

# VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV and CHIK

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CDC WEEK 38: 14 September to 20 September, 2014

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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	0.90	1.80	12 (21)	5 (6)		
Green Bank (Burlington Co.)/25	Coastal	2.09	1.72	179 (222)	16 (17)	1	8.62
Corbin City (Atlantic Co.)/25	Coastal	1.16	1.00	242 (290)	15 (16)		
Dennisville (Cape May Co.)/50	Coastal	3.54	0.26	443	19	5	11.63
Winslow (Camden Co.)/50	Inland	0.48	0.34	1206	32	3	2.52
Centerton (Salem Co.)/50	Inland	2.46	0.50	512	19	1	2.05
Turkey Swamp (Monmouth Co.)/50	Inland	0.67	0.14	169 (178)	16 (17)		
Glassboro (Gloucester Co.)/50	Inland	0.41	0.56	509	18		

\*Current week (in parentheses) results pending.

**Remarks:** Three additional positive EEE pools have been detected this past week, all at Cape May County additional trap sites. Total number of positive EEE pools is 27, all in *Cs. melanura*. Statewide, for all mosquitoes tested, MFIR is 2.08, up from 1.92 of the previous week.

**Traditional Resting Box Sites:** No new EEE positive *Cs. melanura* pools were detected. To date, 3272 *Cs. melanura* from 140 pools have been tested for EEE at the traditional resting box sites. Overall MFIR for these traditional sites is 3.06, down from 3.26 of the previous week. Four additional pools containing 84 *Cs. melanura* remain to be tested.

<b>Additional <i>Cs. melanura</i> trapped by counties</b>				
*traps with positives indicated in <b>BOLD</b> .				
<b>County</b>	<b>Trap types*</b>	<b>Number collected (pools)</b>	<b>Number of positive pools</b>	<b>MFIR</b>
Atlantic	CO <sub>2</sub>	5 (4)		
Burlington	<b>CO<sub>2</sub></b>	4564 (100)	10	2.191
Cape May	<b>Gravid, RB</b>	246 (19)	4	16.260
Cumberland	CO <sub>2</sub> , RB	115 (17)		
Gloucester	<b>RB</b>	830 (70)	1	1.205
Monmouth	Other	2 (1)		
Ocean	<b>CO<sub>2</sub>, Gravid, RB</b>	56 (16)	2	35.714
Salem	CO <sub>2</sub>	9 (5)		
<b>TOTAL</b>		<b>5827 (232)</b>	<b>17</b>	<b>2.917</b>

**Additional *Cs. melanura*:** Counties submit additional pools of *Cs. melanura* caught in other trap types as well as resting boxes. Three additional positive pools were detected in gravid and resting box traps from Cape May County. Virus was first detected in these additional pools from a Gloucester County resting box sampled on 23 July.

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes atlanticus</i>	1	5		
<i>Aedes canadensis canadensis</i>	7	169		
<i>Aedes cantator</i>	4	7		
<i>Aedes cinereus</i>	1	1		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	4	45		
<i>Aedes taeniorhynchus</i>	4	30		
<i>Aedes triseriatus</i>	5	26		
<i>Aedes vexans</i>	4	35		
<i>Anopheles bradleyi</i>	12	322		
<i>Anopheles punctipennis</i>	39	798		
<i>Anopheles quadrimaculatus</i>	26	745		
<i>Coquillettidia perturbans</i>	44	770		
<i>Culex erraticus</i>	15	155		
<i>Culex pipiens</i>	23	178		
<i>Culex restuans</i>	4	16		
<i>Culex salinarius</i>	34	483		
<i>Culex</i> spp.	9	69		
<i>Culex territans</i>	1	1		
<i>Culiseta morsitans</i>	1	1		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	2	14		
State Total	<b>242</b>	<b>3872</b>		

**Additional Species:** Counties submit additional pools of species other than *Cs. melanura* for EEE virus testing. Currently, no detection of EEE in other species has occurred.

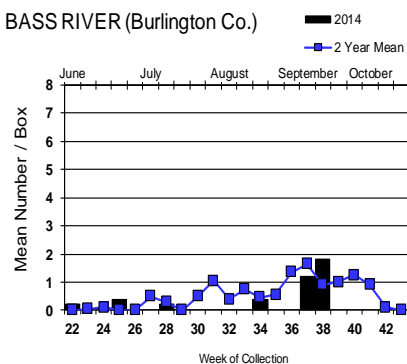
**Horses and Humans:** Currently there is no reported horse or human cases

**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)

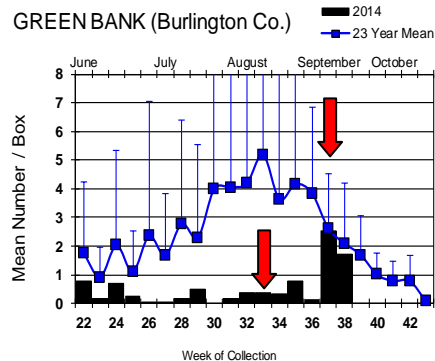
# Culiseta melanura Population Graphs

## Coastal

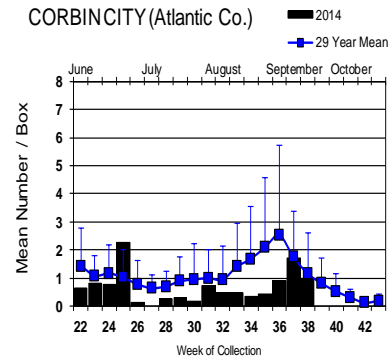
BASS RIVER (Burlington Co.)



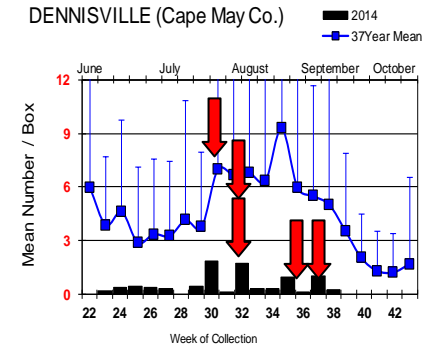
GREEN BANK (Burlington Co.)



CORBINCITY (Atlantic Co.)

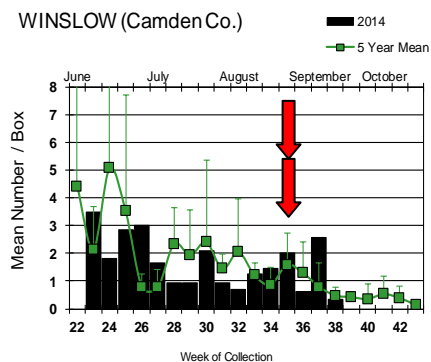


DENNISVILLE (Cape May Co.)

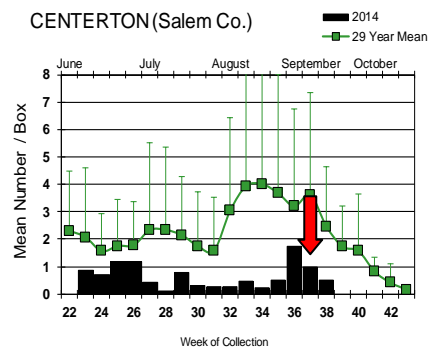


## Inland

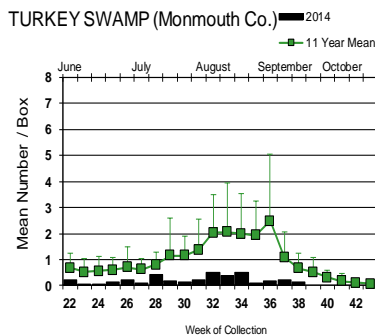
WINSLOW (Camden Co.)



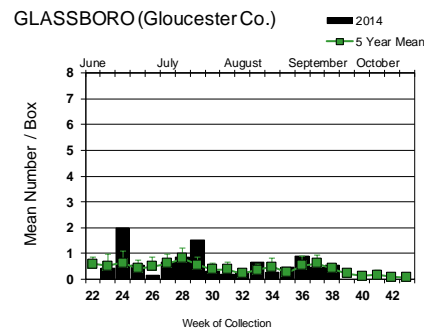
CENTERTON (Salem Co.)





TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



Populations of *Cs. melanura* at most traditional resting box sites fell while detection of EEE positive pools continued. Although the end of the general mosquito season is likely within sight, this cold tolerant mosquito can persist in cooler weather and horse cases have occurred as late as November.

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

**EEE in US** (2014 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: AL(5) FL (50 +2 deer) GA(6) LA(7) MA(1) ME(1) MI(1) MS(1) NC(9) NH(1) NY(8) SC(7) TX(1)
- mosquito pools: GA(1) LA(1) MA(31) ME(15) NH(10) NJ(27) NY(84) VA(108) VT(5)
- sentinel: AL(3) FL(152) GA(1) ME(1 emu) NC(1) VA(31/3 cassowaries)
- human: AL(1) NH(2) NY(1)

**West Nile Virus Positive Organisms in US**

West Nile in US (2014 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			1	1	1
Alaska					
Arizona	1	196/275		2/3	34/40
Arkansas					2/4
California	1827/2079	2660/2952	274/328	7/8	181/311
Colorado	3	195		3	19/42
Connecticut		43/62			3
Delaware	1/2				
DC					1/2
Florida			60/79	3/5	5
Georgia	0	25			3/6
Hawaii					
Idaho		62		2/3	13
Illinois	25/33	760/1139			4/15
Indiana		105/141			2/3
Iowa		5/9		1/2	8/11
Kansas		0			3/10
Kentucky				1	
Louisiana		857/894	26/39	1	80/103
Maine		0		0	0
Maryland		19/23		1	1/2
Mass.		39/55		0	1/2
Michigan	11/14	9		1	1
Minnesota	2	17/19		1	4
Mississippi		54/67		0	24/37
Missouri	1	34		1/6	2/7

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana		12		2	3/4
Nebraska	4/5	166/235		0	28/69
Nevada		55/89			2
New Hampshire		1		0	0
New Jersey	15/17	491/556		0	2/3
New Mexico		1		2	1/7
New York		492/650			3/10
North Carolina					
North Dakota	0	6		2/4*	9/17
Ohio		267/313			3/4
Oklahoma		5			6/11
Oregon	0	31	0	2	4
Pennsylvania	8/12	1129/1345			2/5
Rhode Island		1/2			
South Carolina	1				
South Dakota	1	57/75		1	31/35
Tennessee	0	304/552		0	3/6
Texas	69	1673/1777		1	70/91
Utah	2	145		3	1
Vermont		7/8		0	0
Virginia		130	15		1
Washington	0	80		3/4	7
West Virginia	1	6/7		0	0
Wisconsin	25	2/3		1/2	5
Wyoming	1	12		3	5

\* 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 22 September 2014

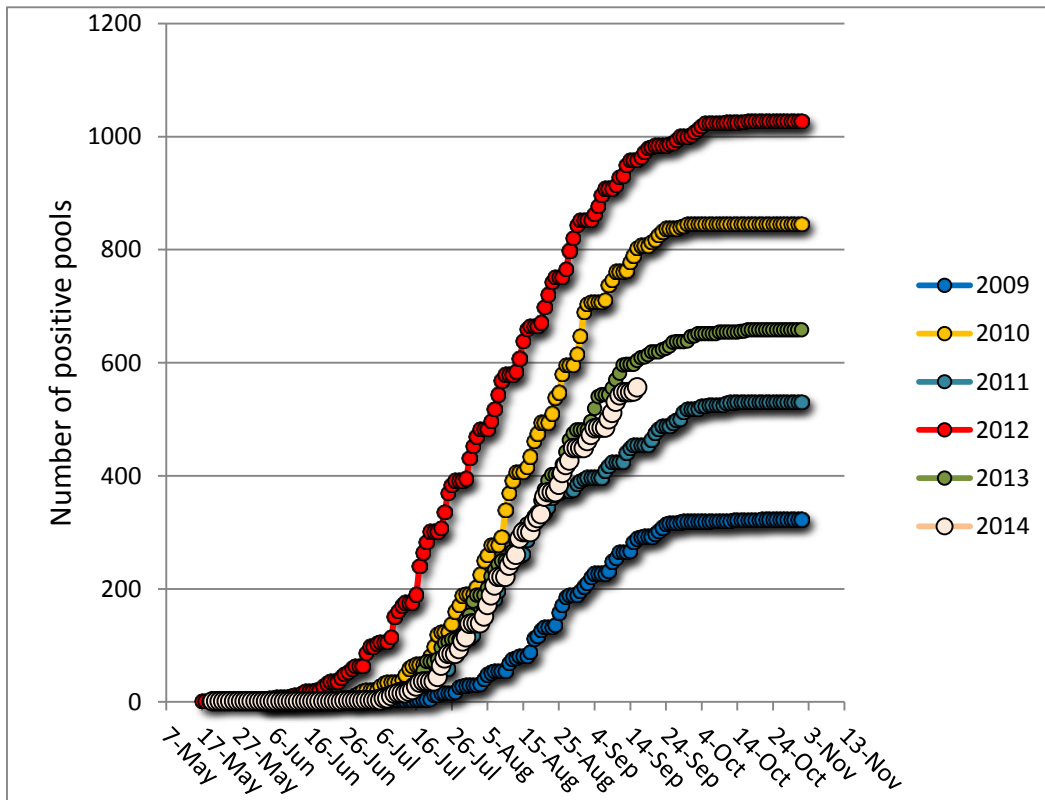
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	764	7255	11	1.516
<i>Aedes atlanticus</i>	4	10		
<i>Aedes atropalpus</i>	1	5		
<i>Aedes canadensis canadensis</i>	32	630		
<i>Aedes cantator</i>	16	208		
<i>Aedes cinereus</i>	1	1		
<i>Aedes japonicus</i>	452	2726	5	1.834
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	10	95		
<i>Aedes sticticus</i>	3	7		
<i>Aedes taeniorhynchus</i>	16	350		
<i>Aedes triseriatus</i>	136	537	1	1.862
<i>Aedes trivittatus</i>	15	67		
<i>Aedes vexans</i>	57	391		
<i>Anopheles bradleyi</i>	26	646		
<i>Anopheles punctipennis</i>	93	1121		
<i>Anopheles quadrimaculatus</i>	78	1579		
<i>Coquilleltidia perturbans</i>	88	1190		
<i>Culex erraticus</i>	59	478		
<i>Culex pipiens</i>	513	16598	45	2.711
<i>Culex restuans</i>	214	4916	17	3.458
<i>Culex salinarius</i>	40	505		
<i>Culex spp.</i>	3032	119639	469	3.920
<i>Culex territans</i>	4	4		0.000
<i>Culiseta melanura</i>	396	9096	8	0.880
<i>Culiseta morsitans</i>	1	1		
<i>Psorophora ciliata</i>	3	3		
<i>Psorophora columbiae</i>	12	88		
<i>Psorophora ferox</i>	12	207		
<b>State Total</b>	<b>6079</b>	<b>168354</b>	<b>556</b>	<b>3.303</b>

**Remarks:** To date, 6079 pools of 168,354 mosquitoes from 28 species have been tested, with 556 positive pools detected. First positive was detected in a Mixed *Culex* pool collected on 20 May in Camden County. Nineteen counties have detected positive pools, including Atlantic, Bergen, Burlington, Camden, Cape May, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren Counties. Overall MFIR for the state has increased from 3.078 to 3.303.

**Humans, Horses and Wild Birds:** Three human cases of WNV have occurred, one each in Gloucester, Hudson and Monmouth Counties. For further information, see <http://www.state.nj.us/health/cd/westnile/techinfo.shtml>.

No horse cases have been detected.

Bird testing began in mid-April. First positive bird (Fish Crow in Mercer County collected 8 July) has been reported. To date, 109 birds have been tested, with 17 positives. Species includes: American Crow (*Corvus brachyrhynchos* 3/3) Fish Crow (*Corvus ossifragus* 9/33), Blue Jay (*Cyanocitta cristata* 2/10), Hawk/Raptor (1/7), unidentified corvid (1/4) and other avian species (1/50). Counties (positives) submitting birds are Atlantic, Bergen, Burlington, Cape May, Cumberland, Essex, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Sussex, Union and Warren.



Graph above shows trend for 2014 WNV activity as compared to 5 previous years, two with high activity (2010 and 2012), two with moderate activity (2011 and 2013) and one with low activity (2009). Two weeks ago, it appeared that 2014 would follow closer to 2011 activity. But recent data suggests somewhat higher trends.

### WNV Results by County through 22 September 2014

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Atlantic</b>		<b>153</b>	<b>3387</b>	<b>19</b>	<b>5.610</b>
	<i>Aedes albopictus</i>	25	242	1	4.132
	<i>Aedes atlanticus</i>	1	1		
	<i>Aedes canadensis canadensis</i>	4	27		
	<i>Aedes cantator</i>	3	10		
	<i>Aedes japonicus</i>	8	40		
	<i>Aedes sollicitans</i>	2	6		
	<i>Aedes sticticus</i>	1	1		
	<i>Aedes taeniorhynchus</i>	6	247		
	<i>Aedes vexans</i>	6	56		
	<i>Anopheles bradleyi</i>	4	13		
	<i>Anopheles punctipennis</i>	2	4		
	<i>Anopheles quadrimaculatus</i>	3	10		
	<i>Coquillettidia perturbans</i>	5	24		
	<i>Culex erraticus</i>	2	25		
	<i>Culex spp.</i>	55	2282	18	7.888
	<i>Culiseta melanura</i>	20	273		
	<i>Psorophora ferox</i>	6	126		
<b>Bergen</b>		<b>222</b>	<b>16064</b>	<b>125</b>	<b>7.781</b>
	<i>Aedes albopictus</i>	7	39	1	25.641
	<i>Aedes japonicus</i>	1	49		
	<i>Anopheles punctipennis</i>	1	1		
	<i>Culex spp.</i>	213	15975	124	7.762

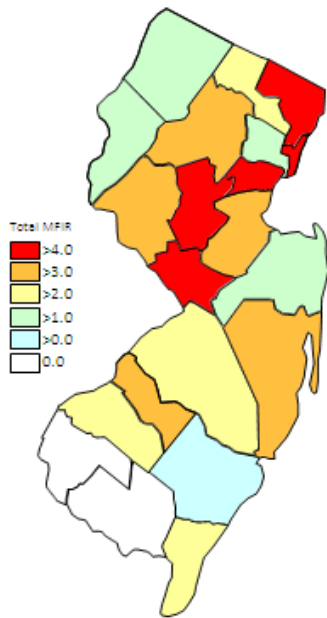
<b>Burlington</b>	<b>399</b>	<b>9962</b>	<b>15</b>	<b>1.506</b>
<i>Aedes albopictus</i>	45	324		
<i>Aedes atlanticus</i>	1	5		
<i>Aedes canadensis canadensis</i>	5	163		
<i>Aedes cinereus</i>	1	1		
<i>Aedes japonicus</i>	32	279		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes taeniorhynchus</i>	4	30		
<i>Aedes triseriatus</i>	13	74		
<i>Aedes trivittatus</i>	1	41		
<i>Aedes vexans</i>	7	85		
<i>Anopheles bradleyi</i>	5	180		
<i>Anopheles punctipennis</i>	3	13		
<i>Anopheles quadrimaculatus</i>	1	21		
<i>Coquillettidia perturbans</i>	7	141		
<i>Culex erraticus</i>	7	54		
<i>Culex pipiens</i>	2	2		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	20	344		
<i>Culex spp.</i>	119	3432	10	2.914
<i>Culiseta melanura</i>	120	4755	5	1.052
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	3	15		
<b>Camden</b>	<b>359</b>	<b>9845</b>	<b>31</b>	<b>3.149</b>
<i>Aedes albopictus</i>	19	43		
<i>Aedes japonicus</i>	96	402	1	2.488
<i>Culex spp.</i>	212	8194	30	3.661
<i>Culiseta melanura</i>	32	1206		
<b>Cape May</b>	<b>378</b>	<b>4434</b>	<b>4</b>	<b>0.902</b>
<i>Aedes albopictus</i>	34	211		
<i>Aedes atropalpus</i>	1	5		
<i>Aedes canadensis canadensis</i>	1	1		
<i>Aedes cantator</i>	4	7		
<i>Aedes japonicus</i>	14	35		
<i>Aedes taeniorhynchus</i>	1	50		
<i>Aedes triseriatus</i>	15	80		
<i>Aedes vexans</i>	1	1		
<i>Anopheles bradleyi</i>	7	142		
<i>Anopheles quadrimaculatus</i>	20	579		
<i>Coquillettidia perturbans</i>	3	52		
<i>Culex erraticus</i>	6	59		
<i>Culex pipiens</i>	151	1934	1	0.517
<i>Culex restuans</i>	69	558	1	1.792
<i>Culex salinarius</i>	9	66		
<i>Culex spp.</i>	2	3		
<i>Culex territans</i>	3	3		
<i>Culiseta melanura</i>	37	648	2	3.086
<b>Cumberland</b>	<b>172</b>	<b>2657</b>		
<i>Aedes albopictus</i>	4	9		
<i>Aedes atlanticus</i>	2	4		
<i>Aedes canadensis canadensis</i>	1	2		
<i>Aedes japonicus</i>	3	3		



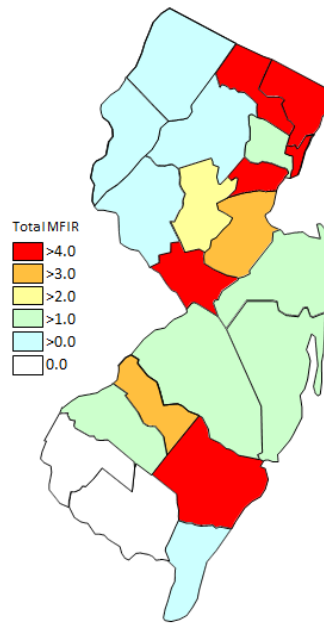
	<i>Aedes sollicitans</i>	4	45		
	<i>Aedes taeniorhynchus</i>	2	18		
	<i>Aedes vexans</i>	12	120		
	<i>Anopheles bradleyi</i>	9	310		
	<i>Anopheles punctipennis</i>	18	170		
	<i>Anopheles quadrimaculatus</i>	9	100		
	<i>Coquillettidia perturbans</i>	11	334		
	<i>Culex erraticus</i>	2	23		
	<i>Culex pipiens</i>	1	5		
	<i>Culex salinarius</i>	6	83		
	<i>Culex spp.</i>	60	1227		
	<i>Culiseta melanura</i>	19	131		
	<i>Psorophora ciliata</i>	2	2		
	<i>Psorophora columbiae</i>	6	70		
	<i>Psorophora ferox</i>	1	1		
<b>Essex</b>		<b>250</b>	<b>2721</b>	<b>4</b>	<b>1.470</b>
	<i>Aedes albopictus</i>	18	70		
	<i>Aedes japonicus</i>	36	109		
	<i>Aedes triseriatus</i>	4	8		
	<i>Aedes trivittatus</i>	7	17		
	<i>Aedes vexans</i>	1	4		
	<i>Anopheles quadrimaculatus</i>	5	6		
	<i>Culex spp.</i>	177	2505	4	1.597
	<i>Psorophora ferox</i>	2	2		
<b>Gloucester</b>		<b>554</b>	<b>17550</b>	<b>32</b>	<b>1.823</b>
	<i>Aedes albopictus</i>	99	1210	2	1.653
	<i>Aedes japonicus</i>	14	189	1	5.291
	<i>Aedes triseriatus</i>	6	58		
	<i>Aedes vexans</i>	1	4		
	<i>Anopheles punctipennis</i>	32	793		
	<i>Anopheles quadrimaculatus</i>	25	744		
	<i>Coquillettidia perturbans</i>	5	39		
	<i>Culex pipiens</i>	285	13198	28	2.122
	<i>Culiseta melanura</i>	87	1315	1	0.760
<b>Hudson</b>		<b>153</b>	<b>7237</b>	<b>70</b>	<b>9.673</b>
	<i>Aedes albopictus</i>	14	220	2	9.091
	<i>Culex spp.</i>	139	7017	68	9.691
<b>Hunterdon</b>		<b>254</b>	<b>12342</b>	<b>9</b>	<b>0.729</b>
	<i>Culex spp.</i>	254	12342	9	0.729
<b>Mercer</b>		<b>418</b>	<b>8972</b>	<b>52</b>	<b>5.796</b>
	<i>Aedes albopictus</i>	90	635		
	<i>Aedes canadensis canadensis</i>	2	5		
	<i>Aedes japonicus</i>	43	151	1	6.623
	<i>Aedes triseriatus</i>	10	28	1	35.714
	<i>Aedes vexans</i>	5	48		
	<i>Culex erraticus</i>	2	6		
	<i>Culex pipiens</i>	70	1453	16	11.012
	<i>Culex restuans</i>	140	4352	16	3.676
	<i>Culex salinarius</i>	2	8		
	<i>Culex spp.</i>	54	2286	18	7.874

<b>Middlesex</b>	<b>331</b>	<b>12810</b>	<b>47</b>	<b>3.669</b>
<i>Aedes albopictus</i>	62	467	3	6.424
<i>Aedes triseriatus</i>	2	14		
<i>Culex</i> spp.	267	12329	44	3.569
<b>Monmouth</b>	<b>447</b>	<b>6646</b>	<b>10</b>	<b>1.505</b>
<i>Aedes albopictus</i>	142	1842		
<i>Aedes canadensis canadensis</i>	14	273		
<i>Aedes cantator</i>	6	56		
<i>Aedes japonicus</i>	45	160		
<i>Aedes sollicitans</i>	4	44		
<i>Aedes taeniorhynchus</i>	3	5		
<i>Aedes triseriatus</i>	15	41		
<i>Aedes trivitatus</i>	7	9		
<i>Aedes vexans</i>	14	41		
<i>Anopheles punctipennis</i>	19	27		
<i>Anopheles quadrimaculatus</i>	4	4		
<i>Coquillettidia perturbans</i>	6	6		
<i>Culex erraticus</i>	6	15		
<i>Culex restuans</i>	2	2		
<i>Culex salinarius</i>	1	1		
<i>Culex</i> spp.	135	3933	10	2.543
<i>Culex territans</i>	1	1		
<i>Culiseta melanura</i>	18	181		
<i>Culiseta morsitans</i>	1	1		
<i>Psorophora columbiae</i>	3	3		
<i>Psorophora ferox</i>	1	1		
<b>Morris</b>	<b>262</b>	<b>11324</b>	<b>8</b>	<b>0.706</b>
<i>Aedes albopictus</i>	5	75		
<i>Coquillettidia perturbans</i>	4	200		
<i>Culex</i> spp.	253	11049	8	0.724
<b>Ocean</b>	<b>336</b>	<b>4349</b>	<b>7</b>	<b>1.610</b>
<i>Aedes albopictus</i>	82	1056		
<i>Aedes canadensis canadensis</i>	3	96		
<i>Aedes cantator</i>	3	135		
<i>Aedes japonicus</i>	53	248	2	8.065
<i>Aedes sticticus</i>	2	6		
<i>Aedes triseriatus</i>	16	51		
<i>Aedes vexans</i>	9	29		
<i>Coquillettidia perturbans</i>	18	97		
<i>Culex erraticus</i>	5	6		
<i>Culex salinarius</i>	2	3		
<i>Culex</i> spp.	101	2454	5	2.037
<i>Culiseta melanura</i>	40	91		
<i>Psorophora ferox</i>	2	77		
<b>Passaic</b>	<b>158</b>	<b>4304</b>	<b>19</b>	<b>4.414</b>
<i>Aedes albopictus</i>	16	48		
<i>Aedes japonicus</i>	35	346		
<i>Aedes triseriatus</i>	10	18		
<i>Aedes vexans</i>	1	3		
<i>Anopheles quadrimaculatus</i>	1	1		

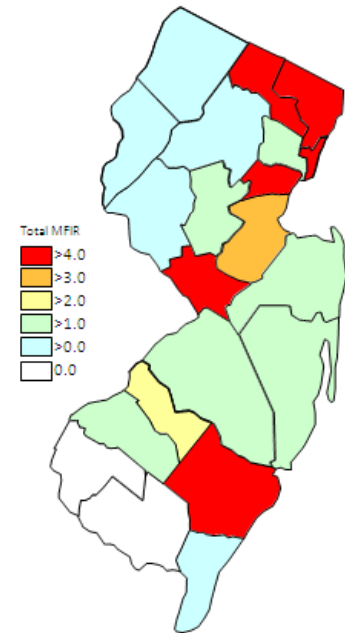
	<i>Coquillettidia perturbans</i>	2	12		
	<i>Culex</i> spp.	93	3876	19	4.902
<b>Salem</b>		<b>324</b>	<b>3200</b>		
	<i>Aedes albopictus</i>	70	441		
	<i>Aedes japonicus</i>	29	66		
	<i>Aedes triseriatus</i>	29	57		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Anopheles punctipennis</i>	13	78		
	<i>Anopheles quadrimaculatus</i>	6	80		
	<i>Coquillettidia perturbans</i>	26	268		
	<i>Culex erraticus</i>	29	290		
	<i>Culex pipiens</i>	4	6		
	<i>Culex restuans</i>	2	3		
	<i>Culex</i> spp.	92	1414		
	<i>Culiseta melanura</i>	23	496		
<b>Somerset</b>		<b>242</b>	<b>4860</b>	<b>10</b>	<b>2.058</b>
	<i>Aedes albopictus</i>	10	39		
	<i>Aedes canadensis canadensis</i>	1	3		
	<i>Aedes japonicus</i>	19	226		
	<i>Aedes triseriatus</i>	5	21		
	<i>Anopheles punctipennis</i>	1	2		
	<i>Culex</i> spp.	206	4569	10	2.189
<b>Sussex</b>		<b>216</b>	<b>6108</b>	<b>3</b>	<b>0.491</b>
	<i>Aedes japonicus</i>	11	249		
	<i>Aedes triseriatus</i>	7	71		
	<i>Anopheles punctipennis</i>	2	8		
	<i>Anopheles quadrimaculatus</i>	2	27		
	<i>Coquillettidia perturbans</i>	1	17		
	<i>Culex</i> spp.	193	5736	3	0.523
<b>Union</b>		<b>187</b>	<b>9382</b>	<b>84</b>	<b>8.953</b>
	<i>Aedes albopictus</i>	16	191	2	10.471
	<i>Aedes canadensis canadensis</i>	1	60		
	<i>Aedes japonicus</i>	6	84		
	<i>Culex</i> spp.	164	9047	82	9.064
<b>Warren</b>		<b>264</b>	<b>10200</b>	<b>7</b>	<b>0.686</b>
	<i>Aedes albopictus</i>	6	93		
	<i>Aedes japonicus</i>	7	90		
	<i>Aedes triseriatus</i>	4	16		
	<i>Anopheles punctipennis</i>	2	25		
	<i>Anopheles quadrimaculatus</i>	2	7		
	<i>Culex</i> spp.	243	9969	7	0.702
<b>Grand Total</b>		<b>6079</b>	<b>168354</b>	<b>556</b>	<b>3.303</b>



Cumulative WNV activity in 2013.



WNV activity to 22 September 2014.



WNV activity last week, 2014.

### Saint Louis Encephalitis (SLE) to 22 September 2014.

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 been detected positive for SLE in 2014.

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Burlington</b>		<b>151</b>	<b>3686</b>		
	<i>Aedes albopictus</i>	6	48		
	<i>Aedes japonicus</i>	26	245		
	<i>Aedes triseriatus</i>	1	1		
	<i>Culex erraticus</i>	1	3		
	<i>Culex pipiens</i>	2	2		
	<i>Culex restuans</i>	1	1		
	<i>Culex</i> spp.	114	3386		
<b>Cape May</b>		<b>24</b>	<b>174</b>		
	<i>Culex pipiens</i>	22	171		
	<i>Culex</i> spp.	2	3		
<b>Grand Total</b>		<b>175</b>	<b>3860</b>		

### La Crosse Encephalitis (LAC) through 22 September 2014.

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 have been detected positive for LAC in 2014.

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Burlington</b>		<b>46</b>	<b>386</b>		
	<i>Aedes albopictus</i>	23	180		
	<i>Aedes canadensis canadensis</i>	4	88		
	<i>Aedes japonicus</i>	6	44		
	<i>Aedes triseriatus</i>	13	74		
<b>Cape May</b>		<b>16</b>	<b>87</b>		
	<i>Aedes triseriatus</i>	15	80		
	<i>Culex pipiens</i>	1	7		
<b>Salem</b>		<b>13</b>	<b>28</b>		
	<i>Aedes triseriatus</i>	13	28		
<b>Grand Total</b>		<b>75</b>	<b>501</b>		

### Dengue (DENV) to 22 September 2014.

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 25 imported human cases in New Jersey, no local transmission.

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

No pools have been detected positive for DENV in 2014.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
<b>Atlantic</b>		<b>22</b>	<b>233</b>	<b>22</b>	<b>233</b>	<b>22</b>	<b>233</b>	<b>21</b>	<b>227</b>		
	<i>Aedes albopictus</i>	22	233	22	233	22	233	21	227		
<b>Bergen</b>		<b>7</b>	<b>39</b>	<b>7</b>	<b>39</b>	<b>7</b>	<b>39</b>	<b>7</b>	<b>39</b>		
	<i>Aedes albopictus</i>	7	39	7	39	7	39	7	39		
<b>Burlington</b>		<b>20</b>	<b>128</b>	<b>20</b>	<b>128</b>	<b>20</b>	<b>128</b>	<b>20</b>	<b>128</b>		
	<i>Aedes albopictus</i>	20	128	20	128	20	128	20	128		
<b>Camden</b>		<b>11</b>	<b>33</b>	<b>11</b>	<b>33</b>	<b>11</b>	<b>33</b>	<b>11</b>	<b>33</b>		
	<i>Aedes albopictus</i>	11	33	11	33	11	33	11	33		
<b>Cape May</b>		<b>21</b>	<b>187</b>	<b>21</b>	<b>187</b>	<b>21</b>	<b>187</b>	<b>21</b>	<b>187</b>		

	<i>Aedes albopictus</i>	21	187	21	187	21	187	21	187		
<b>Cumberland</b>		<b>3</b>	<b>8</b>	<b>3</b>	<b>8</b>	<b>3</b>	<b>8</b>	<b>3</b>	<b>8</b>		
	<i>Aedes albopictus</i>	3	8	3	8	3	8	3	8		
<b>Gloucester</b>		<b>87</b>	<b>965</b>	<b>87</b>	<b>965</b>	<b>87</b>	<b>965</b>	<b>87</b>	<b>965</b>		
	<i>Aedes albopictus</i>	87	965	87	965	87	965	87	965		
<b>Hudson</b>		<b>14</b>	<b>220</b>	<b>14</b>	<b>220</b>	<b>14</b>	<b>220</b>	<b>14</b>	<b>220</b>		
	<i>Aedes albopictus</i>	14	220	14	220	14	220	14	220		
<b>Mercer</b>		<b>73</b>	<b>562</b>	<b>73</b>	<b>562</b>	<b>73</b>	<b>562</b>	<b>73</b>	<b>562</b>		
	<i>Aedes albopictus</i>	73	562	73	562	73	562	73	562		
<b>Middlesex</b>		<b>61</b>	<b>467</b>	<b>61</b>	<b>467</b>	<b>61</b>	<b>467</b>	<b>61</b>	<b>467</b>		
	<i>Aedes albopictus</i>	60	459	60	459	60	459	60	459		
	<i>Culex spp.</i>	1	8	1	8	1	8	1	8		
<b>Monmouth</b>		<b>96</b>	<b>1586</b>	<b>96</b>	<b>1586</b>	<b>96</b>	<b>1586</b>	<b>96</b>	<b>1586</b>		
	<i>Aedes albopictus</i>	96	1586	96	1586	96	1586	96	1586		
<b>Morris</b>		<b>2</b>	<b>24</b>	<b>2</b>	<b>24</b>	<b>2</b>	<b>24</b>	<b>2</b>	<b>24</b>		
	<i>Aedes albopictus</i>	2	24	2	24	2	24	2	24		
<b>Ocean</b>		<b>1</b>	<b>25</b>	<b>1</b>	<b>25</b>	<b>1</b>	<b>25</b>	<b>1</b>	<b>25</b>		
	<i>Aedes albopictus</i>	1	25	1	25	1	25	1	25		
<b>Passaic</b>		<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>2</b>		
	<i>Aedes albopictus</i>	1	2	1	2	1	2	1	2		
<b>Salem</b>		<b>66</b>	<b>429</b>	<b>66</b>	<b>429</b>	<b>66</b>	<b>429</b>	<b>66</b>	<b>429</b>		
	<i>Aedes albopictus</i>	66	429	66	429	66	429	66	429		
<b>Somerset</b>		<b>4</b>	<b>10</b>	<b>4</b>	<b>10</b>	<b>4</b>	<b>10</b>	<b>4</b>	<b>10</b>		
	<i>Aedes albopictus</i>	4	10	4	10	4	10	4	10		
<b>Warren</b>		<b>5</b>	<b>76</b>	<b>5</b>	<b>76</b>	<b>5</b>	<b>76</b>	<b>5</b>	<b>76</b>		
	<i>Aedes albopictus</i>	5	76	5	76	5	76	5	76		
<b>Grand Total</b>		<b>494</b>	<b>4994</b>	<b>494</b>	<b>4994</b>	<b>494</b>	<b>4994</b>	<b>493</b>	<b>4988</b>		

### Chikungunya (CHIK) to 22 September 2014.

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. There are currently 87 imported human cases in New Jersey, no local transmission.

No pools have been detected positive for CHIK in 2014.

<b>County</b>	<b>Species</b>	<b>Pools</b>	<b>Mosquitoes</b>	<b>Positives</b>	<b>MFIR</b>
<b>Atlantic</b>		<b>22</b>	<b>233</b>		
	<i>Aedes albopictus</i>	22	233		
<b>Bergen</b>		<b>7</b>	<b>39</b>		
	<i>Aedes albopictus</i>	7	39		
<b>Burlington</b>		<b>20</b>	<b>128</b>		
	<i>Aedes albopictus</i>	20	128		
<b>Camden</b>		<b>11</b>	<b>33</b>		
	<i>Aedes albopictus</i>	11	33		
<b>Cape May</b>		<b>21</b>	<b>187</b>		
	<i>Aedes albopictus</i>	21	187		
<b>Cumberland</b>		<b>3</b>	<b>8</b>		
	<i>Aedes albopictus</i>	3	8		
<b>Gloucester</b>		<b>87</b>	<b>965</b>		
	<i>Aedes albopictus</i>	87	965		
<b>Hudson</b>		<b>14</b>	<b>220</b>		
	<i>Aedes albopictus</i>	14	220		
<b>Mercer</b>		<b>73</b>	<b>562</b>		
	<i>Aedes albopictus</i>	73	562		
<b>Middlesex</b>		<b>61</b>	<b>467</b>		
	<i>Aedes albopictus</i>	60	459		
	<i>Culex spp.</i>	1	8		
<b>Monmouth</b>		<b>96</b>	<b>1586</b>		
	<i>Aedes albopictus</i>	96	1586		
<b>Morris</b>		<b>2</b>	<b>24</b>		
	<i>Aedes albopictus</i>	2	24		
<b>Ocean</b>		<b>1</b>	<b>25</b>		
	<i>Aedes albopictus</i>	1	25		
<b>Passaic</b>		<b>1</b>	<b>2</b>		
	<i>Aedes albopictus</i>	1	2		
<b>Salem</b>		<b>66</b>	<b>429</b>		
	<i>Aedes albopictus</i>	66	429		
<b>Somerset</b>		<b>4</b>	<b>10</b>		
	<i>Aedes albopictus</i>	4	10		

<b>Warren</b>		<b>5</b>	<b>76</b>		
	<i>Aedes albopictus</i>	5	76		
<b>Grand Total</b>		<b>494</b>	<b>4994</b>		