Coquillettidia perturbans* | 9 | 352 | | |
| | *Culex erraticus* | 17 | 635 | | |
| | *Culex pipiens* | 8 | 107 | | |
| | *Culex restuans* | 1 | 1 | | |
| | *Culex salinarius* | 9 | 51 | | |
| | *Culex* spp. | 113 | 4180 | | |
| | *Culiseta melanura* | 70 | 2582 | | |
| | *Culiseta minnesotae* | 1 | 1 | | |
| | *Psorophora columbiae* | 1 | 5 | | |
| | *Uranotaenia sapphirina* | 1 | 6 | | |
| **Camden** | | **216** | **4771** | | |
| | *Aedes albopictus* | 41 | 125 | | |

| | | | | | |
|---|---|---|---|---|---|
| | *Aedes canadensis canadensis* | 1 | 1 | | |
| | *Aedes japonicus* | 20 | 33 | | |
| | *Aedes triseriatus* | 2 | 2 | | |
| | *Aedes trivittatus* | 1 | 1 | | |
| | *Aedes vexans* | 3 | 50 | | |
| | *Anopheles punctipennis* | 5 | 7 | | |
| | *Anopheles quadrimaculatus* | 1 | 1 | | |
| | *Culex erraticus* | 2 | 8 | | |
| | *Culex* spp. | 133 | 4529 | | |
| | *Culex territans* | 1 | 2 | | |
| | *Culiseta melanura* | 1 | 1 | | |
| | *Orthopodomyia signifera* | 2 | 3 | | |
| | *Psorophora columbiae* | 1 | 1 | | |
| | *Uranotaenia sapphirina* | 2 | 7 | | |
| **Essex** | | **284** | **3525** | | |
| | *Aedes albopictus** | 47 | 171 | | |
| | *Aedes japonicus* | 36 | 290 | | |
| | *Aedes sollicitans* | 1 | 18 | | |
| | *Aedes triseriatus** | 6 | 13 | | |
| | *Aedes vexans* | 15 | 118 | | |
| | *Culex* spp. | 179 | 2915 | | |
| | *decrease from prev. week | | | | |
| **Hudson** | | **183** | **9566** | | |
| | *Aedes albopictus* | 1 | 25 | | |
| | *Culex* spp. | 182 | 9541 | | |
| **Salem** | | **1** | **7** | | |
| | *Culex* spp. | 1 | 7 | | |
| **Sussex** | | **16** | **48** | | |
| | *Aedes triseriatus* | 16 | 48 | | |
| **Grand Total** | | **1016** | **27155** | | |

## La Crosse Encephalitis (LAC) through 18 Oct 2010.

New Jersey will be selectively testing for La Crosse (LAC) virus this year. New Jersey has had 3 cases of this encephalitic disease since 1964 (see CDC's LAC website). The mortality is low but like other encephalitides, LAC can have both personal (lasting neurological sequelae) and economic impacts. LAC is a bunyavirus with a transmission cycle involving mosquitoes such as *Aedes triseriatus* and small mammals such as squirrels and chipmunks. LAC can not only infect *Aedes albopictus* but transovarial transmission was also demonstrated (Tesh and Gubler 1975 Laboratory studies of transovarial transmission of La Crosse and other arboviruses by *Aedes albopictus* and *Culex fatigans.* American Journal of Tropical Medicine and Hygiene 24(5):876-880).

No pools tested positive to date for 2010.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|---|
| **Cape May** | | **18** | **31** | | |
| | *Aedes triseriatus* | 18 | 31 | | |

| | | | | | |
|---|---|---|---|---|---|
| **Cumberland** | | **7** | **10** | | |
| | *Aedes triseriatus* | 7 | 10 | | |
| **Salem** | | **5** | **5** | | |
| | *Aedes triseriatus* | 5 | 5 | | |
| **Warren** | | **10** | **106** | | |
| | *Aedes canadensis canadensis* | 4 | 86 | | |
| | *Aedes triseriatus* | 6 | 20 | | |
| **Grand Total** | | **40** | **152** | | |