

VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV, CHIK and ZIKV

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 CDC WEEK 31: 31 July to 6 August, 2016



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Culiseta melanura and Eastern Equine Encephalitis

| SITE/Boxes | Inland or Coastal | Historic Population Mean | Current Weekly Mean | Total Tested* (Collected) | Total Pools Tested* (Submitted) | EEE Isolation Pools | MFIR |
|--------------------------------|-------------------|--------------------------|---------------------|---------------------------|---------------------------------|---------------------|------|
| Bass River (Burlington Co.)/5 | Coastal | 0.52 | 0.40 | 1 (2) | 1 (2) | | |
| Green Bank (Burlington Co.)/25 | Coastal | 3.80 | 1.20 | 21 (51) | 5 (6) | | |
| Corbin City (Atlantic Co.)/25 | Coastal | 0.98 | 0.96 | 82 (106) | 11 (12) | | |
| Dennisville (Cape May Co.)/50 | Coastal | 6.33 | 0.28 | 58 | 9 | | |
| Winslow (Camden Co.)/50 | Inland | 1.26 | 0.40 | 611 | 16 | | |
| Centerton (Salem Co.)/50 | Inland | 1.50 | 0.88 | 195 | 10 | | |
| Turkey Swamp (Monmouth Co.)/49 | Inland | 1.22 | 0.22 | 25 (36) | 10 (11) | | |
| Glassboro (Gloucester Co.)/50 | Inland | 0.48 | 0.02 | 79 | 10 | | |

*Current week (in parentheses) results pending. ‡ corrected NC=no collection

Remarks: One new positive EEE pool, the first in *Culiseta melanura*, was detected in NJ. Total positive EEE pools detected are 3, with 2 pools found earlier in *Culex pipiens* in Cape May (collected 6 July).

Traditional Resting Box Sites: 1072 *Cs. melanura* from 72 pools have been tested for EEE, with 4 pools of 76 *Cs. melanura* to be tested. No positives at these traditional sites have been detected. Statewide, 2841 *Cs. melanura* have been tested, with one positive pool recently found in *Cs. melanura* at a county site. 11,593 specimens from 14 other species have also been tested, with two reported positives *Culex pipiens* pools.

| | | Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD . | | | |
|--------------|-------------------------------|--|-------------|-----------|-------------|
| County | Trap types* | Pools | Mosquitoes | Positives | MFIR |
| Atlantic | CO ₂ , RB | 17 | 220 | | |
| Burlington | CO ₂ | 33 | 854 | | |
| Cape May | CDC, CO ₂ , GR, RB | 79 | 158 | | |
| Cumberland | RB | 5 | 29 | | |
| Middlesex | GR, RB | 29 | 482 | 1 | 2.07 |
| Ocean | CO ₂ , GR | 10 | 26 | | |
| TOTAL | | 174 | 1769 | 1 | 0.57 |

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. One positive pool was detected, sampled from a Middlesex county resting box on 25 July. This year, Middlesex County put out resting boxes for the purpose of testing for EEE, something not normally done for

central/northern counties in this state.

| Species other than <i>Cs. melanura</i> | Pools | Mosquitoes | Positives | MFIR |
|--|------------|--------------|-----------|--------------|
| <i>Aedes albopictus</i> | 1 | 1 | | |
| <i>Aedes cantator</i> | 23 | 50 | | |
| <i>Aedes sollicitans</i> | 12 | 439 | | |
| <i>Aedes taeniorhynchus</i> | 2 | 68 | | |
| <i>Anopheles bradleyi</i> | 39 | 182 | | |
| <i>Anopheles crucians</i> | 2 | 40 | | |
| <i>Anopheles punctipennis</i> | 9 | 19 | | |
| <i>Anopheles quadrimaculatus</i> | 1 | 1 | | |
| <i>Coquillettidia perturbans</i> | 67 | 1182 | | |
| <i>Culex erraticus</i> | 15 | 64 | | |
| <i>Culex pipiens</i> | 517 | 7413 | 2 | 0.270 |
| <i>Culex restuans</i> | 1 | 3 | | |
| <i>Culex salinarius</i> | 199 | 2016 | | |
| <i>Culex</i> sp. | 37 | 103 | | |
| <i>Culex territans</i> | 1 | 12 | | |
| State Total | 926 | 11593 | 2 | 0.173 |

Additional Species: Twelve additional species were tested for EEE. First positive pools were detected in *Culex pipiens*, an ornithophilic species, in Cape May, collected on 6 July.

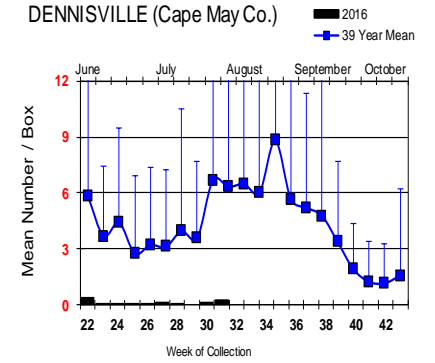
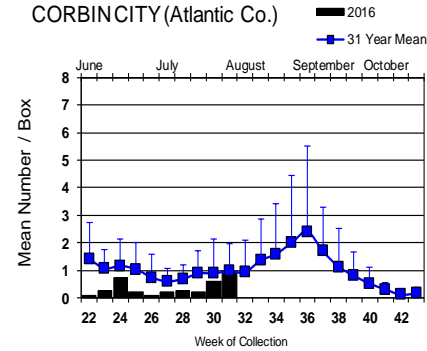
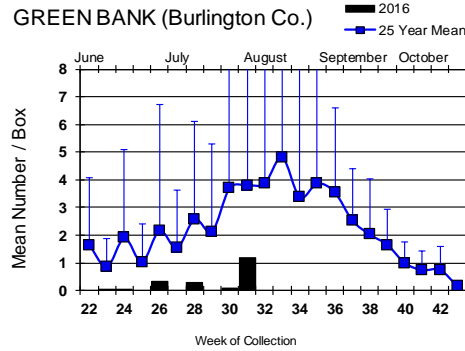
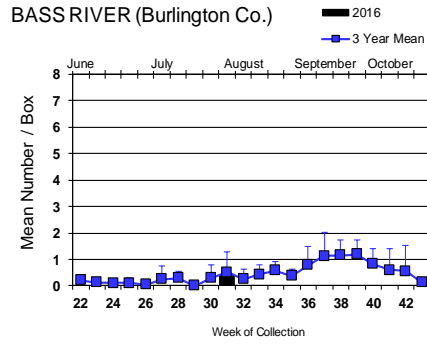
Horses and Humans: No positive horse or humans have been reported. Last year one positive horse was reported.

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:

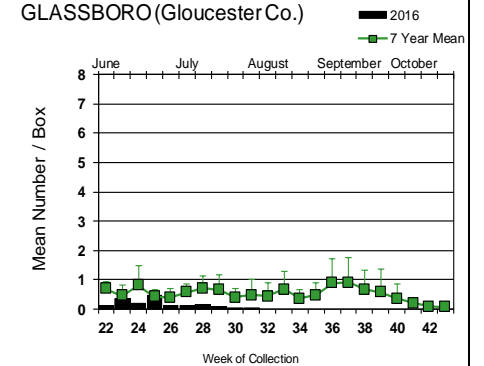
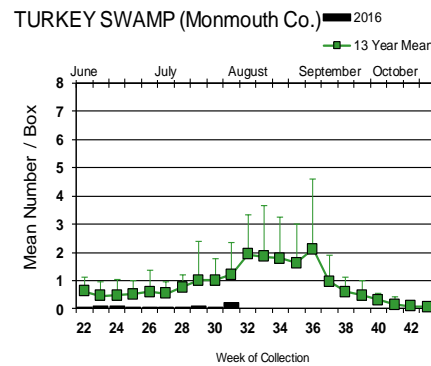
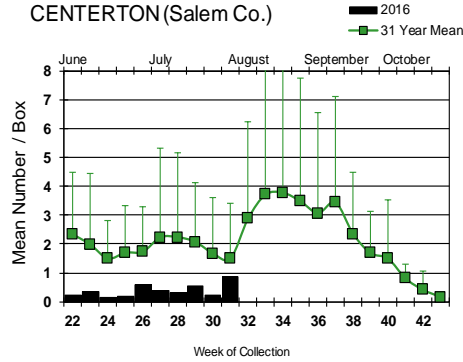
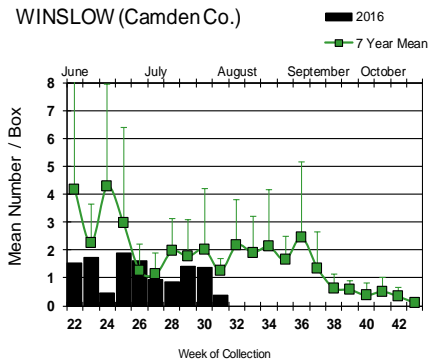
http://www.aaep.org/vaccination_guidelines.htm

Culiseta melanura Population Graphs

Coastal



Inland



While numbers continue to remain below historical values for most *Cs. melanura* populations, some rise in numbers were observed at sites like Green Bank, Corbin City and Centerton. No positive pools have been reported at these sites, but two non-neighboring counties (Cape May and Middlesex) have reported positives, suggesting that some dissemination of virus has occurred.

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

EEE in US (2016 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: AL(1) FL(16) GA(5) LA(5) MS(3) NC(1) SC(11) TN(1) VA(4)
- mosquito pools: NJ(3) MA(1)
- sentinel: FL(51) GA(2) TX(21)
- human:

West Nile Virus Positive Organisms in US, 2016

West Nile in US (2016 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 | | | | | 2 |
| Alaska | | | | | |
| Arizona | 0 | 39 | 0 | 0 | 22/27 |
| Arkansas | | | | 0 | 1 |
| California | 715/834 | 1487/1841 | 73/84 | 2/5 | 3/10 |
| Colorado | 1 | 17/28 | | 1 | 4/6 |
| Connecticut | | 1/14 | | | 0 |
| Delaware | | | | | |
| DC | | | | | |
| Florida | | 2 | 51/52 | 1 | |
| Georgia | | 0 | | | 0 |
| Hawaii | | | | | |
| Idaho | 0 | 14/18 | | 1 | 1 |
| Illinois | 4/7 | 339/593 | | 0 | 3/4 |
| Indiana | 0 | 20/28 | | 0 | 1 |
| Iowa | | 1 | | | 0 |
| Kansas | | 0 | | | 2 |
| Kentucky | | | | 0 | |
| Louisiana | | | | | 0 |
| Maine | | 0 | | | 0 |
| Maryland | | 1 | | | |
| Mass. | | 18/36 | | 0 | 0 |
| Michigan | 13 | 3 | | | 1 |
| Minnesota | | 6 | | | |
| Mississippi | | 20 | | | 5/9 |
| Missouri | | 8 | | 0 | 0 |

| | Birds | Mosquito Pools | Sentinels | Horses | Humans |
|----------------|-------|----------------|-----------|--------|--------|
| Montana | | | | | |
| Nebraska | 2 | 28/33 | | 1 | 5/8 |
| Nevada | | | | | 1 |
| New Hampshire | | 0 | | 0 | 0 |
| New Jersey | | 39/61 | | 0 | 1 |
| New Mexico | | | | | |
| New York | | 5/51 | | | 0 |
| North Carolina | | | | | |
| North Dakota | 6 | 15 | | 1 | 4/7 |
| Ohio | | 1/8 | | 0 | 1 |
| Oklahoma | | 7 | | 1 | 2/4 |
| Oregon | 0 | 8/9 | 0 | 0 | 0 |
| Pennsylvania | 2 | 148/249 | | | 1 |
| Rhode Island | | 0 | | | |
| South Carolina | | | | | |
| South Dakota | | 28/68 | | | 19/26 |
| Tennessee | | | | | 1 |
| Texas | | 604/692 | | 2/3 | 22/24 |
| Utah | | 27/47 | | | |
| Vermont | | | | | 1 |
| Virginia | | | | | |
| Washington | 0 | 39/50 | | 1 | 0 |
| West Virginia | | | | | |
| Wisconsin | 5/8 | 0 | | 0 | 0 |
| Wyoming | 1 | 23 | | | 1 |

* 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 6 August 2016

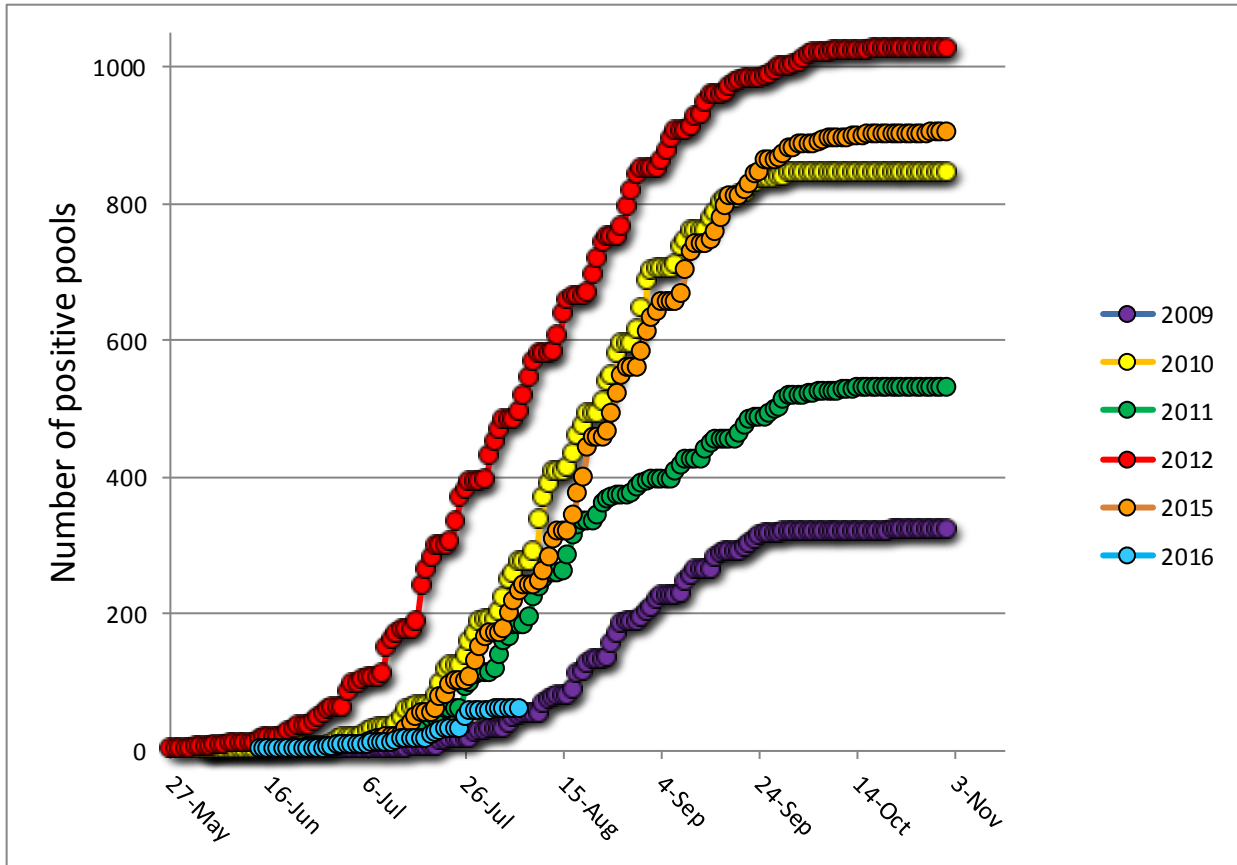
| Species | Pools | Mosquitoes | Positives | MFIR |
|------------------------------------|-------------|---------------|-----------|--------------|
| <i>Aedes albopictus</i> | 652 | 4553 | 1 | 0.220 |
| <i>Aedes atlanticus</i> | 4 | 6 | | |
| <i>Aedes atropalpus</i> | 19 | 62 | | |
| <i>Aedes canadensis canadensis</i> | 31 | 625 | | |
| <i>Aedes cantator</i> | 33 | 242 | | |
| <i>Aedes grossbecki</i> | 1 | 1 | | |
| <i>Aedes japonicus</i> | 328 | 1767 | | |
| <i>Aedes sollicitans</i> | 17 | 554 | | |
| <i>Aedes sticticus</i> | 1 | 6 | | |
| <i>Aedes taeniorhynchus</i> | 14 | 370 | | |
| <i>Aedes triseriatus</i> | 143 | 300 | | |
| <i>Aedes trivittatus</i> | 2 | 34 | | |
| <i>Aedes vexans</i> | 39 | 479 | | |
| <i>Anopheles atropos</i> | 1 | 1 | | |
| <i>Anopheles barberi</i> | 2 | 2 | | |
| <i>Anopheles bradleyi</i> | 46 | 399 | | |
| <i>Anopheles crucians</i> | 4 | 46 | | |
| <i>Anopheles punctipennis</i> | 38 | 143 | | |
| <i>Anopheles quadrimaculatus</i> | 74 | 662 | | |
| <i>Coquillettidia perturbans</i> | 85 | 2106 | | |
| <i>Culex erraticus</i> | 25 | 103 | | |
| <i>Culex pipiens</i> | 698 | 18020 | 7 | 0.388 |
| <i>Culex restuans</i> | 626 | 7330 | 1 | 0.136 |
| <i>Culex salinarius</i> | 204 | 2135 | | |
| <i>Culex</i> spp. | 1598 | 64753 | 52 | 0.803 |
| <i>Culex territans</i> | 18 | 219 | | |
| <i>Culiseta melanura</i> | 244 | 2763 | | |
| <i>Orthopodomyia signifera</i> | 3 | 3 | | |
| <i>Psorophora ciliata</i> | 1 | 1 | | |
| <i>Psorophora columbiae</i> | 7 | 47 | | |
| <i>Psorophora ferox</i> | 9 | 72 | | |
| <i>Uranotaenia sapphirina</i> | 1 | 3 | | |
| Grand Total | 4968 | 107807 | 61 | 0.566 |

Remarks: To date, 4968 pools of 107,807 mosquitoes from 31 species have been tested, with 61 positive pools detected. First non-*Culex* detection occurred in *Aedes albopictus*, collected in Hudson County on 19 July. The first positive pool of *Culex* Mix was collected on 14 June in Monmouth County.

Humans, Horses and Wild Birds: One human from Camden County had been reported with WNV, onset of early July. Last year 26 humans and one horse were positive. Onset in 2015 for humans began in early August and the onset for the horse case began in September. For further information, see <http://www.state.nj.us/health/cd/westnile/techinfo.shtml>.

Birds are no longer routinely tested in New Jersey.

The graph below shows cumulative positive pools for several years, with 2012 as the most active year and 2009 as the least active year. While it currently appears that New Jersey may be on track for low activity, last year we saw a similar pattern that increased to the second most active year as the season progressed and samples were completed.



WNV Results by County through 6 August 2016

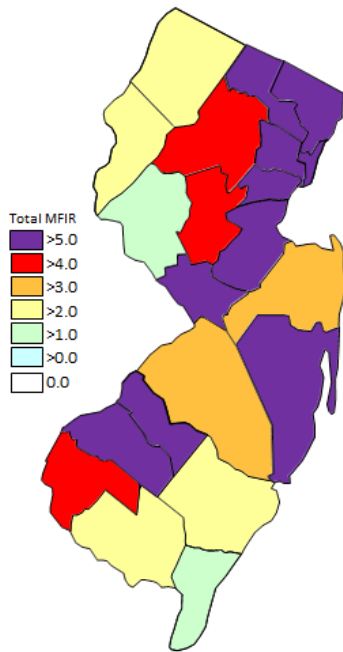
| County | Species | Pools | Mosquitoes | Positives | MFIR |
|-------------------|----------------------------------|------------|-------------|-----------|--------------|
| Atlantic | | 119 | 3748 | 4 | 1.067 |
| | <i>Aedes albopictus</i> | 13 | 157 | | |
| | <i>Aedes japonicus</i> | 1 | 4 | | |
| | <i>Aedes sollicitans</i> | 5 | 333 | | |
| | <i>Aedes sticticus</i> | 1 | 6 | | |
| | <i>Aedes taeniorhynchus</i> | 4 | 266 | | |
| | <i>Aedes vexans</i> | 6 | 203 | | |
| | <i>Anopheles bradleyi</i> | 3 | 95 | | |
| | <i>Coquillettidia perturbans</i> | 16 | 350 | | |
| | <i>Culex erraticus</i> | 2 | 25 | | |
| | <i>Culex pipiens</i> | 15 | 849 | 4 | 4.711 |
| | <i>Culex restuans</i> | 3 | 52 | | |
| | <i>Culex salinarius</i> | 4 | 123 | | |
| | <i>Culex</i> spp. | 16 | 954 | | |
| | <i>Culiseta melanura</i> | 28 | 302 | | |
| | <i>Psorophora ferox</i> | 2 | 29 | | |
| Bergen | | 115 | 7542 | 13 | 1.724 |
| | <i>Aedes albopictus</i> | 15 | 72 | | |
| | <i>Aedes japonicus</i> | 2 | 120 | | |
| | <i>Culex</i> spp. | 98 | 7350 | 13 | 1.769 |
| Burlington | | 121 | 4263 | 3 | 0.704 |

| | | | | | |
|-------------------|------------------------------------|-------------|--------------|----------|--------------|
| | <i>Aedes albopictus</i> | 6 | 86 | | |
| | <i>Aedes atropalpus</i> | 3 | 18 | | |
| | <i>Aedes japonicus</i> | 8 | 174 | | |
| | <i>Aedes taeniorhynchus</i> | 2 | 68 | | |
| | <i>Aedes triseriatus</i> | 5 | 13 | | |
| | <i>Anopheles barberi</i> | 1 | 1 | | |
| | <i>Anopheles bradleyi</i> | 1 | 6 | | |
| | <i>Anopheles crucians</i> | 2 | 40 | | |
| | <i>Coquillettidia perturbans</i> | 1 | 58 | | |
| | <i>Culex salinarius</i> | 11 | 362 | | |
| | <i>Culex</i> spp. | 51 | 2651 | 3 | 1.132 |
| | <i>Culex territans</i> | 1 | 12 | | |
| | <i>Culiseta melanura</i> | 29 | 774 | | |
| Camden | | 117 | 3461 | 2 | 0.578 |
| | <i>Aedes albopictus</i> | 16 | 66 | | |
| | <i>Aedes japonicus</i> | 14 | 56 | | |
| | <i>Culex</i> spp. | 71 | 2728 | 2 | 0.733 |
| | <i>Culiseta melanura</i> | 16 | 611 | | |
| Cape May | | 1976 | 14950 | | |
| | <i>Aedes albopictus</i> | 152 | 242 | | |
| | <i>Aedes atlanticus</i> | 3 | 4 | | |
| | <i>Aedes atropalpus</i> | 16 | 44 | | |
| | <i>Aedes canadensis canadensis</i> | 12 | 244 | | |
| | <i>Aedes cantator</i> | 23 | 50 | | |
| | <i>Aedes japonicus</i> | 165 | 341 | | |
| | <i>Aedes sollicitans</i> | 2 | 4 | | |
| | <i>Aedes taeniorhynchus</i> | 2 | 2 | | |
| | <i>Aedes triseriatus</i> | 99 | 181 | | |
| | <i>Aedes vexans</i> | 7 | 10 | | |
| | <i>Anopheles atropos</i> | 1 | 1 | | |
| | <i>Anopheles bradleyi</i> | 38 | 176 | | |
| | <i>Anopheles punctipennis</i> | 9 | 10 | | |
| | <i>Anopheles quadrimaculatus</i> | 64 | 647 | | |
| | <i>Coquillettidia perturbans</i> | 25 | 415 | | |
| | <i>Culex erraticus</i> | 8 | 16 | | |
| | <i>Culex pipiens</i> | 519 | 7418 | | |
| | <i>Culex restuans</i> | 520 | 4021 | | |
| | <i>Culex salinarius</i> | 166 | 596 | | |
| | <i>Culex</i> spp. | 32 | 90 | | |
| | <i>Culex territans</i> | 17 | 207 | | |
| | <i>Culiseta melanura</i> | 88 | 216 | | |
| | <i>Orthopodomyia signifera</i> | 2 | 2 | | |
| | <i>Psorophora columbiae</i> | 2 | 2 | | |
| | <i>Psorophora ferox</i> | 3 | 8 | | |
| | <i>Uranotaenia sapphirina</i> | 1 | 3 | | |
| Cumberland | | 80 | 1927 | | |
| | <i>Aedes albopictus</i> | 6 | 87 | | |
| | <i>Aedes cantator</i> | 1 | 1 | | |
| | <i>Aedes japonicus</i> | 5 | 9 | | |
| | <i>Aedes sollicitans</i> | 7 | 210 | | |
| | <i>Aedes taeniorhynchus</i> | 3 | 26 | | |
| | <i>Aedes vexans</i> | 7 | 219 | | |
| | <i>Anopheles bradleyi</i> | 4 | 122 | | |

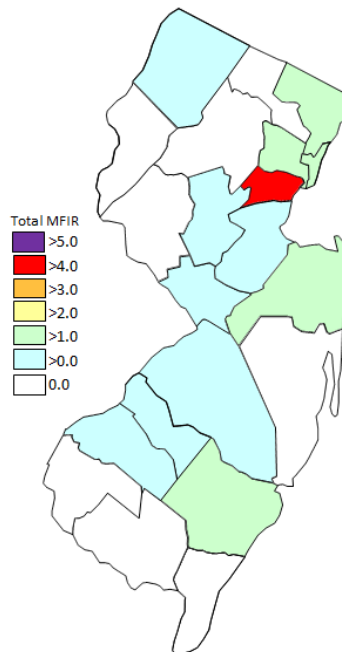
| | | | | | |
|-------------------|------------------------------------|------------|-------------|----------|--------------|
| | <i>Anopheles crucians</i> | 1 | 5 | | |
| | <i>Anopheles punctipennis</i> | 3 | 38 | | |
| | <i>Anopheles quadrimaculatus</i> | 1 | 3 | | |
| | <i>Coquillettidia perturbans</i> | 4 | 104 | | |
| | <i>Culex pipiens</i> | 1 | 7 | | |
| | <i>Culex salinarius</i> | 21 | 989 | | |
| | <i>Culex</i> spp. | 4 | 19 | | |
| | <i>Culiseta melanura</i> | 5 | 29 | | |
| | <i>Orthopodomyia signifera</i> | 1 | 1 | | |
| | <i>Psorophora ciliata</i> | 1 | 1 | | |
| | <i>Psorophora columbiae</i> | 4 | 44 | | |
| | <i>Psorophora ferox</i> | 1 | 13 | | |
| Essex | | 118 | 511 | 1 | 1.957 |
| | <i>Aedes albopictus</i> | 39 | 165 | | |
| | <i>Aedes japonicus</i> | 5 | 8 | | |
| | <i>Aedes triseriatus</i> | 2 | 2 | | |
| | <i>Anopheles punctipennis</i> | 1 | 1 | | |
| | <i>Anopheles quadrimaculatus</i> | 1 | 1 | | |
| | <i>Culex</i> spp. | 70 | 334 | 1 | 2.994 |
| Gloucester | | 190 | 9844 | 3 | 0.305 |
| | <i>Aedes albopictus</i> | 16 | 199 | | |
| | <i>Aedes japonicus</i> | 14 | 186 | | |
| | <i>Aedes triseriatus</i> | 1 | 4 | | |
| | <i>Anopheles punctipennis</i> | 2 | 10 | | |
| | <i>Culex pipiens</i> | 147 | 9366 | 3 | 0.320 |
| | <i>Culiseta melanura</i> | 10 | 79 | | |
| Hudson | | 120 | 5861 | 6 | 1.024 |
| | <i>Aedes albopictus</i> | 18 | 423 | 1 | 2.364 |
| | <i>Culex</i> spp. | 102 | 5438 | 5 | 0.919 |
| Hunterdon | | 104 | 4673 | | |
| | <i>Culex</i> spp. | 104 | 4673 | | |
| Mercer | | 192 | 5442 | 4 | 0.735 |
| | <i>Aedes albopictus</i> | 22 | 358 | | |
| | <i>Aedes japonicus</i> | 4 | 43 | | |
| | <i>Aedes triseriatus</i> | 2 | 24 | | |
| | <i>Aedes vexans</i> | 1 | 3 | | |
| | <i>Culex pipiens</i> | 15 | 379 | | |
| | <i>Culex restuans</i> | 99 | 3250 | 1 | 0.308 |
| | <i>Culex</i> spp. | 49 | 1385 | 3 | 2.166 |
| Middlesex | | 197 | 8000 | 4 | 0.500 |
| | <i>Aedes albopictus</i> | 33 | 217 | | |
| | <i>Culex</i> spp. | 133 | 7300 | 4 | 0.548 |
| | <i>Culiseta melanura</i> | 31 | 483 | | |
| Monmouth | | 384 | 4107 | 7 | 1.704 |
| | <i>Aedes albopictus</i> | 208 | 1690 | | |
| | <i>Aedes atlanticus</i> | 1 | 2 | | |
| | <i>Aedes canadensis canadensis</i> | 18 | 311 | | |
| | <i>Aedes cantator</i> | 9 | 191 | | |

| | | | | |
|------------------------------------|------------|-------------|---|-------|
| <i>Aedes grossbecki</i> | 1 | 1 | | |
| <i>Aedes japonicus</i> | 18 | 35 | | |
| <i>Aedes sollicitans</i> | 3 | 7 | | |
| <i>Aedes taeniorhynchus</i> | 3 | 8 | | |
| <i>Aedes triseriatus</i> | 5 | 12 | | |
| <i>Aedes trivittatus</i> | 1 | 1 | | |
| <i>Aedes vexans</i> | 5 | 21 | | |
| <i>Anopheles barberi</i> | 1 | 1 | | |
| <i>Anopheles crucians</i> | 1 | 1 | | |
| <i>Anopheles punctipennis</i> | 18 | 36 | | |
| <i>Anopheles quadrimaculatus</i> | 2 | 2 | | |
| <i>Coquillettidia perturbans</i> | 4 | 5 | | |
| <i>Culex erraticus</i> | 2 | 5 | | |
| <i>Culex restuans</i> | 1 | 3 | | |
| <i>Culex</i> spp. | 70 | 1729 | 7 | 4.049 |
| <i>Culiseta melanura</i> | 11 | 26 | | |
| <i>Psorophora ferox</i> | 2 | 20 | | |
| Morris | 178 | 6493 | | |
| <i>Aedes albopictus</i> | 13 | 52 | | |
| <i>Culex</i> spp. | 165 | 6441 | | |
| Ocean | 175 | 2692 | | |
| <i>Aedes albopictus</i> | 48 | 520 | | |
| <i>Aedes canadensis canadensis</i> | 1 | 70 | | |
| <i>Aedes japonicus</i> | 21 | 76 | | |
| <i>Aedes triseriatus</i> | 8 | 14 | | |
| <i>Aedes vexans</i> | 1 | 1 | | |
| <i>Anopheles punctipennis</i> | 2 | 2 | | |
| <i>Coquillettidia perturbans</i> | 14 | 236 | | |
| <i>Culex erraticus</i> | 2 | 14 | | |
| <i>Culex restuans</i> | 1 | 2 | | |
| <i>Culex</i> spp. | 61 | 1709 | | |
| <i>Culiseta melanura</i> | 16 | 48 | | |
| Passaic | 180 | 4483 | | |
| <i>Aedes albopictus</i> | 6 | 7 | | |
| <i>Aedes japonicus</i> | 45 | 202 | | |
| <i>Aedes triseriatus</i> | 5 | 6 | | |
| <i>Aedes vexans</i> | 12 | 22 | | |
| <i>Culex</i> spp. | 112 | 4246 | | |
| Salem | 156 | 1066 | | |
| <i>Aedes albopictus</i> | 34 | 126 | | |
| <i>Aedes japonicus</i> | 11 | 29 | | |
| <i>Aedes triseriatus</i> | 14 | 24 | | |
| <i>Anopheles punctipennis</i> | 2 | 2 | | |
| <i>Anopheles quadrimaculatus</i> | 6 | 9 | | |
| <i>Coquillettidia perturbans</i> | 9 | 82 | | |
| <i>Culex erraticus</i> | 11 | 43 | | |
| <i>Culex pipiens</i> | 1 | 1 | | |
| <i>Culex restuans</i> | 2 | 2 | | |
| <i>Culex</i> spp. | 54 | 550 | | |
| <i>Culiseta melanura</i> | 10 | 195 | | |
| <i>Psorophora columbiae</i> | 1 | 1 | | |
| <i>Psorophora ferox</i> | 1 | 2 | | |

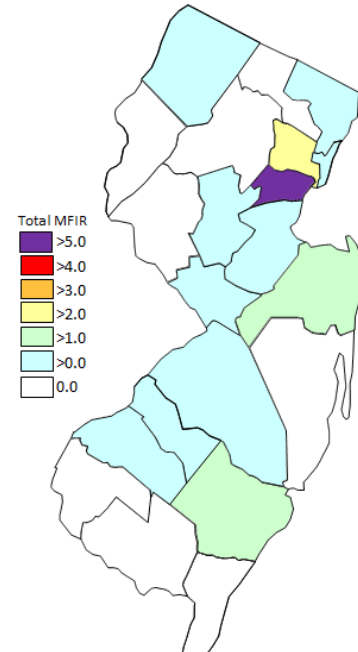
| | | | | |
|----------------------------------|-------------|---------------|-----------|--------------|
| Somerset | 105 | 2476 | 1 | 0.404 |
| <i>Aedes albopictus</i> | 3 | 14 | | |
| <i>Aedes japonicus</i> | 2 | 16 | | |
| <i>Aedes triseriatus</i> | 1 | 4 | | |
| <i>Culex</i> spp. | 99 | 2442 | 1 | 0.410 |
| Sussex | 177 | 6945 | 2 | 0.288 |
| <i>Aedes japonicus</i> | 13 | 468 | | |
| <i>Aedes triseriatus</i> | 1 | 16 | | |
| <i>Aedes trivittatus</i> | 1 | 33 | | |
| <i>Anopheles punctipennis</i> | 1 | 44 | | |
| <i>Coquillettidia perturbans</i> | 12 | 856 | | |
| <i>Culex salinarius</i> | 2 | 65 | | |
| <i>Culex</i> spp. | 147 | 5463 | 2 | 0.366 |
| Union | 44 | 2415 | 11 | 4.555 |
| <i>Aedes albopictus</i> | 4 | 72 | | |
| <i>Culex</i> spp. | 40 | 2343 | 11 | 4.695 |
| Warren | 120 | 6908 | | |
| <i>Culex</i> spp. | 120 | 6908 | | |
| Grand Total | 4968 | 107807 | 61 | 0.566 |



Cumulative WNV activity in 2015.



WNV activity to 6 August 2016.



WNV activity last week, 2016.

Saint Louis Encephalitis (SLE) to 6 August 2016.

New Jersey will be primarily testing for SLE this year only when adjacent states show human activity (Cape May tests mosquitoes in the Cape May lab independently). 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.

Currently, there are no reported positive pools of SLE for 2016. There are no human cases reported.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|--------------------|--------------------------|------------|--------------|-----------|------|
| Burlington | | 52 | 2652 | | |
| | <i>Anopheles barberi</i> | 1 | 1 | | |
| | <i>Culex</i> spp. | 51 | 2651 | | |
| Cape May | | 550 | 7504 | | |
| | <i>Aedes albopictus</i> | 1 | 1 | | |
| | <i>Culex pipiens</i> | 517 | 7413 | | |
| | <i>Culex</i> spp. | 32 | 90 | | |
| Grand Total | | 602 | 10156 | | |

La Crosse Encephalitis (LAC) to 6 August 2016.

New Jersey will be primarily testing for LAC this year only when adjacent states show human activity (Cape May tests mosquitoes in the Cape May lab independently). 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).

Currently, there are no reported positive pools of LAC for 2016. There are no human cases reported.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|--------------------|--------------------------|-----------|------------|-----------|------|
| Burlington | | 22 | 291 | | |
| | <i>Aedes albopictus</i> | 6 | 86 | | |
| | <i>Aedes atropalpus</i> | 3 | 18 | | |
| | <i>Aedes japonicus</i> | 8 | 174 | | |
| | <i>Aedes triseriatus</i> | 5 | 13 | | |
| Grand Total | | 22 | 291 | | |

Dengue (DENV) to 6 August 2016.

New Jersey will be selectively testing for DENV (including serotypes) this year. Dengue has not had a history of local transmission here in New Jersey, but each year, travelers can bring virus back from areas in the world with virus activity. This is significant as humans are NOT dead-end hosts and thus there is the potential for local transmission (i.e., New Jersey mosquitoes biting a sick person and then biting and transmitting the disease to someone else) to be established. DENV is a flavivirus but unlike WNV, *Aedes* mosquitoes are predominant vectors. In New Jersey, *Aedes albopictus* is a candidate for local transmission. There are 4 serotypes tested for Dengue.

Note Same pools of *Ae. albopictus* are tested for the four serotypes of Dengue as well as Chikungunya.

No pools have tested positive in 2016. Currently, New Jersey has 31 imported human cases of Dengue.

| County | Species | DENV1 | | DENV2 | | DENV3 | | DENV4 | | Positives | MFIR |
|--------------------|--------------------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|-----------|------|
| | | Pool | Mos. | Pool | Mos. | Pool | Mos. | Pool | Mos. | | |
| Atlantic | | 13 | 157 | 13 | 157 | 13 | 157 | 13 | 157 | | |
| | <i>Aedes albopictus</i> | 13 | 157 | 13 | 157 | 13 | 157 | 13 | 157 | | |
| Bergen | | 15 | 72 | 15 | 72 | 15 | 72 | 15 | 72 | | |
| | <i>Aedes albopictus</i> | 15 | 72 | 15 | 72 | 15 | 72 | 15 | 72 | | |
| Camden | | 16 | 66 | 16 | 66 | 16 | 66 | 16 | 66 | | |
| | <i>Aedes albopictus</i> | 16 | 66 | 16 | 66 | 16 | 66 | 16 | 66 | | |
| Cumberland | | 6 | 87 | 6 | 87 | 6 | 87 | 6 | 87 | | |
| | <i>Aedes albopictus</i> | 6 | 87 | 6 | 87 | 6 | 87 | 6 | 87 | | |
| Essex | | 39 | 165 | 39 | 165 | 39 | 165 | 39 | 165 | | |
| | <i>Aedes albopictus</i> | 39 | 165 | 39 | 165 | 39 | 165 | 39 | 165 | | |
| Hudson | | 18 | 423 | 18 | 423 | 18 | 423 | 18 | 423 | | |
| | <i>Aedes albopictus</i> | 18 | 423 | 18 | 423 | 18 | 423 | 18 | 423 | | |
| Mercer | | 22 | 358 | 22 | 358 | 22 | 358 | 22 | 358 | | |
| | <i>Aedes albopictus</i> | 22 | 358 | 22 | 358 | 22 | 358 | 22 | 358 | | |
| Middlesex | | 34 | 218 | 34 | 218 | 34 | 218 | 34 | 218 | | |
| | <i>Aedes albopictus</i> | 33 | 217 | 33 | 217 | 33 | 217 | 33 | 217 | | |
| | <i>Culiseta melanura</i> | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Monmouth | | 176 | 1582 | 176 | 1582 | 176 | 1582 | 176 | 1582 | | |
| | <i>Aedes albopictus</i> | 176 | 1582 | 176 | 1582 | 176 | 1582 | 176 | 1582 | | |
| Morris | | 15 | 55 | 15 | 55 | 15 | 55 | 15 | 55 | | |
| | <i>Aedes albopictus</i> | 13 | 52 | 13 | 52 | 13 | 52 | 13 | 52 | | |
| | <i>Culex spp.</i> | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | | |
| Passaic | | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | | |
| | <i>Aedes albopictus</i> | 2 | 3 | 2 | 3 | 2 | 3 | 2 | 3 | | |
| Salem | | 34 | 126 | 34 | 126 | 34 | 126 | 34 | 126 | | |
| | <i>Aedes albopictus</i> | 34 | 126 | 34 | 126 | 34 | 126 | 34 | 126 | | |
| Grand Total | | 390 | 3312 | 390 | 3312 | 390 | 3312 | 390 | 3312 | | |

Chikungunya (CHIK) to 6 August 2016.

New Jersey will be selectively testing for CHIK this year. Chikungunya is similar in symptoms to Dengue, a “breakbone” fever and has a low mortality rate. But this virus has had recent worldwide activity, and in the past year has come to the Western Hemisphere. As with Dengue, transmission can occur when a mosquito bites an infected human, then bites an uninfected human who subsequently becomes ill. CHIK is an alphavirus with *Aedes* mosquitoes as potential vectors. In New Jersey, *Aedes albopictus* is the mosquito of interest.

No pools have tested positive in 2016. Currently, New Jersey has 1 imported human case of Chikungunya.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|-----------------|-------------------------|-----------|------------|-----------|------|
| Atlantic | | 13 | 157 | | |
| | <i>Aedes albopictus</i> | 13 | 157 | | |
| Bergen | | 15 | 72 | | |
| | <i>Aedes albopictus</i> | 15 | 72 | | |
| Camden | | 16 | 66 | | |

| | | | | | |
|--------------------|--------------------------|------------|-------------|--|--|
| | <i>Aedes albopictus</i> | 16 | 66 | | |
| Cape May | | 152 | 245 | | |
| | <i>Aedes albopictus</i> | 151 | 241 | | |
| | <i>Culex pipiens</i> | 1 | 4 | | |
| Cumberland | | 6 | 87 | | |
| | <i>Aedes albopictus</i> | 6 | 87 | | |
| Essex | | 39 | 165 | | |
| | <i>Aedes albopictus</i> | 39 | 165 | | |
| Hudson | | 18 | 423 | | |
| | <i>Aedes albopictus</i> | 18 | 423 | | |
| Mercer | | 22 | 358 | | |
| | <i>Aedes albopictus</i> | 22 | 358 | | |
| Middlesex | | 34 | 218 | | |
| | <i>Aedes albopictus</i> | 33 | 217 | | |
| | <i>Culiseta melanura</i> | 1 | 1 | | |
| Monmouth | | 176 | 1582 | | |
| | <i>Aedes albopictus</i> | 176 | 1582 | | |
| Morris | | 15 | 55 | | |
| | <i>Aedes albopictus</i> | 13 | 52 | | |
| | <i>Culex</i> spp. | 2 | 3 | | |
| Passaic | | 2 | 3 | | |
| | <i>Aedes albopictus</i> | 2 | 3 | | |
| Salem | | 34 | 126 | | |
| | <i>Aedes albopictus</i> | 34 | 126 | | |
| Grand Total | | 542 | 3557 | | |

Zika (ZIKV) to 6 August 2016.

New Jersey will be selectively testing for ZIKV this year. Zika is an emerging arboviral threat with significant health consequences for fetuses and recent activity in the Western Hemisphere. Humans are potential hosts that can transmit through sexual activity. ZIKV is a flavivirus with *Aedes* mosquitoes as potential vectors. In New Jersey, *Aedes albopictus* is the mosquito of interest.

No pools have tested positive in 2016. Currently, New Jersey has 80 imported human cases of Zika.

| County | Species | Pools | Mosquitoes | Positives | MFIR |
|--------------------|-------------------------|------------|------------|-----------|------|
| Cape May | | 152 | 245 | | |
| | <i>Aedes albopictus</i> | 151 | 241 | | |
| | <i>Culex pipiens</i> | 1 | 4 | | |
| Monmouth | | 6 | 8 | | |
| | <i>Aedes albopictus</i> | 6 | 8 | | |
| Grand Total | | 158 | 253 | | |