

# VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 37: 10 September to 16 September, 2017



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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	2.00	18 (28)	5 (6)		
Green Bank (Burlington Co.)/18	Coastal	2.43	0.72	133 (151)	9 (10)		
Corbin City (Atlantic Co.)/25	Coastal	1.68	1.00	262 (287)	15 (16)		
Dennisville (Cape May Co.)/50	Coastal	4.64	0.16	106	11		
Winslow (Camden Co.)/50	Inland	1.03	0.34	830	25		
Centerton (Salem Co.)/50	Inland	3.34	0.74	563	21	3	5.70
Turkey Swamp (Monmouth Co.)/50	Inland	0.96	0.16	197 (205)	14 (15)		
Glassboro (Gloucester Co.)/50	Inland	0.51	0.10	163	15		

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

**Remarks:** A total of ten positive EEE pools have been detected in a *Culiseta melanura*. The latest three positives were found at county-set sites in Burlington and Cape May counties. One horse cases was previously reported in Cumberland County. NOTE: Despite impending cooler weather, due diligence is required as *Culiseta melanura* is a cold tolerant species and will be active late into the season.

Statewide, 5,967 *Cs. melanura* from 490 pools have been tested, with ten positive pools detected for an overall *Cs. melanura* MFIR of 1.676. 11,817 specimens from 18 other species have also been tested, with no positives detected. Overall MFIR for all species statewide is 0.562.

**Traditional Resting Box Sites:** 2,272 *Cs. melanura* from 115 pools have been tested for EEE, with 61 additional *Cs. melanura* from 4 pools to be tested. Three positive pools were previously detected at the Centerton site; the last two positive pools were collected 6 Sept.

County	Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in <b>BOLD</b> .				
	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	GR, LT, RB	30	473		
Burlington	<b>CO<sub>2</sub>, UVLT</b>	50	1511	3	1.99
Cape May	BGS, GR, RB	150	666	3	4.50
Cumberland	<b>LT, RB</b>	14	173	1	5.78
Gloucester	RB	44	316		
Middlesex	RB	19	308		
Monmouth	CDC	1	1		
Morris	ABC	1	1		
Ocean	GR, LT, RB	19	62		
Passaic	RB	5	5		
Salem	LT	5	35		
Sussex	ABC, BGS, GR, RB	36	131		
Warren	LT	1	13		
<b>TOTAL</b>		<b>375</b>	<b>3695</b>	<b>7</b>	<b>1.89</b>

**Additional County-set *Cs. melanura*:** Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. Three new positive pools, collected in Burlington (5 Sep) and Cape May (both 28 Aug) counties were detected. Previously, four positive pools were collected from county-set sites - Cape May and Cumberland counties were both collected on 17 Aug. First county-set detection occurred in Burlington County UVLTs.

**Horses and Humans:** One horse has been detected with EEE in New Jersey. This was a 5 yo mare from Cumberland County, with onset date of 23 Aug, euthanized on 28 Aug. There was no vaccination history. Nearly all of the horse cases from previous years include those horses who were either not vaccinated or had incomplete vaccination histories. **Horse owners are urged to make sure their horses are up to date on their vaccinations. Horse cases are known to occur through October and sometimes into November (see link below).** Other sensitive species are non-native birds, such as Ostriches/Emus and Gallinaceous birds such as pheasants of Eurasian origins.

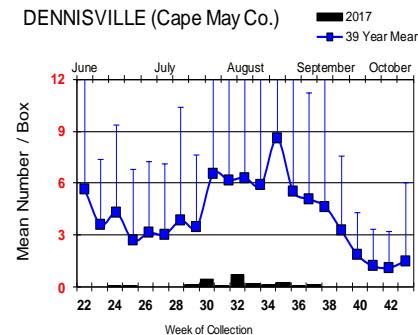
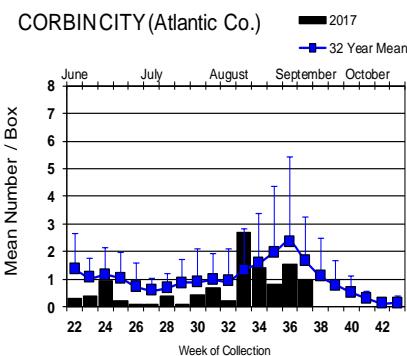
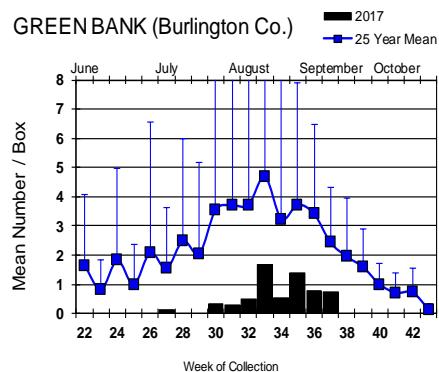
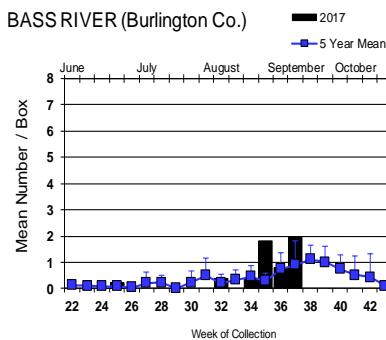
**Horses and Vaccinations:** The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: [http://www.aaep.org/vaccination\\_guidelines.htm](http://www.aaep.org/vaccination_guidelines.htm)

**Additional Species:** Sixteen additional species were tested for EEE. No additional positives were detected. Previously reported *Aedes provocans* was re-assigned to *Anopheles punctipennis*.

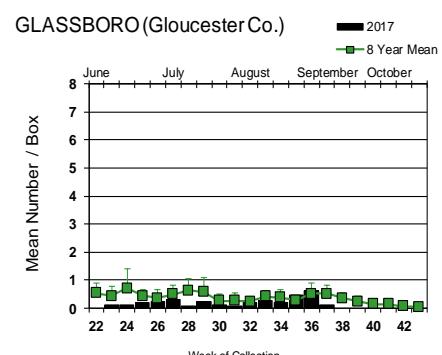
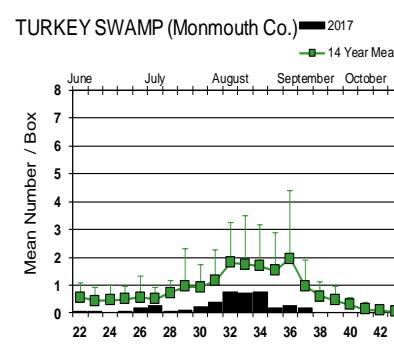
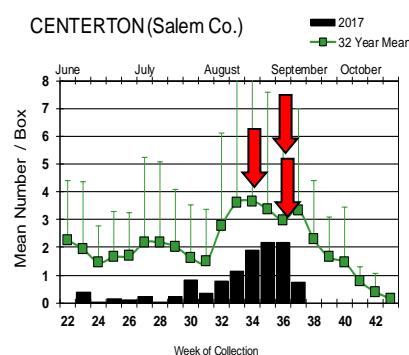
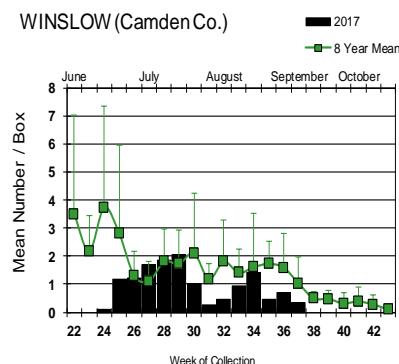
Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes canadensis canadensis</i>	11	102		
<i>Aedes cantator</i>	10	26		
<i>Aedes japonicus</i>	2	20		
<i>Aedes sollicitans</i>	7	25		
<i>Aedes taeniorhynchus</i>	1	8		
<i>Aedes triseriatus</i>	1	4		
<i>Aedes vexans</i>	5	140		
<i>Anopheles bradleyi</i>	121	854		
<i>Anopheles crucians</i>	3	93		
<i>Anopheles punctipennis</i>	33	307		
<i>Anopheles quadrimaculatus</i>	16	223		
<i>Coquillettidia perturbans</i>	77	1442		
<i>Culex erraticus</i>	69	1338		
<i>Culex pipiens</i>	622	5540		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	240	1548		
<i>Culex</i> sp.	36	125		
<i>Psorophora columbiae</i>	2	12		
<i>Psorophora cyanescens</i>	1	1		
<i>Psorophora ferox</i>	2	8		
<b>State Total</b>	<b>1260</b>	<b>11817</b>		

# Culiseta melanura Population Graphs

## Coastal



## Inland



Three previous detections of EEE had occurred at Centerton, the last two collected 6 September. Mosquito populations at the traditional resting box sites decreased at all locations except for Bass River. One positive horse was previously reported and due diligence should be continued even when temperatures decrease – *Culiseta melanura* is a cold tolerant species. Positive pools continue to be in the southern half of the state.



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

**EEE in US** (2017 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: FL(3/1 deer) GA(4) LA(2) MI(2) NC(1) OH(1) SC(5) TX(1) WI(10)
- mosquito pools: MA(1) NJ(10) NY(30) RI(2)
- sentinel: FL(31) TX(6)
- human:

## West Nile Virus Positive Organisms in US, 2017

West Nile in US (2017 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					20/33
Alaska					
Arizona	0	245		0	50/58
Arkansas				0	6/10
California	298/336	2828/2981	189/204	10/13	108/143
Colorado	5	125/136		1/5	21/25
Connecticut		100/113			0
Delaware					
DC					
Florida	1	2	39/41		0
Georgia		0		1	19/22
Hawaii					
Idaho	1	113/121		4	6/10
Illinois	14/20	1580/1754			18/33
Indiana	0	494/580		5/9	6/11
Iowa	1	56/61		1	5/6
Kansas		13		0	6/10
Kentucky				6/8	4
Louisiana	36	378			33
Maine		0		0	0
Maryland					
Mass.		246/265		0	1
Michigan	148	86		9/13	4/16
Minnesota					13/20
Mississippi		220/244		1	47/49
Missouri		0		1/2	8

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					7
Nebraska	1	69		0	30/31
Nevada					24/31
New Hampshire		4		0	0
New Jersey		498/640		0	1/2
New Mexico					2/9
New York		1003/1085			5/11
North Carolina					2
North Dakota	11	15/16		1	50/57
Ohio		600/1945		5	14/18
Oklahoma					13/19
Oregon		66/78		5	5
Pennsylvania	25/31	2223/2753		5	6/10
Rhode Island		2/3		0	0
South Carolina	7/9	42			5
South Dakota	2	55			49/52
Tennessee					12/15
Texas		786/820		2/5	56/71
Utah		268/378		4	9/22
Vermont					
Virginia				1	5/6
Washington	3/4	30/32		7/8	
West Virginia					
Wisconsin	76/78	35/37		12/14	4
Wyoming				1	1

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

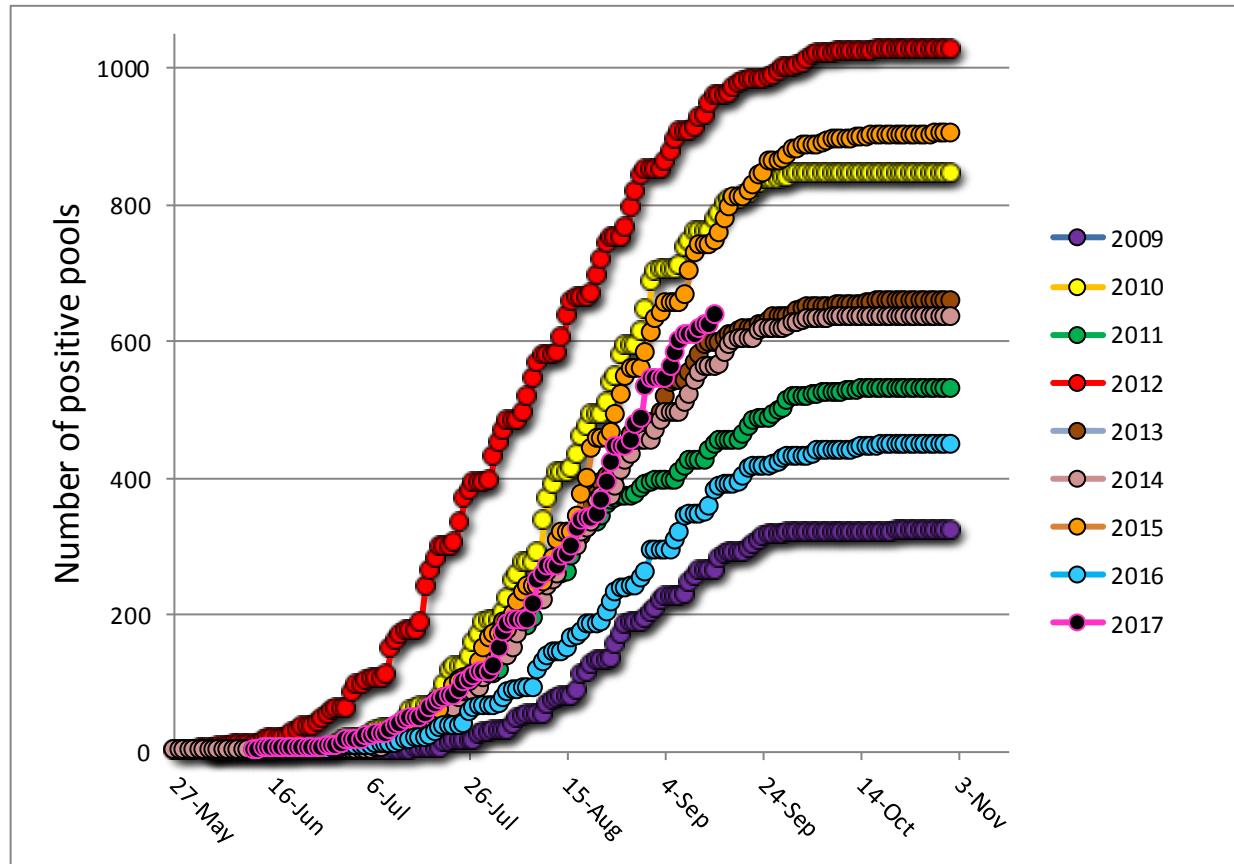
**Mosquito Species Submitted and Tested  
for West Nile Virus Testing through 15 September 2017.**

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	1123	13019	11	0.845
<i>Aedes atlanticus</i>	11	34		
<i>Aedes atropalpus</i>	25	110		
<i>Aedes canadensis canadensis</i>	51	497		
<i>Aedes cantator</i>	28	240		
<i>Aedes cinereus</i>	1	54		
<i>Aedes grossbecki</i>	2	4		
<i>Aedes japonicus</i>	341	1454	2	1.376
<i>Aedes sollicitans</i>	27	655		
<i>Aedes stimulans</i>	1	10		
<i>Aedes taeniorhynchus</i>	12	90		
<i>Aedes triseriatus</i>	248	586		
<i>Aedes trivittatus</i>	3	5		
<i>Aedes vexans</i>	99	1045		
<i>Anopheles barberi</i>	3	3		
<i>Anopheles bradleyi</i>	135	1246		
<i>Anopheles crucians</i>	4	168	1	5.952
<i>Anopheles earlei</i>	1	1		
<i>Anopheles punctipennis</i>	78	458		
<i>Anopheles quadrimaculatus</i>	149	1066		
<i>Coquillettidia perturbans</i>	89	1483		
<i>Culex erraticus</i>	84	1440		
<i>Culex pipiens</i>	740	8124	16	1.969
<i>Culex restuans</i>	567	2948	9	3.053
<i>Culex salinarius</i>	263	2172	3	1.381
<i>Culex spp.</i>	2313	96879	590	6.090
<i>Culex territans</i>	45	120		
<i>Culiseta inornata</i>	1	1		
<i>Culiseta melanura</i>	493	5974	7	1.172
<i>Orthopodomyia signifera</i>	6	6		
<i>Psorophora ciliata</i>	3	3		
<i>Psorophora columbiae</i>	24	95	1	10.526
<i>Psorophora cyanescens</i>	1	1		
<i>Psorophora ferox</i>	16	285		
<i>Uranotaenia sapphirina</i>	3	34		
<b>Grand Total</b>	<b>6990</b>	<b>140310</b>	<b>640</b>	<b>4.561</b>

**Remarks:** To date, 6,990 pools of 140,310 mosquitoes from 34 species have been tested. 640 positive pools have been detected. Most continue to be in the enzootic vector, *Culex* (Mix, *pipiens* or *restuans*). Activity has increased from the previous week significantly (see graph below and county activity figures following county tables). Overall MFIR for New Jersey is at 4.561, up from 4.014 of last week. First positive *Culex* Mix pool was detected in Sussex County on 12 June. Last year, the first positive pool of *Culex* Mix was collected on 14 June in Monmouth County.

**Humans, Horses and Wild Birds:** A second human case of WNV was detected in a person from Atlantic County (2). No horse cases have been detected yet. Last year, human cases were first reported in CDC week 20, but under unusual circumstances. First typical case occurred in CDC week 27. For further information, see <http://www.nj.gov/health/cd/statistics/arboviral-stats/>.

Birds are no longer routinely tested in New Jersey.



Above is a graph showing cumulative number of positive pools for the last 9 years, inclusive of the most active (2012) and least active (2009) years. As the season peaks, the cumulative increase for 2017 is showing a definite increase in activity (black markers with pink borders). The slow start of the season has picked up.

### WNV Results by County through 15 September 2017.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		160	3905	1	0.256
	<i>Aedes albopictus</i>	14	88		
	<i>Aedes canadensis canadensis</i>	1	3		
	<i>Aedes japonicus</i>	3	118		
	<i>Aedes sollicitans</i>	6	318		
	<i>Aedes taeniorhynchus</i>	3	71		
	<i>Aedes triseriatus</i>	2	14		
	<i>Aedes vexans</i>	6	274		
	<i>Anopheles bradleyi</i>	10	359		
	<i>Coquillettidia perturbans</i>	14	468		
	<i>Culex erraticus</i>	6	153		
	<i>Culex pipiens</i>	24	719		
	<i>Culex salinarius</i>	6	73		
	<i>Culex spp.</i>	16	427		
	<i>Culiseta melanura</i>	45	735	1	1.361
	<i>Psorophora columbiae</i>	1	1		
	<i>Psorophora ferox</i>	3	84		

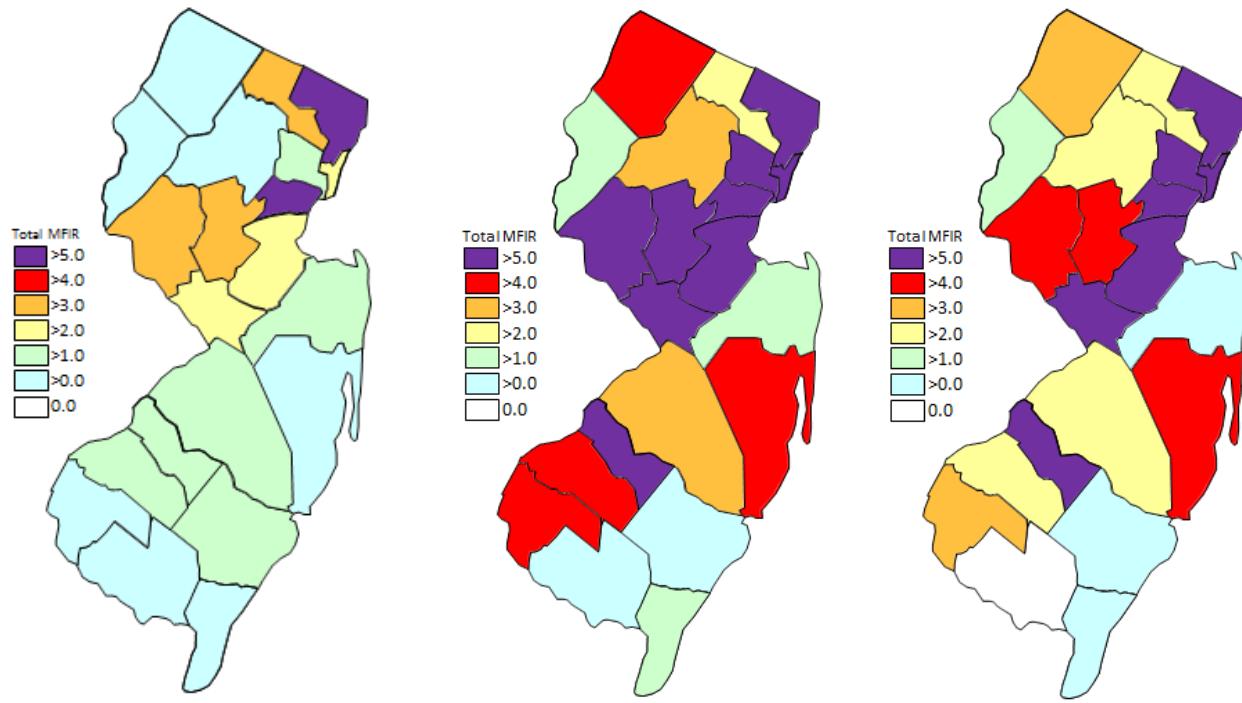
<b>Bergen</b>	<b>165</b>	<b>7800</b>	<b>93</b>	<b>11.923</b>
<i>Aedes albopictus</i>	4	129		
<i>Aedes japonicus</i>	9	86		
<i>Culex</i> spp.	152	7585	93	12.261
<b>Burlington</b>	<b>206</b>	<b>6817</b>	<b>22</b>	<b>3.227</b>
<i>Aedes albopictus</i>	10	191		
<i>Aedes canadensis canadensis</i>	7	92		
<i>Aedes cantator</i>	2	18		
<i>Aedes japonicus</i>	4	92		
<i>Aedes taeniorhynchus</i>	1	8		
<i>Aedes triseriatus</i>	4	36		
<i>Aedes vexans</i>	4	139		
<i>Anopheles bradleyi</i>	3	167		
<i>Anopheles crucians</i>	3	93		
<i>Coquillettidia perturbans</i>	2	124		
<i>Culex erraticus</i>	3	215		
<i>Culex salinarius</i>	13	641		
<i>Culex</i> spp.	84	3336	19	5.695
<i>Culiseta melanura</i>	64	1662	3	1.805
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora columbiae</i>	1	2		
<b>Camden</b>	<b>151</b>	<b>5608</b>	<b>32</b>	<b>5.706</b>
<i>Aedes albopictus</i>	21	134	4	29.851
<i>Aedes japonicus</i>	15	60	1	16.667
<i>Culex</i> spp.	90	4584	27	5.890
<i>Culiseta melanura</i>	25	830		
<b>Cape May</b>	<b>2841</b>	<b>13434</b>	<b>16</b>	<b>1.191</b>
<i>Aedes albopictus</i>	505	1598		
<i>Aedes atlanticus</i>	11	34		
<i>Aedes atropalpus</i>	24	100		
<i>Aedes canadensis canadensis</i>	19	29		
<i>Aedes cantator</i>	8	8		
<i>Aedes japonicus</i>	179	396		
<i>Aedes sollicitans</i>	5	5		
<i>Aedes taeniorhynchus</i>	3	3		
<i>Aedes triseriatus</i>	173	285		
<i>Aedes vexans</i>	39	118		
<i>Anopheles bradleyi</i>	119	632		
<i>Anopheles punctipennis</i>	8	11		
<i>Anopheles quadrimaculatus</i>	110	740		
<i>Coquillettidia perturbans</i>	17	22		
<i>Culex erraticus</i>	42	819		
<i>Culex pipiens</i>	624	5567	9	1.617
<i>Culex restuans</i>	484	1401	4	2.855
<i>Culex salinarius</i>	221	661	2	3.026
<i>Culex</i> spp.	25	48		
<i>Culex territans</i>	45	120		
<i>Culiseta melanura</i>	162	773	1	1.294
<i>Orthopodomyia signifera</i>	4	4		
<i>Psorophora columbiae</i>	8	9		
<i>Psorophora ferox</i>	3	17		
<i>Uranotaenia sapphirina</i>	3	34		

<b>Cumberland</b>	<b>157</b>	<b>2168</b>	<b>2</b>	<b>0.923</b>
<i>Aedes albopictus</i>	22	332		
<i>Aedes canadensis canadensis</i>	1	1		
<i>Aedes japonicus</i>	8	36		
<i>Aedes sollicitans</i>	2	20		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes vexans</i>	19	354		
<i>Anopheles bradleyi</i>	1	75		
<i>Anopheles punctipennis</i>	1	5		
<i>Anopheles quadrimaculatus</i>	10	62		
<i>Coquillettidia perturbans</i>	11	105		
<i>Culex erraticus</i>	4	20		
<i>Culex salinarius</i>	6	246		
<i>Culex</i> spp.	49	601	2	3.328
<i>Culiseta melanura</i>	14	173		
<i>Psorophora columbiae</i>	3	32		
<i>Psorophora ferox</i>	5	104		
<b>Essex</b>	<b>132</b>	<b>913</b>	<b>6</b>	<b>6.572</b>
<i>Aedes albopictus</i>	57	240		
<i>Aedes japonicus</i>	8	13		
<i>Culex</i> spp.	67	660	6	9.091
<b>Gloucester</b>	<b>387</b>	<b>15794</b>	<b>66</b>	<b>4.179</b>
<i>Aedes albopictus</i>	75	2006	2	0.997
<i>Aedes atropalpus</i>	1	10		
<i>Aedes japonicus</i>	13	144		
<i>Aedes triseriatus</i>	5	38		
<i>Aedes vexans</i>	1	1		
<i>Anopheles crucians</i>	1	75	1	13.333
<i>Anopheles punctipennis</i>	25	270		
<i>Anopheles quadrimaculatus</i>	15	222		
<i>Coquillettidia perturbans</i>	3	8		
<i>Culex pipiens</i>	14	788	1	1.269
<i>Culex</i> spp.	173	11677	62	5.310
<i>Culiseta melanura</i>	59	479		
<i>Psorophora ferox</i>	2	76		
<b>Hudson</b>	<b>148</b>	<b>6470</b>	<b>61</b>	<b>9.428</b>
<i>Culex</i> spp.	148	6470	61	9.428
<b>Hunterdon</b>	<b>218</b>	<b>10297</b>	<b>56</b>	<b>5.438</b>
<i>Culex</i> spp.	218	10297	56	5.438
<b>Mercer</b>	<b>195</b>	<b>2923</b>	<b>17</b>	<b>5.816</b>
<i>Aedes albopictus</i>	11	110		
<i>Aedes japonicus</i>	32	119		
<i>Culex pipiens</i>	17	210	1	4.762
<i>Culex restuans</i>	51	909	2	2.200
<i>Culex</i> spp.	84	1575	14	8.889
<b>Middlesex</b>	<b>185</b>	<b>7351</b>	<b>49</b>	<b>6.666</b>
<i>Culex</i> spp.	166	7043	48	6.815
<i>Culiseta melanura</i>	19	308	1	3.247

<b>Monmouth</b>	<b>497</b>	<b>8322</b>	<b>10</b>	<b>1.202</b>
<i>Aedes albopictus</i>	209	5534		
<i>Aedes canadensis canadensis</i>	23	372		
<i>Aedes cantator</i>	17	176		
<i>Aedes grossbecki</i>	2	4		
<i>Aedes japonicus</i>	23	92		
<i>Aedes sollicitans</i>	14	312		
<i>Aedes taeniorhynchus</i>	5	8		
<i>Aedes triseriatus</i>	13	16		
<i>Aedes trivittatus</i>	2	2		
<i>Aedes vexans</i>	24	62		
<i>Anopheles barberi</i>	3	3		
<i>Anopheles bradleyi</i>	2	13		
<i>Anopheles earlei</i>	1	1		
<i>Anopheles punctipennis</i>	38	100		
<i>Anopheles quadrimaculatus</i>	7	28		
<i>Coquillettidia perturbans</i>	8	18		
<i>Culex erraticus</i>	7	28		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	3	58	1	17.241
<i>Culex spp.</i>	63	1246	9	7.223
<i>Culiseta inornata</i>	1	1		
<i>Culiseta melanura</i>	17	204		
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora ciliata</i>	3	3		
<i>Psorophora columbiae</i>	8	37		
<i>Psorophora cyanescens</i>	1	1		
<i>Psorophora ferox</i>	1	1		
<b>Morris</b>	<b>235</b>	<b>7623</b>	<b>23</b>	<b>3.017</b>
<i>Aedes albopictus</i>	30	127		
<i>Coquillettidia perturbans</i>	12	429		
<i>Culex spp.</i>	192	7066	23	3.255
<i>Culiseta melanura</i>	1	1		
<b>Ocean</b>	<b>180</b>	<b>2714</b>	<b>12</b>	<b>4.422</b>
<i>Aedes albopictus</i>	66	1345	2	1.487
<i>Aedes japonicus</i>	6	40		
<i>Aedes triseriatus</i>	4	12		
<i>Anopheles punctipennis</i>	1	1		
<i>Coquillettidia perturbans</i>	5	103		
<i>Culex erraticus</i>	5	75		
<i>Culex spp.</i>	74	1076	10	9.294
<i>Culiseta melanura</i>	19	62		
<b>Passaic</b>	<b>113</b>	<b>1008</b>	<b>3</b>	<b>2.976</b>
<i>Aedes albopictus</i>	8	54		
<i>Aedes japonicus</i>	19	129		
<i>Aedes triseriatus</i>	3	11		
<i>Coquillettidia perturbans</i>	8	12		
<i>Culex erraticus</i>	2	4		
<i>Culex pipiens</i>	51	653	3	4.594
<i>Culex restuans</i>	10	65		
<i>Culex spp.</i>	7	75		
<i>Culiseta melanura</i>	5	5		

<b>Salem</b>	<b>180</b>	<b>2157</b>	<b>9</b>	<b>4.172</b>
<i>Aedes albopictus</i>	43	236	1	4.237
<i>Aedes japonicus</i>	8	20	1	50.000
<i>Aedes triseriatus</i>	15	37		
<i>Aedes vexans</i>	4	9		
<i>Anopheles quadrimaculatus</i>	6	11		
<i>Coquillettidia perturbans</i>	6	66		
<i>Culex erraticus</i>	15	126		
<i>Culex pipiens</i>	5	6	1	166.667
<i>Culex restuans</i>	2	4		
<i>Culex salinarius</i>	1	1		
<i>Culex</i> spp.	45	1027	4	3.895
<i>Culiseta melanura</i>	26	598	1	1.672
<i>Psorophora columbiae</i>	3	14	1	71.429
<i>Psorophora ferox</i>	1	2		
<b>Somerset</b>	<b>189</b>	<b>5455</b>	<b>29</b>	<b>5.316</b>
<i>Aedes albopictus</i>	7	39		
<i>Aedes japonicus</i>	8	48		
<i>Aedes triseriatus</i>	3	8		
<i>Anopheles punctipennis</i>	3	21		
<i>Culex</i> spp.	168	5339	29	5.432
<b>Sussex</b>	<b>216</b>	<b>4997</b>	<b>22</b>	<b>4.403</b>
<i>Aedes albopictus</i>	9	18		
<i>Aedes japonicus</i>	2	31		
<i>Aedes triseriatus</i>	24	124		
<i>Anopheles punctipennis</i>	1	40		
<i>Coquillettidia perturbans</i>	1	14		
<i>Culex pipiens</i>	5	181	1	5.525
<i>Culex restuans</i>	19	568	3	5.282
<i>Culex salinarius</i>	13	492		
<i>Culex</i> spp.	106	3398	18	5.297
<i>Culiseta melanura</i>	36	131		
<b>Union</b>	<b>185</b>	<b>11613</b>	<b>89</b>	<b>7.664</b>
<i>Aedes albopictus</i>	31	837	2	2.389
<i>Culex</i> spp.	154	10776	87	8.073
<b>Warren</b>	<b>250</b>	<b>12941</b>	<b>22</b>	<b>1.700</b>
<i>Aedes albopictus</i>	1	1		
<i>Aedes cantator</i>	1	38		
<i>Aedes cinereus</i>	1	54		
<i>Aedes japonicus</i>	4	30		
<i>Aedes stimulans</i>	1	10		
<i>Aedes triseriatus</i>	1	3		
<i>Aedes trivittatus</i>	1	3		
<i>Aedes vexans</i>	2	88		
<i>Anopheles punctipennis</i>	1	10		
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Coquillettidia perturbans</i>	2	114		
<i>Culex</i> spp.	232	12573	22	1.750
<i>Culiseta melanura</i>	1	13		
<i>Psorophora ferox</i>	1	1		

<b>Grand Total</b>	6990	140310	640	4.561
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Cumulative WNV activity in 2016. WNV activity to 15 September 2017. WNV activity last week, 2017

## Saint Louis Encephalitis (SLE) to 15 September 2017.

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.

No pools of SLE have tested positive for 2017. No human cases have been reported.

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Burlington</b>		<b>19</b>	<b>996</b>		
	<i>Culex</i> spp.	19	996		
<b>Cape May</b>		<b>647</b>	<b>5588</b>		
	<i>Culex pipiens</i>	622	5540		
	<i>Culex</i> spp.	25	48		
<b>Grand Total</b>		<b>666</b>	<b>6584</b>		

## La Crosse Encephalitis (LAC) to 15 September 2017.

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).

No pools of SLE have tested positive for 2017. No human cases have been reported.

County	Species	Positives		MFIR
<b>Burlington</b>		<b>16</b>	<b>299</b>	
	<i>Aedes albopictus</i>	8	171	
	<i>Aedes japonicus</i>	4	92	
	<i>Aedes triseriatus</i>	4	36	
<b>Cape May</b>		<b>8</b>	<b>14</b>	
	<i>Aedes triseriatus</i>	8	14	
<b>Sussex</b>		<b>24</b>	<b>124</b>	
	<i>Aedes triseriatus</i>	24	124	
<b>Grand Total</b>		<b>48</b>	<b>437</b>	

### Dengue (DENV) to 15 September 2017.

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 of Dengue have tested positive in 2017. There are 3 travel-related human cases in NJ.

County	Species	DENV1		DENV2		DENV3		DENV4		Pos.	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
<b>Mercer</b>		<b>8</b>	<b>87</b>	<b>8</b>	<b>87</b>	<b>8</b>	<b>87</b>	<b>8</b>	<b>87</b>		
	<i>Aedes albopictus</i>	8	87	8	87	8	87	8	87		
<b>Grand Total</b>		<b>8</b>	<b>87</b>	<b>8</b>	<b>87</b>	<b>8</b>	<b>87</b>	<b>8</b>	<b>87</b>		

### Chikungunya (CHIK) to 15 September 2017.

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 of CHIK have tested positive in 2017. There are 3 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Cape May</b>		<b>432</b>	<b>1173</b>		

	<i>Aedes albopictus</i>	432	1173		
<b>Mercer</b>		<b>8</b>	<b>87</b>		
	<i>Aedes albopictus</i>	8	87		
<b>Grand Total</b>		<b>440</b>	<b>1260</b>		

### Zika (ZIKV) to 15 September 2017.

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 2017. There are 21 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
<b>Cape May</b>		<b>503</b>	<b>1591</b>		
	<i>Aedes albopictus</i>	503	1591		
<b>Mercer</b>		<b>8</b>	<b>87</b>		
	<i>Aedes albopictus</i>	8	87		
<b>Grand Total</b>		<b>511</b>	<b>1678</b>		