

# VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV and CHIK

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CDC WEEK 42: 18 October to 24 October, 2015

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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	0.73	0.00	32	15	1	31.25
Green Bank (Burlington Co.)/25	Coastal	0.77	0.44	151 (162)	18 (19)	1	6.62
Corbin City (Atlantic Co.)/25	Coastal	0.14	0.00	306	19		
Dennisville (Cape May Co.)/50	Coastal	1.62	0.00	232	14		
Winslow (Camden Co.)/50	Inland	0.38	0.00	1927	50	7	3.63
Centerton (Salem Co.)/50	Inland	0.44	0.00	882	28	2	2.27
Turkey Swamp (Monmouth Co.)/50	Inland	0.09	0.00	408	20		
Glassboro (Gloucester Co.)/50	Inland	0.10	0.00	313	20	1	3.19

\*Current week (in parentheses) results pending. ‡ corrected

**Remarks:** One new positive pools of EEE were detected during the current week at a county site in Ocean County. There have been a total of 24 positive pools detected statewide: 17 in *Culiseta melanura*, 6 in *Culex erraticus* and 1 in *Culex pipiens*. There has been one horse case reported previously. First detection of EEE in a pool of *Culiseta melanura* was collected at the Winslow resting box site on the 27<sup>th</sup> of July.

**Traditional Resting Box Sites:** Twelve EEE positive *Cs. melanura* pools have been detected at the state resting box sites to date. Five of the eight sites have detected positive pools. 4251 *Cs. melanura* from 184 pools have been tested for EEE with an additional pool containing 11 *Cs. melanura* to be tested. MFIR for the traditional resting box sites is 2.82 with a statewide MFIR of 1.87 for *Cs. melanura* and a statewide MFIR of 0.96 for all species tested.

**Additional *Cs. melanura* trapped by counties**

\*traps with positives indicated in **BOLD**.

County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO <sub>2</sub>	23	339		
Burlington	<b>CO<sub>2</sub></b>	87	2583	2	0.77
Cape May	CO <sub>2</sub> , GR, RB	153	811		
Cumberland	CO <sub>2</sub> , <b>RB</b>	26	267	1	3.75
Gloucester	CO <sub>2</sub> , GR, RB	55	697		
Middlesex	RB	11	48		
Ocean	<b>CO<sub>2</sub>, GR, RB</b>	25	100	2	20.00
Salem	CO <sub>2</sub> , GR	3	6		
<b>TOTAL</b>		<b>383</b>	<b>4851</b>	<b>5</b>	<b>1.03</b>

**Additional *Cs. melanura*:** Counties maintain trap sites for *Cs. melanura* in other areas. Latest positive pool was collected 30 Sep in Ocean County. Previous to the current week, three positive pools (two from Burlington County and one from Cumberland County) have been detected. The first county positive was collected from a CO<sub>2</sub> trap on 3 August.

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	5	6		
<i>Aedes atlanticus</i>	1	7		
<i>Aedes canadensis canadensis</i>	2	24		
<i>Aedes cantator</i>	39	54		
<i>Aedes japonicus</i>	4	6		
<i>Aedes sollicitans</i>	17	400		
<i>Aedes taeniorhynchus</i>	5	25		
<i>Aedes triseriatus</i>	2	2		
<i>Aedes vexans</i>	6	119		
<i>Anopheles bradleyi</i>	51	349		
<i>Anopheles crucians</i>	5	57		
<i>Anopheles earlei</i>	1	1		
<i>Anopheles punctipennis</i>	39	160		
<i>Anopheles quadrimaculatus</i>	7	13		
<i>Coquillettidia perturbans</i>	119	2220		
<i>Culex erraticus</i>	108	2149	6	2.792
<i>Culex pipiens</i>	922	9084	1	0.110
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	203	943		
<i>Culex sp.</i>	63	177		
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora ciliata</i>	1	2		
<i>Psorophora ferox</i>	4	9		
<i>Psorophora howardii</i>	1	1		
<b>State Total</b>	<b>1607</b>	<b>15810</b>	<b>7</b>	<b>0.443</b>

**Additional Species:** Nineteen additional species were tested for EEE. Previous to the current week, seven positive pools (6 from *Culex erraticus* collected on 18 Aug, in Cape May and the 6<sup>th</sup> from *Culex pipiens* collected in Gloucester County on 2 Sep).

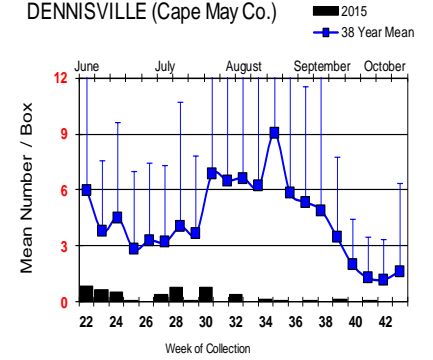
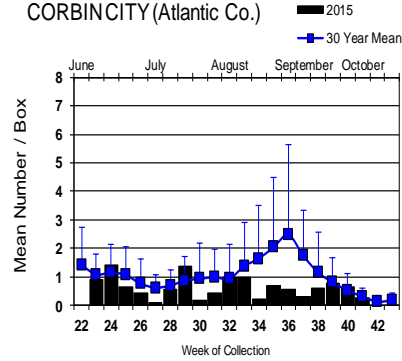
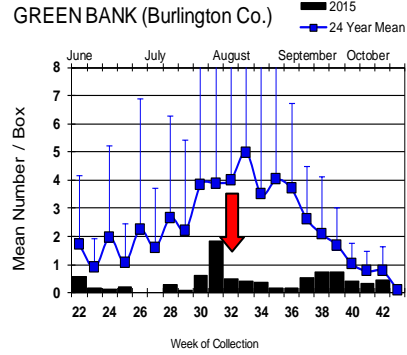
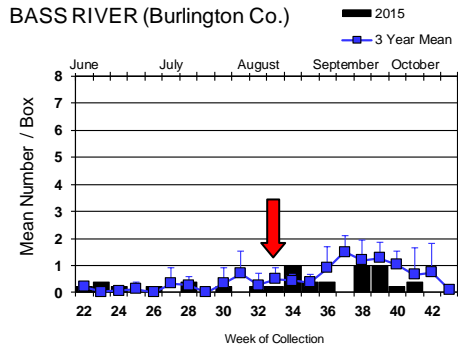
**Horses and Humans:** One horse, a 2 yo unvaccinated mare in Gloucester County, euthanized 25 Aug (no date of onset reported).

No humans have been reported with EEE.

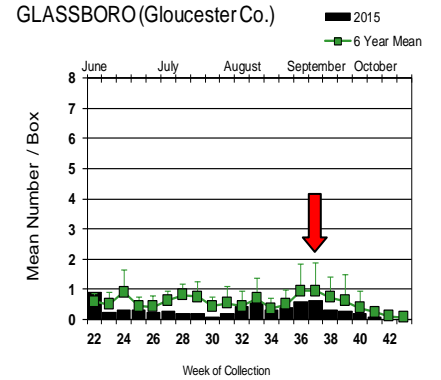
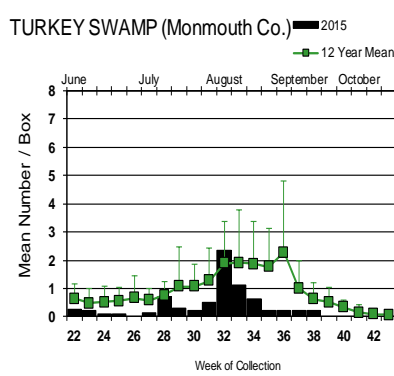
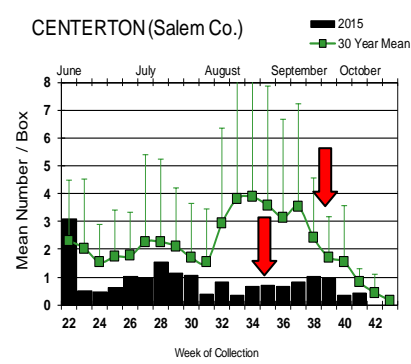
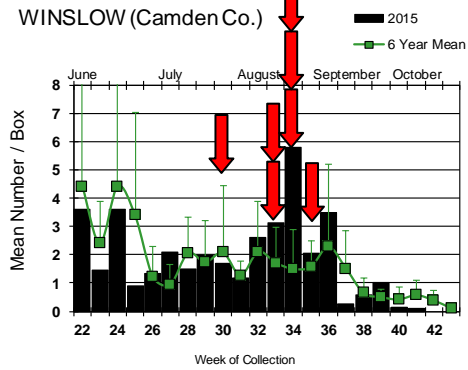
**Horses and Vaccinations:** The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: [http://www.aaep.org/vaccination\\_guidelines.htm](http://www.aaep.org/vaccination_guidelines.htm)

# Culiseta melanura Population Graphs



## Coastal



## Inland



Populations at all but the Green Bank site were at zero. No new positive pools were detected during the current week.

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

**EEE in US** (2015 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: FL(20/1goat) GA(6) LA(2) MI(1) MS(2) NC(1) NJ(1) NY(4) SC(3) TX(8) VA(2)
- mosquito pools: MA(1) ME(1) NH(2) NJ (24) NY(13) VT(1)
- sentinel: FL(69), TX(24)
- human: LA (1), NY(2)

**West Nile Virus Positive Organisms in US, 2015**

West Nile in US (2015 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		6/7
Alaska					
Arizona	0	81/82		3/4	79/84
Arkansas				3	16
California	1170/1192	2938/2972	362/379	17	366/421
Colorado	13	166		13/15	83/90
Connecticut		157			8
Delaware	2				4
DC					1
Florida		8/11	220/291	1/3	8/9
Georgia	0	63		0	10/11
Hawaii					
Idaho	0	13		5	13
Illinois	51	1701/1711		12/13	57/59
Indiana	0	468			18
Iowa		7		2	9
Kansas		1			24/26
Kentucky				8	
Louisiana	70/82	506/513		1	56/60
Maine		1			1
Maryland					38/45
Mass.		164		0	9
Michigan	10	9		1	16
Minnesota	3	2		1	5
Mississippi		44		1	37/38
Missouri		452/514		15/19	21/26

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					3
Nebraska	2	103		0	60/63
Nevada		104			7
New Hampshire		3		1	0
New Jersey	28	901		1	25/26
New Mexico				1	12
New York		36		1	40/41
North Carolina					3
North Dakota	0	4		3	23
Ohio		540		4	29/31
Oklahoma		2			68/79
Oregon	10	57	0	6	1
Pennsylvania	31	2689		2	30/31
Rhode Island		4		0	0
South Carolina					1
South Dakota		7			35/39
Tennessee		117			3
Texas	14	1427/1498		14/22	188/218
Utah		266/278	4	4	3/6
Vermont		97			
Virginia				1	12/19
Washington	7	157		36	23/24
West Virginia					
Wisconsin	44/45	15		1	7
Wyoming					4

\* 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 26 October 2015

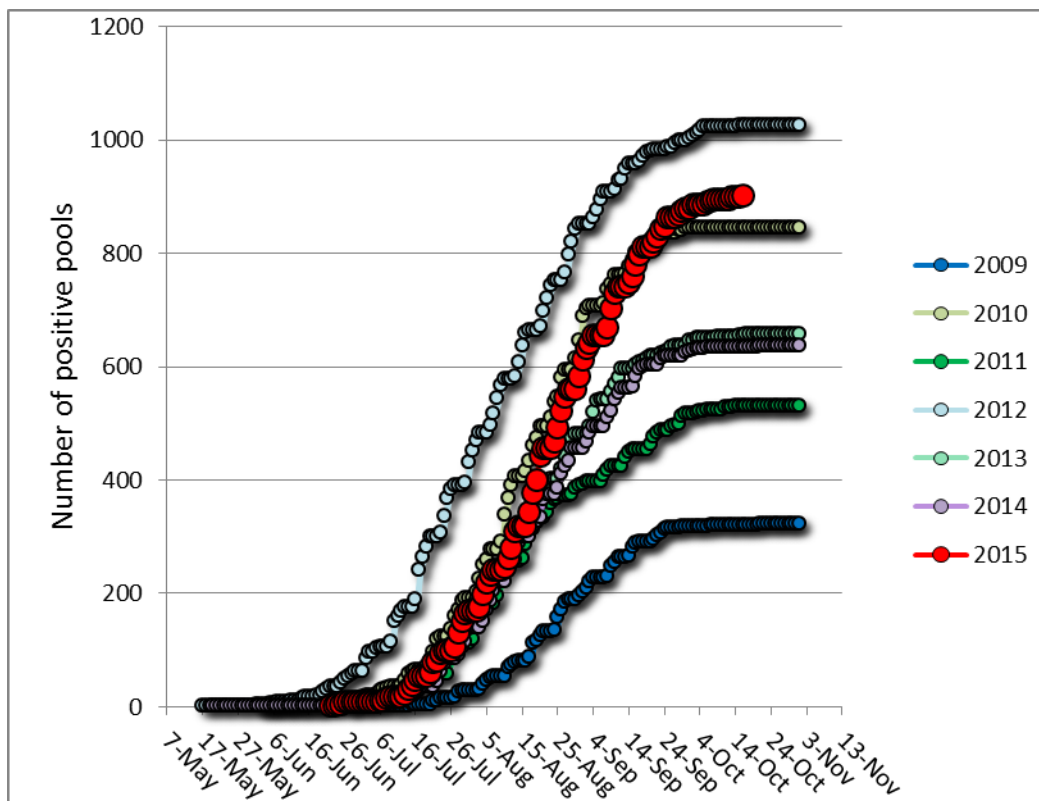
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	1	1		
<i>Aedes albopictus</i>	1681	12138	22	1.812
<i>Aedes atlanticus</i>	2	13		
<i>Aedes atropalpus</i>	13	23		
<i>Aedes aurifer</i>	1	1		
<i>Aedes canadensis canadensis</i>	23	197		
<i>Aedes cantator</i>	45	224		
<i>Aedes grossbecki</i>	9	40		
<i>Aedes japonicus</i>	609	2533	10	3.948
<i>Aedes sollicitans</i>	17	400		
<i>Aedes sticticus</i>	1	1		
<i>Aedes stimulans</i>	1	1		
<i>Aedes taeniorhynchus</i>	18	103		
<i>Aedes triseriatus</i>	318	898	3	3.341
<i>Aedes trivittatus</i>	6	17		
<i>Aedes vexans</i>	142	2551	4	1.568
<i>Anopheles atropos</i>	1	1		
<i>Anopheles barberi</i>	3	3		
<i>Anopheles bradleyi</i>	58	384		
<i>Anopheles crucians</i>	7	61		
<i>Anopheles earlei</i>	1	1		
<i>Anopheles punctipennis</i>	132	475		
<i>Anopheles quadrimaculatus</i>	229	4139		
<i>Coquillettidia perturbans</i>	129	2307		
<i>Culex erraticus</i>	160	2502	2	0.799
<i>Culex pipiens</i>	1444	31314	183	5.844
<i>Culex restuans</i>	762	3805	11	2.891
<i>Culex salinarius</i>	218	1025	2	1.951
<i>Culex sp.</i>	3032	103312	646	6.253
<i>Culex territans</i>	24	71		
<i>Culiseta melanura</i>	576	9191	18	1.958
<i>Orthopodomyia signifera</i>	2	2		
<i>Psorophora ciliata</i>	4	22		
<i>Psorophora columbiae</i>	23	243		
<i>Psorophora ferox</i>	15	29		
<i>Psorophora howardii</i>	2	2		
<i>Uranotaenia sapphirina</i>	7	25		
<b>Grand Total</b>	<b>9716</b>	<b>178055</b>	<b>901</b>	<b>5.060</b>

**Remarks:** *\*NOTE\* Correction to totals made from previous week.* To date, 9716 pools of 178,055 mosquitoes from 35 species have been tested, with 901 positive pools detected, most in ornithophilic *Culex/Culiseta* pools. No detections occurred in the current week. First positive of the season occurred in Middlesex County, in a pool of mixed *Culex*, collected on the 22<sup>nd</sup> of June. First positive pool in non-*Culex* was in an *Aedes albopictus* pool, collected in Monmouth County on 10 July. First positive pool in a non-*Culex* ornithophilic species was found in *Culiseta melanura* in Cape May 21 July. Overall state MFIR is 5.060, a continued decreased from the previous week of 5.143.

**Humans, Horses and Wild Birds:** Twenty-six human cases (2 fatalities) of WNV have been reported in Bergen (2), Burlington (4), Camden (1), Cumberland (5), Essex (2), Gloucester (2), Hudson (1), Hunterdon (1), Middlesex (2), Monmouth (3), Ocean (1), Passaic (1) and Union (1) counties. For further information, see <http://www.state.nj.us/health/cd/westnile/techinfo.shtml>.

One WNV horse case has tested positive (presumptive) in a 10 yo gelding from Gloucester County. No known vaccination history was given and the horse was euthanized on 3 October after first onset date of 27 September.

Bird testing began in mid-April. Twenty-eight positive birds have been reported, mostly corvids. To date, 73 birds have been tested. Species includes: American Crow (*Corvus brachyrhynchos* 8/11) Fish Crow (*Corvus ossifragus* 1/12), Blue Jay (*Cyanocitta cristata* 4/7), unidentified corvid (7/8), Hawk/Raptor (2/5) and other avian species (6/30). Counties (positives) submitting birds are Atlantic, Bergen, Burlington, Cape May, Cumberland, Essex, Gloucester, Hunterdon, Mercer, Monmouth, Morris, Ocean, Passaic, Salem and Warren.



The figure above shows WNV activity as the accumulation of positive pools over the season. This year has now surpassed the total number of positive pools but during CDC Week 40, there were 153705 mosquitoes in 6987 pools tested in 2010 (~12% of the pools) while this year about ~10% of the pools are positive.

### WNV Results by County through 26 October 2015

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Atlantic</b>		<b>283</b>	<b>7565</b>	<b>17</b>	<b>2.247</b>
	<i>Aedes albopictus</i>	59	547	1	1.828
	<i>Aedes japonicus</i>	14	61		
	<i>Aedes sollicitans</i>	3	136		
	<i>Aedes taeniorhynchus</i>	5	33		
	<i>Aedes triseriatus</i>	1	2		
	<i>Aedes vexans</i>	11	461		
	<i>Anopheles bradleyi</i>	3	9		
	<i>Anopheles punctipennis</i>	1	14		
	<i>Anopheles quadrimaculatus</i>	3	28		
	<i>Coquillettidia perturbans</i>	26	943		
	<i>Culex erraticus</i>	12	131		
	<i>Culex pipiens</i>	30	1327	12	9.043
	<i>Culex restuans</i>	3	9		
	<i>Culex salinarius</i>	1	15		

	<i>Culex</i> spp.	67	3199	3	0.938
	<i>Culiseta melanura</i>	42	645	1	1.550
	<i>Psorophora columbiae</i>	1	4		
	<i>Psorophora ferox</i>	1	1		
<b>Bergen</b>		<b>197</b>	<b>7804</b>	<b>97</b>	<b>12.430</b>
	<i>Aedes albopictus</i>	10	31	1	32.258
	<i>Aedes japonicus</i>	16	446		
	<i>Aedes triseriatus</i>	1	1		
	<i>Culex</i> spp.	170	7326	96	13.104
<b>Burlington</b>		<b>346</b>	<b>6528</b>	<b>21</b>	<b>3.217</b>
	<i>Aedes albopictus</i>	30	247	2	8.097
	<i>Aedes atlanticus</i>	1	7		
	<i>Aedes atropalpus</i>	1	4		
	<i>Aedes canadensis canadensis</i>	2	24		
	<i>Aedes japonicus</i>	22	103		
	<i>Aedes sollicitans</i>	2	25		
	<i>Aedes sticticus</i>	1	1		
	<i>Aedes taeniorhynchus</i>	5	25		
	<i>Aedes triseriatus</i>	5	16		
	<i>Aedes vexans</i>	10	200		
	<i>Anopheles bradleyi</i>	8	256		
	<i>Anopheles crucians</i>	3	55		
	<i>Anopheles punctipennis</i>	6	27		
	<i>Anopheles quadrimaculatus</i>	1	2		
	<i>Coquillettidia perturbans</i>	8	103		
	<i>Culex erraticus</i>	11	17	1	58.824
	<i>Culex pipiens</i>	8	17	1	58.824
	<i>Culex restuans</i>	3	15		
	<i>Culex salinarius</i>	15	251		
	<i>Culex</i> spp.	80	2287	13	5.684
	<i>Culiseta melanura</i>	123	2845	4	1.406
	<i>Orthopodomyia signifera</i>	1	1		
<b>Camden</b>		<b>318</b>	<b>9341</b>	<b>64</b>	<b>6.852</b>
	<i>Aedes abserratus</i>	1	1		
	<i>Aedes albopictus</i>	30	60	2	33.333
	<i>Aedes canadensis canadensis</i>	4	16		
	<i>Aedes cantator</i>	1	1		
	<i>Aedes japonicus</i>	56	402	3	7.463
	<i>Aedes stimulans</i>	1	1		
	<i>Aedes vexans</i>	1	39		
	<i>Anopheles punctipennis</i>	3	7		
	<i>Coquillettidia perturbans</i>	3	6		
	<i>Culex</i> spp.	162	6870	52	7.569
	<i>Culiseta melanura</i>	51	1928	7	3.631
	<i>Psorophora ferox</i>	5	10		
<b>Cape May</b>		<b>3442</b>	<b>22006</b>	<b>36</b>	<b>1.636</b>
	<i>Aedes albopictus</i>	419	975		
	<i>Aedes atropalpus</i>	12	19		
	<i>Aedes aurifer</i>	1	1		
	<i>Aedes canadensis canadensis</i>	7	7		
	<i>Aedes cantator</i>	39	54		
	<i>Aedes japonicus</i>	281	573		

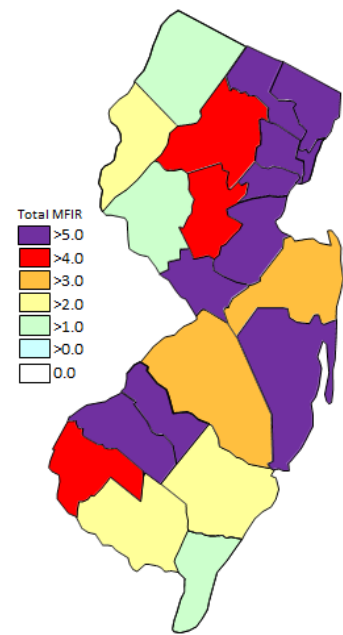
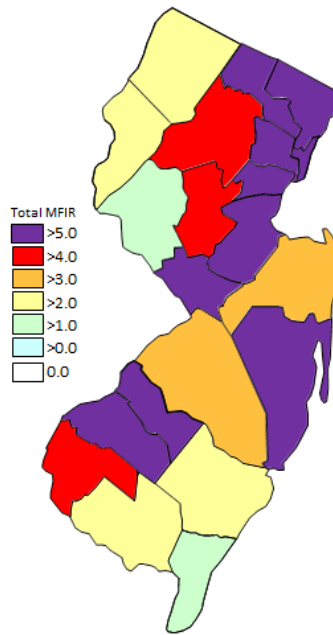
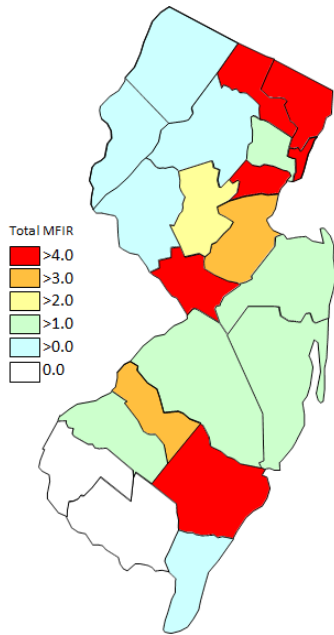
	<i>Aedes sollicitans</i>	6	8		
	<i>Aedes taeniorhynchus</i>	6	15		
	<i>Aedes triseriatus</i>	236	535		
	<i>Aedes vexans</i>	20	48		
	<i>Anopheles atropos</i>	1	1		
	<i>Anopheles barberi</i>	1	1		
	<i>Anopheles bradleyi</i>	44	102		
	<i>Anopheles punctipennis</i>	22	25		
	<i>Anopheles quadrimaculatus</i>	190	3991		
	<i>Coquillettidia perturbans</i>	52	894		
	<i>Culex erraticus</i>	72	2007		
	<i>Culex pipiens</i>	912	8722	27	3.096
	<i>Culex restuans</i>	677	2302	4	1.738
	<i>Culex salinarius</i>	185	445	2	4.494
	<i>Culex spp.</i>	52	133		
	<i>Culex territans</i>	24	71		
	<i>Culiseta melanura</i>	167	1043	3	2.876
	<i>Orthopodomyia signifera</i>	1	1		
	<i>Psorophora columbiae</i>	5	5		
	<i>Psorophora ferox</i>	2	2		
	<i>Psorophora howardii</i>	1	1		
	<i>Uranotaenia sapphirina</i>	7	25		
<b>Cumberland</b>		<b>307</b>	<b>4138</b>	<b>12</b>	<b>2.900</b>
	<i>Aedes albopictus</i>	46	394		
	<i>Aedes atlanticus</i>	1	6		
	<i>Aedes canadensis canadensis</i>	3	54		
	<i>Aedes cantator</i>	1	2		
	<i>Aedes grossbecki</i>	9	40		
	<i>Aedes japonicus</i>	11	26		
	<i>Aedes sollicitans</i>	6	231		
	<i>Aedes taeniorhynchus</i>	2	30		
	<i>Aedes triseriatus</i>	3	7		
	<i>Aedes trivittatus</i>	2	3		
	<i>Aedes vexans</i>	46	1263	3	2.375
	<i>Anopheles bradleyi</i>	1	15		
	<i>Anopheles earlei</i>	1	1		
	<i>Anopheles punctipennis</i>	14	121		
	<i>Anopheles quadrimaculatus</i>	7	41		
	<i>Coquillettidia perturbans</i>	12	69		
	<i>Culex erraticus</i>	17	100		
	<i>Culex pipiens</i>	7	29	1	34.483
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	5	256		
	<i>Culex spp.</i>	70	961	8	8.325
	<i>Culiseta melanura</i>	26	267		
	<i>Psorophora ciliata</i>	3	20		
	<i>Psorophora columbiae</i>	13	201		
<b>Essex</b>		<b>149</b>	<b>2124</b>	<b>12</b>	<b>5.650</b>
	<i>Aedes albopictus</i>	6	10		
	<i>Aedes japonicus</i>	25	60		
	<i>Aedes triseriatus</i>	3	3	1	333.333
	<i>Aedes trivittatus</i>	1	1		
	<i>Anopheles punctipennis</i>	2	3		
	<i>Anopheles quadrimaculatus</i>	5	22		



<i>Culex</i> spp.	105	2019	11	5.448
<i>Psorophora ferox</i>	2	6		
<b>Gloucester</b>	<b>754</b>	<b>22100</b>	<b>142</b>	<b>6.425</b>
<i>Aedes albopictus</i>	220	1425	8	5.614
<i>Aedes japonicus</i>	22	140		
<i>Aedes triseriatus</i>	7	21		
<i>Aedes vexans</i>	10	125	1	8.000
<i>Anopheles punctipennis</i>	29	127		
<i>Anopheles quadrimaculatus</i>	7	11		
<i>Coquillettidia perturbans</i>	4	6		
<i>Culex pipiens</i>	374	19223	131	6.815
<i>Culiseta melanura</i>	75	1010	2	1.980
<i>Psorophora ciliata</i>	1	2		
<i>Psorophora ferox</i>	4	9		
<b>Hudson</b>	<b>231</b>	<b>8736</b>	<b>74</b>	<b>8.471</b>
<i>Aedes albopictus</i>	24	380		
<i>Culex</i> spp.	207	8356	74	8.856
<b>Hunterdon</b>	<b>267</b>	<b>11625</b>	<b>21</b>	<b>1.806</b>
<i>Culex</i> spp.	267	11625	21	1.806
<b>Mercer</b>	<b>539</b>	<b>9867</b>	<b>54</b>	<b>5.473</b>
<i>Aedes albopictus</i>	175	2033		
<i>Aedes japonicus</i>	39	109	1	9.174
<i>Aedes vexans</i>	19	117		
<i>Coquillettidia perturbans</i>	6	54		
<i>Culex erraticus</i>	9	43		
<i>Culex pipiens</i>	111	1994	11	5.517
<i>Culex restuans</i>	74	1471	7	4.759
<i>Culex</i> spp.	106	4046	35	8.651
<b>Middlesex</b>	<b>451</b>	<b>12635</b>	<b>88</b>	<b>6.965</b>
<i>Aedes albopictus</i>	156	502	4	7.968
<i>Culex</i> spp.	284	12085	84	6.951
<i>Culiseta melanura</i>	11	48		
<b>Monmouth</b>	<b>704</b>	<b>10413</b>	<b>35</b>	<b>3.361</b>
<i>Aedes albopictus</i>	351	4085	2	0.490
<i>Aedes canadensis canadensis</i>	6	93		
<i>Aedes cantator</i>	4	167		
<i>Aedes japonicus</i>	25	103	1	9.709
<i>Aedes triseriatus</i>	7	15		
<i>Aedes trivittatus</i>	1	1		
<i>Aedes vexans</i>	16	263		
<i>Anopheles barberi</i>	2	2		
<i>Anopheles bradleyii</i>	1	1		
<i>Anopheles crucians</i>	3	5		
<i>Anopheles punctipennis</i>	31	80		
<i>Anopheles quadrimaculatus</i>	7	15		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex erraticus</i>	16	93		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	12	58		

	<i>Culex</i> spp.	197	4986	32	6.418
	<i>Culiseta melanura</i>	21	413		
	<i>Psorophora columbiae</i>	2	31		
<b>Morris</b>		<b>343</b>	<b>13590</b>	<b>67</b>	<b>4.930</b>
	<i>Aedes albopictus</i>	28	368		
	<i>Culex</i> spp.	315	13222	67	5.067
<b>Ocean</b>		<b>324</b>	<b>4072</b>	<b>24</b>	<b>5.894</b>
	<i>Aedes albopictus</i>	87	797	2	2.509
	<i>Aedes canadensis canadensis</i>	1	3		
	<i>Aedes japonicus</i>	48	167	3	17.964
	<i>Aedes triseriatus</i>	12	32	1	31.250
	<i>Aedes vexans</i>	5	6		
	<i>Anopheles punctipennis</i>	1	1		
	<i>Anopheles quadrimaculatus</i>	6	10		
	<i>Coquillettidia perturbans</i>	2	4		
	<i>Culex erraticus</i>	6	130		
	<i>Culex</i> spp.	9	21		
	<i>Culiseta melanura</i>	118	2797	18	6.435
<b>Passaic</b>		<b>20</b>	<b>313</b>	<b>4</b>	<b>12.780</b>
	<i>Aedes albopictus</i>	2	3		
	<i>Aedes japonicus</i>	4	8	1	125.000
	<i>Aedes triseriatus</i>	2	3		
	<i>Aedes vexans</i>	1	1		
	<i>Culex</i> spp.	11	298	3	10.067
<b>Salem</b>		<b>182</b>	<b>1743</b>	<b>7</b>	<b>4.016</b>
	<i>Aedes albopictus</i>	27	182		
	<i>Aedes japonicus</i>	15	31	1	32.258
	<i>Aedes triseriatus</i>	15	22	1	45.455
	<i>Aedes vexans</i>	1	2		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Anopheles punctipennis</i>	7	12		
	<i>Anopheles quadrimaculatus</i>	6	23		
	<i>Coquillettidia perturbans</i>	9	26		
	<i>Culex erraticus</i>	14	90	1	11.111
	<i>Culex pipiens</i>	2	2		
	<i>Culex restuans</i>	3	6		
	<i>Culex</i> spp.	48	455	3	6.593
	<i>Culiseta melanura</i>	31	888	1	1.126
	<i>Psorophora columbiae</i>	2	2		
	<i>Psorophora ferox</i>	1	1		
<b>Somerset</b>		<b>239</b>	<b>3185</b>	<b>14</b>	<b>4.396</b>
	<i>Aedes albopictus</i>	3	16		
	<i>Aedes japonicus</i>	10	128		
	<i>Aedes triseriatus</i>	8	84		
	<i>Anopheles punctipennis</i>	1	4		
	<i>Coquillettidia perturbans</i>	1	29		
	<i>Culex</i> spp.	216	2924	14	4.788
<b>Sussex</b>		<b>226</b>	<b>4160</b>	<b>9</b>	<b>2.163</b>
	<i>Aedes japonicus</i>	18	154		

<i>Aedes triseriatus</i>	13	135		
<i>Anopheles punctipennis</i>	9	43		
<i>Coquillettidia perturbans</i>	1	46		
<i>Culex</i> spp.	185	3782	9	2.380
<b>Union</b>	<b>181</b>	<b>10757</b>	<b>92</b>	<b>8.553</b>
<i>Aedes albopictus</i>	3	27		
<i>Culex</i> spp.	178	10730	92	8.574
<b>Warren</b>	<b>213</b>	<b>5353</b>	<b>11</b>	<b>2.055</b>
<i>Aedes albopictus</i>	5	56		
<i>Aedes japonicus</i>	3	22		
<i>Aedes triseriatus</i>	5	22		
<i>Aedes trivittatus</i>	2	12		
<i>Aedes vexans</i>	2	26		
<i>Anopheles punctipennis</i>	1	2		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Culex</i> spp.	194	5211	11	2.111
<b>Grand Total</b>	<b>9716</b>	<b>178055</b>	<b>901</b>	<b>5.060</b>



Cumulative WNV activity in 2014.

WNV activity to 26 October 2015.

WNV activity last week, 2015.

\*NOTE\* New scale on activity maps – addition of MFIR 5.0 and above in purple

## Saint Louis Encephalitis (SLE) 2015.

New Jersey will be testing for SLE this year only when adjacent states show human activity (Cape May tests its own 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.

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Cape May</b>		<b>960</b>	<b>8835</b>		
	<i>Culex pipiens</i>	908	8702		
	<i>Culex restuans</i>	52	133		
	<i>Culex</i> spp.	<b>960</b>	<b>8835</b>		
<b>Grand Total</b>		<b>960</b>	<b>8835</b>		

## La Crosse Encephalitis (LAC) 2015.

New Jersey will be testing for LAC this year only when adjacent states show human activity (Cape May tests its own 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).

*\*NOTE\* Ae. albopictus and japonicus previously reported in error.*

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Cape May</b>		<b>236</b>	<b>535</b>		
	<i>Aedes triseriatus</i>	236	535		
<b>Grand Total</b>		<b>236</b>	<b>535</b>		

## Dengue (DENV) to 26 October 2015.

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. There are currently 40 imported human cases in New Jersey, no local transmission.

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

No pools have tested positive in 2015. Currently, there are 33 imported human cases reported in New Jersey.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
<b>Atlantic</b>		<b>59</b>	<b>547</b>	<b>59</b>	<b>547</b>	<b>59</b>	<b>547</b>	<b>59</b>	<b>547</b>		
		59	547	59	547	59	547	59	547		

<b>Burlington</b>	<b>30</b>	<b>247</b>	<b>30</b>	<b>247</b>	<b>30</b>	<b>247</b>	<b>30</b>	<b>247</b>		
	30	247	30	247	30	247	30	247		
<b>Camden</b>	<b>29</b>	<b>58</b>	<b>29</b>	<b>58</b>	<b>29</b>	<b>58</b>	<b>29</b>	<b>58</b>		
	29	58	29	58	29	58	29	58		
<b>Cumberland</b>	<b>46</b>	<b>394</b>	<b>46</b>	<b>394</b>	<b>46</b>	<b>394</b>	<b>46</b>	<b>394</b>		
	46	394	46	394	46	394	46	394		
<b>Gloucester</b>	<b>214</b>	<b>1411</b>	<b>215</b>	<b>1419</b>	<b>215</b>	<b>1419</b>	<b>215</b>	<b>1419</b>		
	214	1411	215	1419	215	1419	215	1419		
<b>Hudson</b>	<b>24</b>	<b>380</b>	<b>24</b>	<b>380</b>	<b>24</b>	<b>380</b>	<b>24</b>	<b>380</b>		
	24	380	24	380	24	380	24	380		
<b>Mercer</b>	<b>175</b>	<b>2033</b>	<b>175</b>	<b>2033</b>	<b>175</b>	<b>2033</b>	<b>175</b>	<b>2033</b>		
	175	2033	175	2033	175	2033	175	2033		
<b>Middlesex</b>	<b>155</b>	<b>482</b>	<b>155</b>	<b>482</b>	<b>155</b>	<b>482</b>	<b>155</b>	<b>482</b>		
	155	482	155	482	155	482	155	482		
<b>Monmouth</b>	<b>304</b>	<b>3622</b>	<b>304</b>	<b>3622</b>	<b>304</b>	<b>3622</b>	<b>285</b>	<b>3511</b>		
	304	3622	304	3622	304	3622	285	3511		
<b>Morris</b>	<b>28</b>	<b>368</b>	<b>28</b>	<b>368</b>	<b>28</b>	<b>368</b>	<b>28</b>	<b>368</b>		
	28	368	28	368	28	368	28	368		
<b>Salem</b>	<b>27</b>	<b>182</b>	<b>27</b>	<b>182</b>	<b>27</b>	<b>182</b>	<b>27</b>	<b>182</b>		
	27	182	27	182	27	182	27	182		
<b>Warren</b>	<b>5</b>	<b>56</b>	<b>5</b>	<b>56</b>	<b>5</b>	<b>56</b>	<b>5</b>	<b>56</b>		
	5	56	5	56	5	56	5	56		
<b>Grand Total</b>										
	1096	9780	1097	9788	1097	9788	1078	9677		

### Chikungunya (CHIK) to 26 October 2015.

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 2015. Currently, there are 23 imported human cases reported in New Jersey.

*\*NOTE\* Ae. japonicus previously reported in error for Cape May.*

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		59	547		
	<i>Aedes albopictus</i>	59	547		

<b>Burlington</b>		<b>30</b>	<b>247</b>		
	<i>Aedes albopictus</i>	30	247		
<b>Camden</b>		<b>29</b>	<b>58</b>		
	<i>Aedes albopictus</i>	29	58		
<b>Cape May</b>		<b>417</b>	<b>972</b>		
	<i>Aedes albopictus</i>	417	972		
<b>Cumberland</b>		<b>46</b>	<b>394</b>		
	<i>Aedes albopictus</i>	46	394		
<b>Gloucester</b>		<b>215</b>	<b>1419</b>		
	<i>Aedes albopictus</i>	215	1419		
<b>Hudson</b>		<b>24</b>	<b>380</b>		
	<i>Aedes albopictus</i>	24	380		
<b>Mercer</b>		<b>175</b>	<b>2033</b>		
	<i>Aedes albopictus</i>	175	2033		
<b>Middlesex</b>		<b>155</b>	<b>482</b>		
	<i>Aedes albopictus</i>	155	482		
<b>Monmouth</b>		<b>304</b>	<b>3622</b>		
	<i>Aedes albopictus</i>	304	3622		
<b>Morris</b>		<b>28</b>	<b>368</b>		
	<i>Aedes albopictus</i>	28	368		
<b>Salem</b>		<b>27</b>	<b>182</b>		
	<i>Aedes albopictus</i>	27	182		
<b>Warren</b>		<b>5</b>	<b>56</b>		
	<i>Aedes albopictus</i>	5	56		
<b>Grand Total</b>		<b>1514</b>	<b>10760</b>		