# VECTOR SURVEILLANCE IN NEW JERSEY

## EEE, WNV, SLE and LAC

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CDC WEEK 44/45: October 28 to November 13, 2012

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## *Culiseta melanura* and Eastern Equine Encephalitis

| SITE/Boxes | Inland / Coastal | Historic Population Mean | Current Weekly Mean | Total (Collected) Tested* | Total Pools (Submitted) Tested | EEE Isolation Pools | MFIR |
|---|---|---|---|---|---|---|---|
| **Bass River (Burlington Co.)/10** | **Coastal** | na | na | 72 | 10 | | |
| **Green Bank (Burlington Co.)/25** | **Coastal** | na | na | 524 | 18 | 1 | 1.91 |
| **Corbin City (Atlantic Co.)/25** | **Coastal** | na | na | 221 | 20 | | |
| **Dennisville (Cape May Co.)/50** | **Coastal** | na | na | 192 | 17 | 3 | 15.62 |
| **Winslow (Camden Co.)/50** | **Inland** | na | na | 2006 | 51 | 8 | 3.99 |
| **Centerton (Salem Co.)/50** | **Inland** | na | na | 548 | 24 | 3 | 5.47 |
| **Turkey Swamp (Monmouth Co.)/48** | **Inland** | na | na | 676 | 25 | 2 | 2.96 |
| **Glassboro (Gloucester Co.)/50** | **Inland** | na | na | 238 | 20 | 1 | 4.20 |

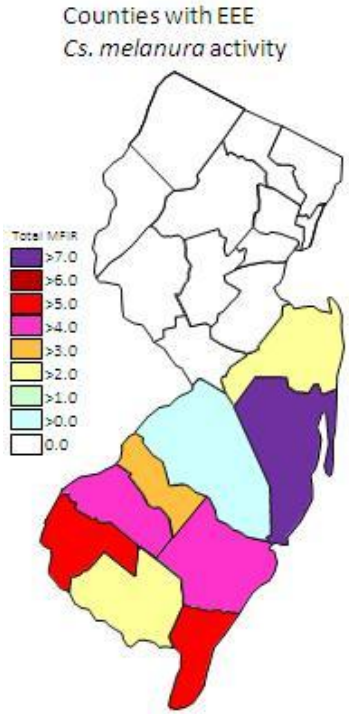
*Including trial run last week in May.

**Remarks:** Hurricane Sandy put the period on the mosquito season, taking any adults still on the wing with her as she left New Jersey. Collections ceased around the time of Sandy's approach. To date, 18 positives have occurred at the traditional resting box sites. A total of 33 positive pools including 13 *Cs. melanura* at other county sites and 2 additional positive pools from other species (see next pages) have been detected in New Jersey in 2012.

To date 4477 *Cs. melanura* from 185 pools have been tested from the traditional resting box sites for an MFIR of 4.02. Thirteen positive pools of *Cs. melanura* in traps set by individual counties have been detected for a county site MFIR of 1.81 (see below). Overall *Cs. melanura* MFIR value for the state is 2.69.

**Additional *Cs. melanura***: Four hundred fifty additional pools containing 7185 *Cs. melanura* have been tested from other sites using other traps in addition to resting boxes. A season total of 13 positive *Cs. melanura* pools from these sites have been detected. Figure of New Jersey shows *Cs. melanura* MFIR values from all sites in counties with EEE activity.

| **Additional *Cs. melanura* trapped by counties**<br>*traps with positives indicated in **BOLD.** | | | | |
|---|---|---|---|---|
| **County** | **Trap types*** | **Number collected (pools)** | **Number of positives pools** | **MFIR** |
| Atlantic | **$CO_2$** | 22 (2) | 1 | 45.45 |
| Burlington | **$CO_2$**, Other | 4606 (116) | 2 | 0.43 |
| Cape May | **Gravid, RB** | 733 (163) | 2 | 2.73 |
| Cumberland | $CO_2$, Gravid, **RB** | 354 (27) | 1 | 2.82 |
| Gloucester | $CO_2$, **RB** | 1303 (102) | 6 | 4.60 |
| Monmouth | Gravid | 26 (3) | | |
| Ocean | **$CO_2$**, Gravid, RB | 138 (34) | 1 | 7.25 |
| Salem | $CO_2$ | 3 (3) | | |
| **TOTAL** | | **7185 (450)** | **13** | 1.81 |




**Additional Species:** The table below indicates non-*Cs. melanura* mosquitoes tested for EEE. An additional 22 species of mosquitoes have been tested. Two positive pools have previously been detected in *Culex erraticus*, both collected on 19 Sep, with one in the traditional resting box site at Turkey Swamp and the other in Cumberland County, where an additional positive *Culiseta melanura* pool was also detected. *Culex erraticus* is a known enzootic vector in the southern US. It is also cosmopolitan in its diet, making it a potential bridge vector.

| **Species other than *Cs. melanura*** | **Pools** | **Mosquitoes** | **Positives** | **MFIR** |
|---|---|---|---|---|
| *Aedes albopictus* | 9 | 41 | | |
| *Aedes atlanticus* | 2 | 20 | | |
| *Aedes canadensis canadensis* | 24 | 611 | | |
| *Aedes cantator* | 36 | 472 | | |
| *Aedes japonicus* | 18 | 72 | | |
| *Aedes mitchellae* | 7 | 71 | | |
| *Aedes sollicitans* | 21 | 172 | | |
| *Aedes sticticus* | 1 | 8 | | |
| *Aedes taeniorhynchus* | 1 | 1 | | |
| *Aedes triseriatus* | 8 | 9 | | |
| *Aedes trivittatus* | 1 | 2 | | |
| *Aedes vexans* | 9 | 162 | | |

| | | | | |
|---|---|---|---|---|
| *Anopheles bradleyi* | 82 | 530 | | |
| *Anopheles crucians* | 7 | 41 | | |
| *Anopheles punctipennis* | 39 | 190 | | |
| *Anopheles quadrimaculatus* | 34 | 156 | | |
| *Coquillettidia perturbans* | 70 | 1637 | | |
| *Culex erraticus* | 350 | 9200 | 2 | 0.217 |
| *Culex pipiens* | 869 | 7923 | | |
| *Culex restuans* | 17 | 78 | | |
| *Culex salinarius* | 226 | 992 | | |
| *Culex sp.* | 187 | 4708 | | |
| *Psorophora columbiae* | 4 | 41 | | |
| *Psorophora ferox* | 1 | 50 | | |
| State Total | **2026** | **27207** | **2** | **0.074** |

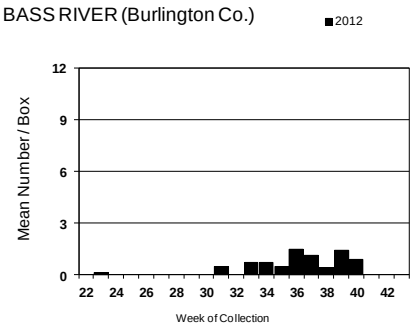
**Horses and Humans:** To date, six EEE positive horses have been identified, including with the above: 1) A presumptive positive horse with an unusually early onset date of 25 May has been reported for Burlington County. The horse was reportedly vaccinated in early May. 2) A second horse has been reported, also from Burlington County. Date of onset was 22 July, with the 3.9 yo mare euthanized on the same date and no reported vaccination history. 3) A 3 yo mare from Atlantic County with date of onset of 10 Aug was euthanized on the same day (no vaccination history), 4) a 4 yo mare from Camden County with date of onset 18 Aug was euthanized on same date, no vaccination history and 5/6) two 2 yo colts from Camden County with onset date of 9 Sep, both euthanized on 10 Sep, both with no vaccination or travel history.

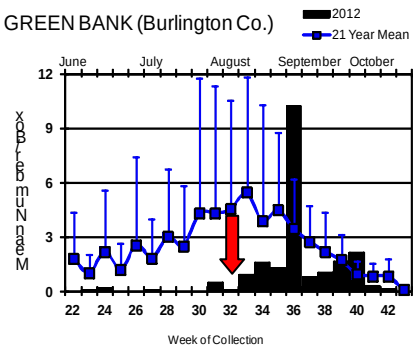
In Burlington County, 300 out of 3000 birds died September 1st/2nd in a flock of ring-necked pheasants (*Phasianus colchicus)*. Three birds of the 300 were tested out of state and returned positive for EEE. This non-native game bird can be susceptible to EEE effects, including hemorrhagic enteritis and sick birds can become aggressive targets of healthier birds.

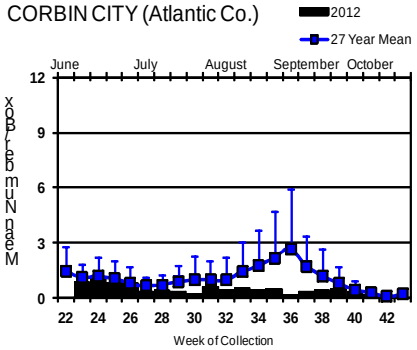
**Horses and Vaccinations:** The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

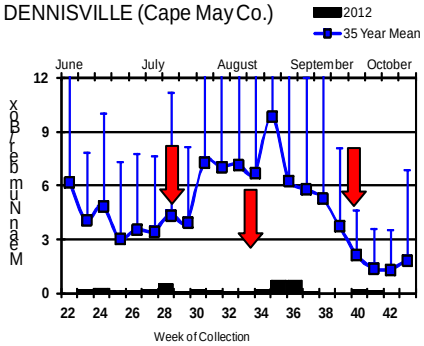
# *Culiseta melanura* Population Graphs

## Coastal

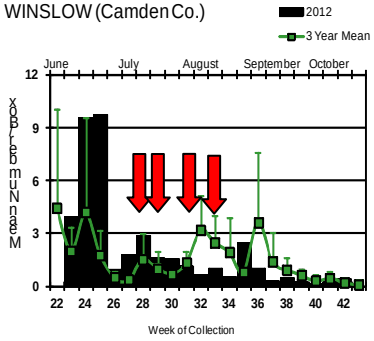


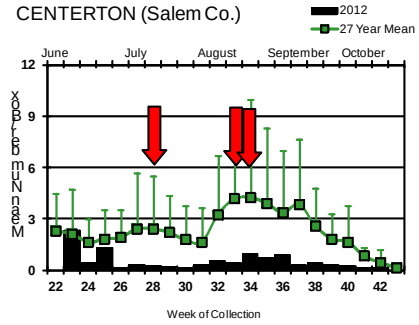



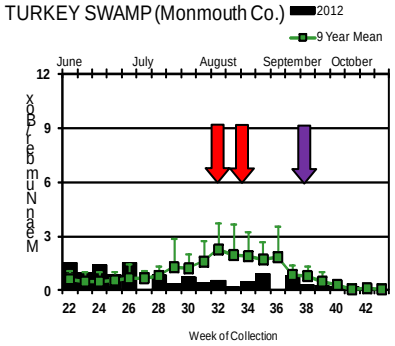



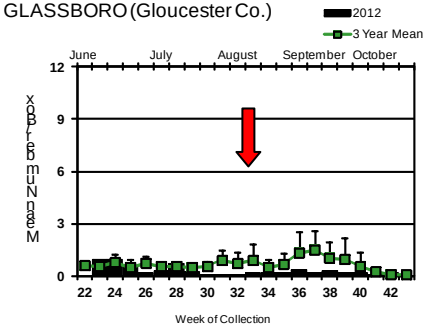




## Inland




This year, apart from the occasional significant numbers, resting box numbers suggested lower populations for most sites through most of the mosquito season. Light trap data suggests that active populations were perhaps higher than resting box sites indicated. Viral activity, higher than is typically seen, would indicate enough vectors available to support the virus detections and horse/other animal activity seen.

= Positive pool(s) detected (red = melanura, purple = other).

EEE in US (2012 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: 12(AL) 1(AR) 29(FL) 8(GA) 45(LA) 6(MA) 1(MI) 31(MS) 18(NC) 4(NH) 6(NJ) 2(NY) 1(PA) 12(SC) 2(VT) 4(WI)
- mosquito pools: 9(CT) 2(GA) 4(LA) 266(MA) 9(NH) 33(NJ) 1(NY) 6(RI) 137(VA) 10(VT)
- sentinel: 1(AL) 1(DE) 70(FL) 300(game birds NJ) 1[2 wild](1 game ME) 3(NC) (2 emu NH) 33(VA)
- human: 1(FL) 7(MA) 1(NC) 1(VA) 2(VT)

## West Nile Virus

West Nile in US (2012 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 | 15 | | 23 | 10 | 39/43 |
| Alaska | | | | | 0 |
| Arizona | 1 | 181/189 | 2 | 1 | 95/125 |
| Arkansas | | | | 10/11 | 60/62 |
| California | 1604/1619 | 2792/2819 | 492/516 | 21/22 | 339/416 |
| Colorado | 4/6 | 209 | | 15 | 127/130 |
| Connecticut | | 234 | | 2 | 21 |
| Delaware | 24 | | 36 | 0 | 8 |
| DC | | | | | 2 |
| Florida | 1 | 4 | 360/391 | 7/17 | 54/55 |
| Georgia | 1 | 114 | 0 | 7/8 | 63/69 |
| Hawaii | | | | | |
| Idaho | 3 | 35 | | 9 | 15/17 |
| Illinois | 108 | 3945/3948 | | 7 | 215/245 |
| Indiana | 2 | 737 | | 30 | 69/70 |
| Iowa | | 14 | 17 | 33 | 25/30 |
| Kansas | | 6 | | 1 | 42/45 |
| Kentucky | | 2 | | 13 | 6 |
| Louisiana | | 2491/2497 | 143/151 | 50/67 | 279/312 |
| Maine | | 7 | | | 1 |
| Maryland | | 10/11 | | 2 | 44/45 |
| Mass. | | 307 | | 2 | 26/27 |
| Michigan | 39 | 24 | | 5 | 196/201 |
| Minnesota | 26 | 105 | | 11 | 68/70 |
| Mississippi | | 56 | | 32/36 | 233/242 |
| Missouri | | 162/170 | | 6 | 21 |

| | Birds | Mosquito Pools | Sentinels | Horses | Humans |
|---|---|---|---|---|---|
| Montana | 1 | 11 | | 6 | 5 |
| Nebraska | 15 | 257 | | 14 | 155/165 |
| Nevada | | 2 | | 3 | 7/8 |
| New Hampshire | | 41 | | 0 | 1 |
| New Jersey | 132 | 1023/1027 | | 6* | 46 |
| New Mexico | 1 | 20 | | 10 | 39/40 |
| New York | | 1005 | | 6 | 99/101 |
| North Carolina | | 1 | | 2 | 6 |
| North Dakota | 2 | 0 | | 15* | 88 |
| Ohio | | 1218 | | 12* | 114/119 |
| Oklahoma | 1 | 30 | | 22/34 | 178/184 |
| Oregon | 1 | 71 | 0 | 2 | 4/12 |
| Pennsylvania | 135 | 3410 | | 49 | 36/48 |
| Rhode Island | | 5 | | 0 | 4 |
| South Carolina | 23/24 | 3/9 | | 5 | 40 |
| South Dakota | 5 | 84 | | 12/13 | 200/202 |
| Tennessee | 3 | 762 | | 6 | 32 |
| Texas | 209/210 | 1391/1401 | | 95/109 | 1683/1754 |
| Utah | | 21 | 1 | 1/3 | 5 |
| Vermont | | 1 | | 2* | 2/3 |
| Virginia | | 208 | 19 | 1 | 24/25 |
| Washington | 0 | 5 | | 1 | 4 |
| West Virginia | 1 | 281 | | | 7 |
| Wisconsin | 32 | 0 | | 2 | 57 |
| Wyoming | 4 | 13 | | 5 | 7 |

* Can include other species (e.g., dogs, cows) reported positive.

Protocol: New Jersey Department of Health (NJDH Public Health Environmental and Agricultural Laboratories, PHEAL) and the Cape May County Department of Mosquito Control tests mosquito pools using RT-PCR Taqman techniques.

## Mosquito Species Submitted and Tested for West Nile Virus Testing through 13 November 2012

| Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|
| *Aedes albopictus* | 1619 | 11341 | 5 | 0.441 |
| *Aedes atlanticus* | 12 | 34 | | |
| *Aedes atropalpus* | 17 | 47 | | |
| *Aedes canadensis canadensis* | 95 | 1994 | | |
| *Aedes cantator* | 75 | 886 | | |
| *Aedes grossbecki* | 2 | 2 | | |
| *Aedes japonicus* | 643 | 3067 | 7 | 2.282 |
| *Aedes mitchellae* | 7 | 71 | | |
| *Aedes sollicitans* | 27 | 188 | | |
| *Aedes sticticus* | 9 | 126 | | |
| *Aedes taeniorhynchus* | 47 | 470 | | |
| *Aedes triseriatus* | 332 | 764 | | |
| *Aedes trivittatus* | 8 | 16 | | |
| *Aedes vexans* | 177 | 1163 | 1 | 0.860 |
| *Anopheles bradleyi* | 117 | 882 | | |
| *Anopheles crucians* | 17 | 75 | | |
| *Anopheles punctipennis* | 148 | 506 | 1 | 1.976 |
| *Anopheles quadrimaculatus* | 196 | 674 | 1 | 1.484 |
| *Coquillettidia perturbans* | 92 | 1881 | | |
| *Culex erraticus* | 396 | 9525 | | |
| *Culex pipiens* | 1791 | 35225 | 148 | 4.202 |
| *Culex restuans* | 659 | 2640 | 7 | 2.652 |
| *Culex salinarius* | 273 | 1303 | 1 | 0.767 |
| *Culex sp.* | 3899 | 127579 | 844 | 6.616 |
| *Culex territans* | 59 | 112 | | |
| *Culiseta melanura* | 682 | 11813 | 12 | 1.016 |
| *Culiseta minnesotae* | 1 | 2 | | |
| *Orthopodomyia signifera* | 25 | 26 | | |
| *Psorophora ciliata* | 1 | 1 | | |
| *Psorophora columbiae* | 24 | 211 | | |
| *Psorophora ferox* | 16 | 120 | | |
| *Psorophora howardii* | 2 | 2 | | |
| *Uranotaenia sapphirina* | 16 | 40 | | |
| **State Total** | **11484** | **212786** | **1027** | **4.826** |

**Remarks:** To date, there have been 212,786 mosquitoes tested in 11,484 pools from 32 species. Currently, 1027 positive pools have been detected in *Aedes albopictus, Ae. japonicus, Ae. vexans, Anopheles punctipennis, An. quadrimaculatus, Culex pipiens, Cx. restuans, Cx. salinarius,* Mixed *Cx.* species *and Culiseta melanura*.

**Humans, Horses and Wild Birds:** Forty-six human cases have been reported in the following counties: Atlantic (1), Bergen (4), Burlington (2), Camden (5), Cape May (1), Essex (4), Gloucester (2), Hudson (1), Mercer (1), Middlesex (4), Monmouth (3), Ocean (9), Passaic (4) Salem (1) Somerset (3) and Union (1). DOH noted that a change in protocol has occurred midyear to include WNV results from commercial laboratories. See http://www.state.nj.us/health/cd/westnile/techinfo.shtml for further information.

Five positive WNV horses have been reported to date: 1) A 11 yo quarter horse from Salem County, with onset of symptoms on 4th August. The horse was put down the same day. Generally horses have either an unknown or no vaccination history, but this horse was reported as vaccinated. See

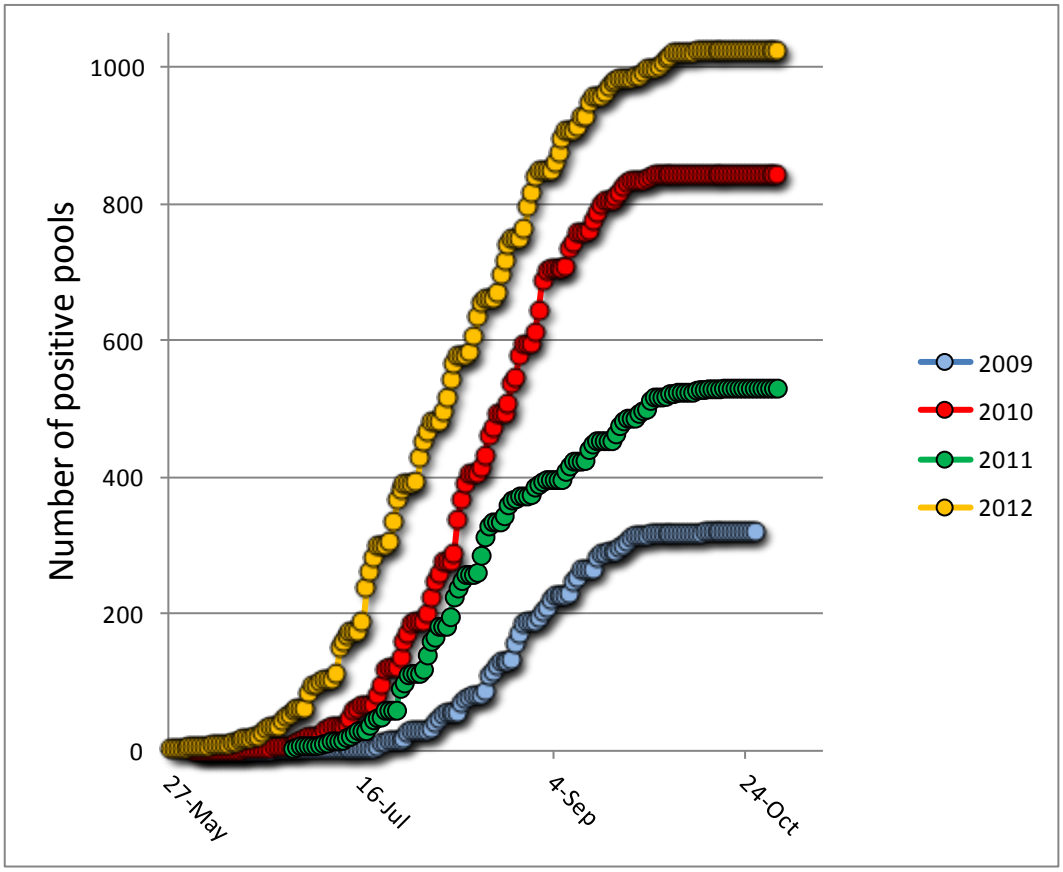
http://www.escrutgers.com/downloads/NJDA_08102012.pdf In the very active year of 2010, the first WNV horse case had an onset date of 17 August. 2) A 25 yo gelding from Monmouth County, onset of symptoms 14 July, was vaccinated and is recovering. 3) An additional Monmouth County horse (2 yo mare) with date of onset on 15 Sep was euthanized 17 Sep. No vaccination history was reported. 4) One 3 yo unvaccinated stallion was reported from Atlantic County, date of onset and euthanasia on 26 Sep (no travel history) and 5) the latest horse from Sussex County was a 33 yo gelding with no vaccination or travel history, and date on onset 4 Oct. The Sussex horse recovered.

An unvaccinated 5 yo male alpaca from Gloucester County developed WNV with an onset date of 28 Sep and euthanized 1 Oct.

Bird testing began in mid-April. To date, WNV has been detected in 132 birds out of 309 tested. WNV was first detected in an American Crow (*Corvus brachyrhynchos*) from Morris County, collected 9 April. To date, testing includes: American Crow (*Corvus brachyrhynchos* 62/69), Fish Crow (*Corvus ossifragus* 14/42), unidentified Crow (*Corvus* spp. 15/26), Blue Jay (*Cyanocitta cristata* 33/44), Hawk/Raptor (2/12) and other avian species (6/116). Counties submitting birds are Atlantic, Bergen, Burlington, Cape May, Cumberland, Essex, Gloucester, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Salem, Somerset, Sussex and Warren.

| 2012 Positive Mosquito pools to date / Total Mosquito Pools Submitted | This time last year |
|---|---|
| 1027 / 11484 (0.089) | 523 / 7360 (0.071) |
| 2012 Positive Birds to date / Total Birds Submitted | This time last year |
| 132 / 309 (0.427) | 42 / 123 (0.341) |

Activity, as seen by plotting cumulative positive pools (graph below) has now gone well above 2010 levels. It should be noted that testing began earlier this year. A number of counties have stopped for the season.



# WNV Results by County through 13 October 2012

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|---|
| **Atlantic** | | **155** | **2655** | **5** | **1.883** |
| | *Aedes albopictus* | 21 | 289 | | |
| | *Aedes canadensis canadensis* | 1 | 2 | | |
| | *Aedes cantator* | 2 | 11 | | |
| | *Aedes japonicus* | 9 | 33 | | |
| | *Aedes sollicitans* | 1 | 9 | | |
| | *Aedes taeniorhynchus* | 3 | 92 | | |
| | *Aedes triseriatus* | 6 | 19 | | |
| | *Aedes trivittatus* | 1 | 2 | | |
| | *Aedes vexans* | 8 | 102 | | |
| | *Anopheles bradleyi* | 4 | 14 | | |
| | *Anopheles punctipennis* | 5 | 21 | | |
| | *Anopheles quadrimaculatus* | 2 | 5 | | |
| | *Coquillettidia perturbans* | 2 | 3 | | |
| | *Culex erraticus* | 14 | 88 | | |
| | *Culex salinarius* | 1 | 27 | | |
| | *Culex* spp. | 43 | 1647 | 5 | 3.036 |
| | *Culiseta melanura* | 27 | 273 | | |
| | *Psorophora columbiae* | 2 | 2 | | |
| | *Psorophora ferox* | 2 | 15 | | |
| | *Psorophora howardii* | 1 | 1 | | |
| **Bergen** | | **270** | **13375** | **170** | **12.710** |
| | *Aedes albopictus* | 3 | 53 | 1 | 18.868 |
| | *Aedes japonicus* | 3 | 13 | 2 | 153.846 |
| | *Aedes triseriatus* | 1 | 1 | | |
| | *Aedes vexans* | 1 | 4 | | |
| | *Anopheles punctipennis* | 1 | 1 | | |
| | *Anopheles quadrimaculatus* | 1 | 1 | 1 | 1000.000 |
| | *Culex salinarius* | 1 | 3 | 1 | 333.333 |
| | *Culex* spp. | 259 | 13299 | 165 | 12.407 |
| **Burlington** | | **576** | **16119** | **35** | **2.171** |
| | *Aedes albopictus* | 30 | 517 | | |
| | *Aedes atlanticus* | 2 | 20 | | |
| | *Aedes atropalpus* | 1 | 2 | | |
| | *Aedes canadensis canadensis* | 20 | 582 | | |
| | *Aedes cantator* | 2 | 30 | | |
| | *Aedes japonicus* | 28 | 140 | 1 | 7.143 |
| | *Aedes mitchellae* | 7 | 71 | | |
| | *Aedes sollicitans* | 1 | 9 | | |
| | *Aedes sticticus* | 1 | 8 | | |
| | *Aedes triseriatus* | 7 | 58 | | |
| | *Aedes trivittatus* | 1 | 2 | | |
| | *Aedes vexans* | 15 | 325 | | |
| | *Anopheles bradleyi* | 11 | 240 | | |
| | *Anopheles crucians* | 5 | 51 | | |
| | *Anopheles punctipennis* | 10 | 36 | | |
| | *Anopheles quadrimaculatus* | 8 | 17 | | |
| | *Coquillettidia perturbans* | 25 | 983 | | |
| | *Culex erraticus* | 17 | 137 | | |
| | *Culex pipiens* | 8 | 234 | | |
| | *Culex restuans* | 8 | 74 | | |

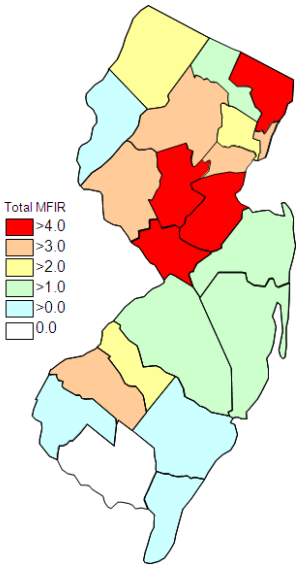
| | | | | | |
|---|---|---|---|---|---|
| | *Culex salinarius* | 14 | 287 | | |
| | *Culex* spp. | 201 | 6977 | 29 | 4.157 |
| | *Culiseta melanura* | 144 | 5202 | 5 | 0.961 |
| | *Orthopodomyia signifera* | 1 | 1 | | |
| | *Psorophora columbiae* | 4 | 43 | | |
| | *Psorophora ferox* | 1 | 50 | | |
| | *Uranotaenia sapphirina* | 4 | 23 | | |
| **Camden** | | **327** | **8545** | **47** | **5.500** |
| | *Aedes albopictus* | 53 | 218 | 1 | 4.587 |
| | *Aedes japonicus* | 29 | 48 | 1 | 20.833 |
| | *Aedes triseriatus* | 2 | 6 | | |
| | *Aedes trivittatus* | 1 | 2 | | |
| | *Aedes vexans* | 4 | 8 | | |
| | *Anopheles crucians* | 1 | 1 | | |
| | *Anopheles punctipennis* | 2 | 3 | | |
| | *Culex erraticus* | 1 | 1 | | |
| | *Culex* spp. | 181 | 6248 | 44 | 7.042 |
| | *Culiseta melanura* | 52 | 2007 | 1 | 0.498 |
| | *Uranotaenia sapphirina* | 1 | 3 | | |
| **Cape May** | | **4262** | **31102** | **31** | **0.997** |
| | *Aedes albopictus* | 812 | 2274 | | |
| | *Aedes atlanticus* | 6 | 9 | | |
| | *Aedes atropalpus* | 16 | 45 | | |
| | *Aedes canadensis canadensis* | 10 | 79 | | |
| | *Aedes cantator* | 47 | 462 | | |
| | *Aedes japonicus* | 158 | 224 | | |
| | *Aedes sollicitans* | 21 | 164 | | |
| | *Aedes taeniorhynchus* | 43 | 377 | | |
| | *Aedes triseriatus* | 178 | 314 | | |
| | *Aedes vexans* | 36 | 79 | | |
| | *Anopheles bradleyi* | 76 | 370 | | |
| | *Anopheles punctipennis* | 30 | 35 | | |
| | *Anopheles quadrimaculatus* | 123 | 423 | | |
| | *Coquillettidia perturbans* | 6 | 25 | | |
| | *Culex erraticus* | 297 | 8781 | | |
| | *Culex pipiens* | 1169 | 13452 | 24 | 1.784 |
| | *Culex restuans* | 594 | 1720 | 6 | 3.488 |
| | *Culex salinarius* | 226 | 777 | | |
| | *Culex* spp. | 122 | 386 | | |
| | *Culex territans* | 55 | 108 | | |
| | *Culiseta melanura* | 195 | 951 | 1 | 1.052 |
| | *Orthopodomyia signifera* | 24 | 25 | | |
| | *Psorophora columbiae* | 5 | 6 | | |
| | *Psorophora ferox* | 2 | 2 | | |
| | *Uranotaenia sapphirina* | 11 | 14 | | |
| **Cumberland** | | **205** | **1808** | | |
| | *Aedes albopictus* | 23 | 92 | | |
| | *Aedes atlanticus* | 3 | 3 | | |
| | *Aedes canadensis canadensis* | 4 | 25 | | |
| | *Aedes cantator* | 3 | 11 | | |
| | *Aedes japonicus* | 17 | 37 | | |
| | *Aedes triseriatus* | 9 | 17 | | |
| | *Aedes vexans* | 5 | 17 | | |

| | | | | | |
|---|---|---|---|---|---|
| | *Anopheles crucians* | 5 | 160 | | |
| | *Anopheles bradleyi* | 7 | 11 | | |
| | *Anopheles punctipennis* | 9 | 18 | | |
| | *Anopheles quadrimaculatus* | 6 | 6 | | |
| | *Coquillettidia perturbans* | 6 | 89 | | |
| | *Culex erraticus* | 17 | 177 | | |
| | *Culex pipiens* | 22 | 357 | | |
| | *Culex restuans* | 12 | 91 | | |
| | *Culex salinarius* | 12 | 150 | | |
| | *Culex* spp. | 9 | 30 | | |
| | *Culex territans* | 3 | 3 | | |
| | *Culiseta melanura* | 28 | 388 | | |
| | *Psorophora columbiae* | 2 | 104 | | |
| | *Psorophora ferox* | 3 | 22 | | |
| **Essex** | | **509** | **6601** | **29** | **4.393** |
| | *Aedes albopictus* | 103 | 696 | | |
| | *Aedes canadensis canadensis* | 2 | 2 | | |
| | *Aedes grossbecki* | 2 | 2 | | |
| | *Aedes japonicus* | 67 | 486 | 2 | 4.115 |
| | *Aedes sticticus* | 5 | 113 | | |
| | *Aedes triseriatus* | 13 | 32 | | |
| | *Aedes vexans* | 23 | 231 | | |
| | *Culex* spp. | 293 | 5035 | 27 | 5.362 |
| | *Psorophora ferox* | 1 | 4 | | |
| **Gloucester** | | **636** | **18040** | **62** | **3.437** |
| | *Aedes albopictus* | 60 | 1412 | | |
| | *Aedes japonicus* | 10 | 153 | | |
| | *Aedes triseriatus* | 3 | 15 | | |
| | *Aedes vexans* | 3 | 12 | | |
| | *Anopheles punctipennis* | 25 | 173 | | |
| | *Anopheles quadrimaculatus* | 23 | 149 | | |
| | *Coquillettidia perturbans* | 1 | 2 | | |
| | *Culex pipiens* | 388 | 14580 | 58 | 3.978 |
| | *Culiseta melanura* | 123 | 1544 | 4 | 2.591 |
| **Hudson** | | **260** | **14153** | **79** | **5.582** |
| | *Culex* spp. | 260 | 14153 | 79 | 5.582 |
| **Hunterdon** | | **391** | **15001** | **74** | **4.933** |
| | *Culex* spp. | 391 | 15001 | 74 | 4.933 |
| **Mercer** | | **364** | **8624** | **70** | **8.117** |
| | *Aedes albopictus* | 93 | 942 | | |
| | *Aedes japonicus* | 41 | 217 | | |
| | *Aedes triseriatus* | 5 | 11 | | |
| | *Aedes vexans* | 1 | 3 | | |
| | *Culex erraticus* | 5 | 12 | | |
| | *Culex pipiens* | 179 | 6481 | 65 | 10.029 |
| | *Culex restuans* | 29 | 545 | 1 | 1.835 |
| | *Culex* spp. | 11 | 413 | 4 | 9.685 |
| **Middlesex** | | **285** | **10179** | **86** | **8.449** |
| | *Aedes albopictus* | 19 | 222 | | |

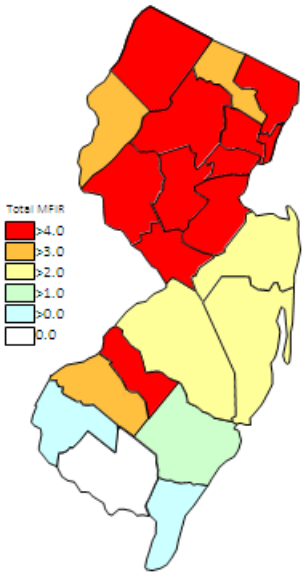
| | | | | | |
|---|---|---|---|---|---|
| | *Aedes japonicus* | 15 | 120 | | |
| | *Aedes triseriatus* | 3 | 14 | | |
| | *Culex* spp. | 248 | 9823 | 86 | 8.755 |
| **Monmouth** | | **431** | **4759** | **12** | **2.522** |
| | *Aedes albopictus* | 86 | 417 | 1 | 2.398 |
| | *Aedes canadensis canadensis* | 13 | 130 | | |
| | *Aedes cantator* | 8 | 43 | | |
| | *Aedes japonicus* | 60 | 200 | 1 | 5.000 |
| | *Aedes triseriatus* | 18 | 24 | | |
| | *Aedes vexans* | 13 | 23 | | |
| | *Anopheles crucians* | 2 | 2 | | |
| | *Anopheles punctipennis* | 25 | 40 | | |
| | *Anopheles quadrimaculatus* | 2 | 3 | | |
| | *Coquillettidia perturbans* | 4 | 5 | | |
| | *Culex erraticus* | 13 | 133 | | |
| | *Culex pipiens* | 3 | 6 | | |
| | *Culex restuans* | 1 | 1 | | |
| | *Culex salinarius* | 4 | 15 | | |
| | *Culex* spp. | 140 | 2991 | 10 | 3.343 |
| | *Culex territans* | 1 | 1 | | |
| | *Culiseta melanura* | 35 | 720 | | |
| | *Psorophora columbiae* | 2 | 3 | | |
| | *Psorophora ferox* | 1 | 2 | | |
| **Morris** | | **372** | **12409** | **73** | **5.883** |
| | *Aedes albopictus* | 2 | 25 | | |
| | *Aedes japonicus* | 25 | 332 | | |
| | *Aedes triseriatus* | 4 | 15 | | |
| | *Aedes vexans* | 1 | 1 | | |
| | *Anopheles punctipennis* | 3 | 66 | | |
| | *Coquillettidia perturbans* | 3 | 149 | | |
| | *Culex* spp. | 334 | 11821 | 73 | 6.175 |
| **Ocean** | | **524** | **7126** | **16** | **2.245** |
| | *Aedes albopictus* | 134 | 2831 | 1 | 0.353 |
| | *Aedes atlanticus* | 1 | 2 | | |
| | *Aedes canadensis canadensis* | 42 | 1165 | | |
| | *Aedes cantator* | 12 | 328 | | |
| | *Aedes japonicus* | 41 | 152 | | |
| | *Aedes sollicitans* | 2 | 2 | | |
| | *Aedes sticticus* | 2 | 2 | | |
| | *Aedes taeniorhynchus* | 1 | 1 | | |
| | *Aedes triseriatus* | 25 | 51 | | |
| | *Aedes trivittatus* | 1 | 2 | | |
| | *Aedes vexans* | 28 | 89 | 1 | 11.236 |
| | *Anopheles bradleyi* | 13 | 52 | | |
| | *Anopheles crucians* | 2 | 10 | | |
| | *Anopheles punctipennis* | 6 | 7 | | |
| | *Anopheles quadrimaculatus* | 6 | 8 | | |
| | *Coquillettidia perturbans* | 21 | 431 | | |
| | *Culex erraticus* | 9 | 13 | | |
| | *Culex restuans* | 1 | 1 | | |
| | *Culex salinarius* | 14 | 43 | | |
| | *Culex* spp. | 123 | 1792 | 14 | 7.813 |
| | *Culiseta melanura* | 34 | 138 | | |

| | | | | | |
|---|---|---|---|---|---|
| | *Psorophora columbiae* | 1 | 1 | | |
| | *Psorophora ferox* | 4 | 4 | | |
| | *Psorophora howardii* | 1 | 1 | | |
| **Passaic** | | **180** | **2827** | **11** | **3.891** |
| | *Aedes albopictus* | 33 | 143 | 1 | 6.993 |
| | *Aedes japonicus* | 40 | 353 | | |
| | *Aedes triseriatus* | 14 | 30 | | |
| | *Anopheles punctipennis* | 5 | 16 | | |
| | *Anopheles quadrimaculatus* | 1 | 1 | | |
| | *Coquillettidia perturbans* | 1 | 2 | | |
| | *Culex* spp. | 86 | 2282 | 10 | 4.382 |
| **Salem** | | **362** | **3327** | **2** | **0.601** |
| | *Aedes albopictus* | 57 | 154 | | |
| | *Aedes canadensis canadensis* | 2 | 6 | | |
| | *Aedes cantator* | 1 | 1 | | |
| | *Aedes japonicus* | 13 | 31 | | |
| | *Aedes sollicitans* | 2 | 4 | | |
| | *Aedes sticticus* | 1 | 3 | | |
| | *Aedes triseriatus* | 6 | 7 | | |
| | *Aedes vexans* | 28 | 231 | | |
| | *Anopheles bradleyi* | 8 | 46 | | |
| | *Anopheles punctipennis* | 11 | 17 | | |
| | *Anopheles quadrimaculatus* | 19 | 56 | | |
| | *Coquillettidia perturbans* | 20 | 144 | | |
| | *Culex erraticus* | 23 | 183 | | |
| | *Culex pipiens* | 7 | 29 | | |
| | *Culex restuans* | 6 | 20 | | |
| | *Culex* spp. | 113 | 1746 | 1 | 0.573 |
| | *Culiseta melanura* | 33 | 573 | 1 | 1.745 |
| | *Culiseta minnesotae* | 1 | 2 | | |
| | *Psorophora ciliata* | 1 | 1 | | |
| | *Psorophora columbiae* | 8 | 52 | | |
| | *Psorophora ferox* | 2 | 21 | | |
| **Somerset** | | **291** | **5013** | **46** | **9.176** |
| | *Aedes albopictus* | 21 | 128 | | |
| | *Aedes canadensis canadensis* | 1 | 3 | | |
| | *Aedes japonicus* | 20 | 148 | | |
| | *Aedes triseriatus* | 5 | 59 | | |
| | *Aedes vexans* | 1 | 8 | | |
| | *Anopheles punctipennis* | 5 | 28 | 1 | 35.714 |
| | *Culex* spp. | 238 | 4639 | 45 | 9.700 |
| **Sussex** | | **363** | **9550** | **41** | **4.293** |
| | *Aedes albopictus* | 4 | 4 | | |
| | *Aedes japonicus* | 4 | 45 | | |
| | *Coquillettidia perturbans* | 1 | 43 | | |
| | *Culex pipiens* | 15 | 86 | 1 | 11.628 |
| | *Culex restuans* | 8 | 188 | | |
| | *Culex salinarius* | 1 | 1 | | |
| | *Culex* spp. | 320 | 9167 | 40 | 4.363 |
| | *Culiseta melanura* | 10 | 16 | | |

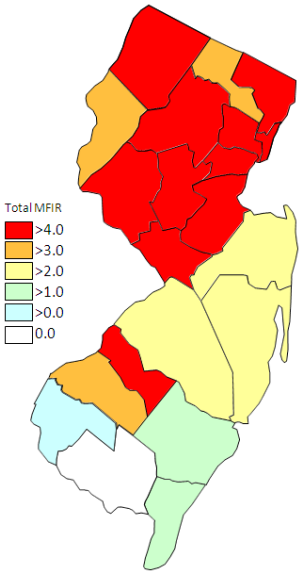
| | | | | | |
|---|---|---|---|---|---|
| **Union** | | **312** | **14118** | **114** | **8.075** |
| | *Aedes albopictus* | 59 | 838 | | |
| | *Aedes japonicus* | 5 | 64 | | |
| | *Aedes triseriatus* | 1 | 15 | | |
| | *Culex* spp. | 247 | 13201 | 114 | 8.636 |
| **Warren** | | **409** | **7488** | **24** | **3.219** |
| | *Aedes albopictus* | 6 | 86 | | |
| | *Aedes japonicus* | 58 | 271 | | |
| | *Aedes triseriatus* | 32 | 76 | | |
| | *Aedes trivittatus* | 4 | 8 | | |
| | *Aedes vexans* | 10 | 30 | | |
| | *Anopheles punctipennis* | 11 | 45 | | |
| | *Anopheles quadrimaculatus* | 5 | 5 | | |
| | *Coquillettidia perturbans* | 2 | 5 | | |
| | *Culex* spp. | 280 | 6928 | 24 | 3.464 |
| | *Culiseta melanura* | 1 | 1 | | |
| **Grand Total** | | **11484** | **212786** | **1027** | **4.826** |



Cumulative WNV activity in 2011.



WNV activity to 13 Nov 2012.



WNV activity last week, 2012.

## Saint Louis Encephalitis (SLE) through 13 November 2012.

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 have tested positive for SLE to date in 2012.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|---|
| **Burlington** | | **287** | **9562** | | |
| | *Aedes albopictus* | 6 | 107 | | |
| | *Aedes canadensis canadensis* | 6 | 214 | | |
| | *Aedes cantator* | 2 | 30 | | |
| | *Aedes japonicus* | 19 | 77 | | |

| | | | | | |
|---|---|---|---|---|---|
| | *Aedes mitchellae* | 4 | 60 | | |
| | *Aedes sticticus* | 1 | 8 | | |
| | *Aedes triseriatus* | 3 | 3 | | |
| | *Aedes trivittatus* | 1 | 2 | | |
| | *Aedes vexans* | 4 | 65 | | |
| | *Anopheles bradleyi* | 1 | 4 | | |
| | *Anopheles crucians* | 3 | 37 | | |
| | *Anopheles punctipennis* | 2 | 13 | | |
| | *Anopheles quadrimaculatus* | 3 | 11 | | |
| | *Coquillettidia perturbans* | 20 | 892 | | |
| | *Culex erraticus* | 3 | 71 | | |
| | *Culex pipiens* | 8 | 234 | | |
| | *Culex restuans* | 4 | 56 | | |
| | *Culex salinarius* | 10 | 182 | | |
| | *Culex* spp. | 131 | 4944 | | |
| | *Culiseta melanura* | 55 | 2547 | | |
| | *Psorophora columbiae* | 1 | 5 | | |
| **Camden** | | **75** | **2601** | | |
| | *Aedes albopictus* | 7 | 31 | | |
| | *Aedes japonicus* | 4 | 6 | | |
| | *Aedes triseriatus* | 1 | 5 | | |
| | *Anopheles punctipennis* | 1 | 2 | | |
| | *Culex* spp. | 62 | 2557 | | |
| **Essex** | | **200** | **3900** | | |
| | *Aedes albopictus* | 23 | 48 | | |
| | *Aedes canadensis canadensis* | 2 | 2 | | |
| | *Aedes grossbecki* | 2 | 2 | | |
| | *Aedes japonicus* | 30 | 251 | | |
| | *Aedes sticticus* | 5 | 113 | | |
| | *Aedes triseriatus* | 9 | 22 | | |
| | *Aedes vexans* | 16 | 220 | | |
| | *Culex* spp. | 112 | 3238 | | |
| | *Psorophora ferox* | 1 | 4 | | |
| **Hudson** | | **74** | **4966** | | |
| | *Culex* spp. | 74 | 4966 | | |
| **Salem** | | **1** | **6** | | |
| | *Culex* spp. | 1 | 6 | | |
| **Grand Total** | | **637** | **21035** | | |

# La Crosse Encephalitis (LAC) through 13 November 2012.

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 2012.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|---|---|---|---|---|---|
| **Burlington** | | **2** | **42** | | |
| | *Aedes triseriatus* | 2 | 42 | | |
| **Cape May** | | **156** | **283** | | |
| | *Aedes taeniorhynchus* | 1 | 1 | | |
| | *Aedes triseriatus* | 146 | 264 | | |
| | *Culex* spp. | 1 | 2 | | |
| | *Orthopodomyia signifera* | 5 | 6 | | |
| | *Psorophora columbiae* | 1 | 2 | | |
| | *Uranotaenia sapphirina* | 2 | 4 | | |
| **Cumberland** | | **8** | **16** | | |
| | *Aedes triseriatus* | 8 | 16 | | |
| **Salem** | | **2** | **3** | | |
| | *Aedes triseriatus* | 2 | 3 | | |
| **Union** | | **1** | **15** | | |
| | *Aedes triseriatus* | 1 | 15 | | |
| **Grand Total** | | **169** | **359** | | |