VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 38: 18 September to 24 September, 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**	1.15	1.00	6 (11)	4 (5)	1	166.67
Green Bank (Burlington Co.)/25	**Coastal**	2.02	0.04	66 (67)	11 (12)		
Corbin City (Atlantic Co.)/25	**Coastal**	1.14	0.08	268 (270)	18 (19)	1	3.73
Dennisville (Cape May Co.)/50	**Coastal**	3.37	0.00	69	12		
Winslow (Camden Co.)/50	**Inland**	0.64	0.16	960	27	2	2.08
Centerton (Salem Co.)/50	**Inland**	2.35	0.00	257	16		
Turkey Swamp (Monmouth Co.)/50	**Inland**	0.96	0.76	96 (134)	16 (17)	1	10.42
Glassboro (Gloucester Co.)/50	**Inland**	0.66	0.02	106	17	1	9.43

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

Remarks: EEE virus continues to circulate in NJ in the enzootic vector. One new positive EEE pool in *Culiseta melanura* was detected at an additional county site in Middlesex County where two previous positive pools had been found. Total positive EEE pools detected is 11, with 9 pools of *Cs. melanura* and 2 pools of *Culex pipiens*. A total of 4 horse cases have been found.

Traditional Resting Box Sites: 1828 *Cs. melanura* from 121 pools have been tested for EEE, with 4 pools of 46 *Cs. melanura* to be tested. No new positive pools were detected at the traditional resting box sites. Statewide, 4596 *Cs. melanura* have been tested, with nine positive pools detected (six traditional, three county sites), for an overall *Cs. melanura* MFIR of 1.96, an increase from 1.78 last week. 16,958 specimens from 22 other species have also been tested, with two positives *Culex pipiens* pools. Overall MFIR for all species statewide is 0.51.

	Additional *Cs. melanura* trapped by counties *traps with positives indicated in **BOLD.**				
County	**Trap types***	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Atlantic	CO_2, RB	27	394		
Burlington	CO_2	50	1214		
Cape May	CDC, CO_2, GR, RB	169	398		
Cumberland	CDC, RB	16	88		
Middlesex	**RB**	46	600	3	5.00
Ocean	CO_2, GR, RB	20	44		
Passaic	EVS	1	1		
Sussex	CO_2, GR	5	6		
Union	LT	1	23		
TOTAL		**335**	**2768**	**3**	**1.08**

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. Three positive pools were detected in Middlesex, the first on 25 July and the most recent at the same site on 20 Sep.

Species other than *Cs. melanura*	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Aedes albopictus	5	10		
Aedes canadensis canadensis	3	74		
Aedes cantator	25	52		
Aedes japonicus	1	4		
Aedes mitchellae	1	6		
Aedes sollicitans	22	715		
Aedes taeniorhynchus	4	195		
Aedes trivittatus	2	2		
Aedes vexans	9	74		
Anopheles bradleyi	81	409		
Anopheles crucians	5	72		
Anopheles punctipennis	24	112		
Anopheles quadrimaculatus	4	12		
Anopheles walkeri	1	1		
Coquillettidia perturbans	107	1922		
Culex erraticus	104	871		
Culex pipiens	762	9197	2	0.217
Culex restuans	2	4		
Culex salinarius	315	2828		
Culex sp.	60	380		
Culex territans	1	12		
Psorophora columbiae	1	2		
Psorophora ferox	2	4		
State Total	**1541**	**16958**	**2**	**0.118**

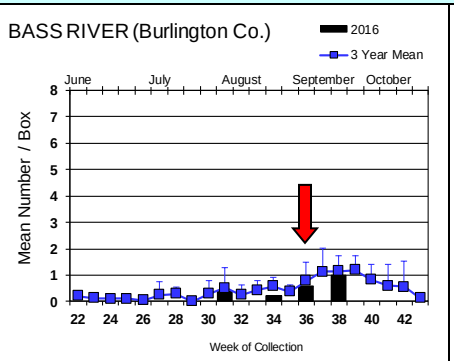
Additional Species: Twenty-two additional species were tested for EEE. First positive pools were detected in *Culex pipiens,* an ornithophilic species, in Cape May, collected on 6 July.

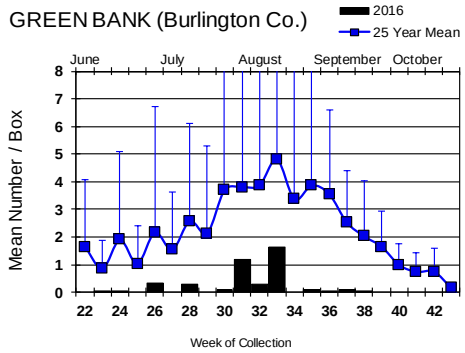
Horses and Humans: Four horses have been detected with EEE, two from Morris, one from Ocean and one from Passaic. All horses were not up to date with vaccinations. ***Horse owners are urged to make sure their horses are up to date on their vaccinations. Horse cases are known to occur through October and sometimes into November.*** Other sensitive species are non-native birds, such as Ostriches/Emus and Gallinaceous birds such as pheasants of Eurasian origins.

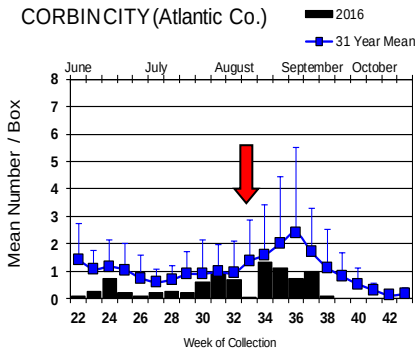
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

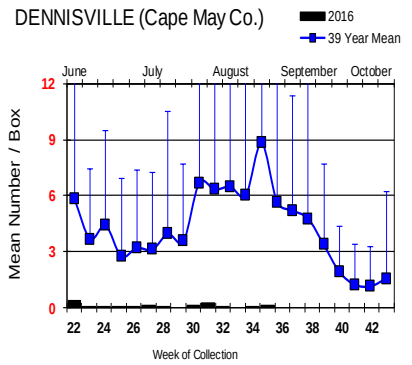
Culiseta melanura Population Graphs

Coastal

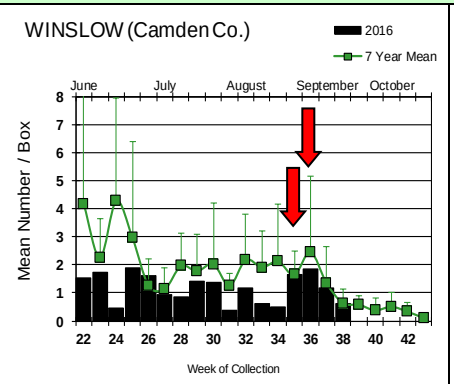


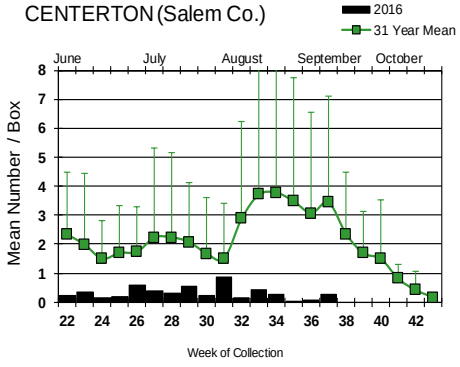


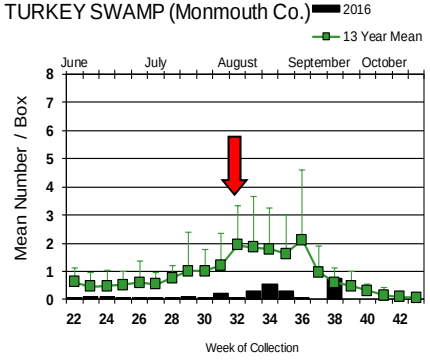


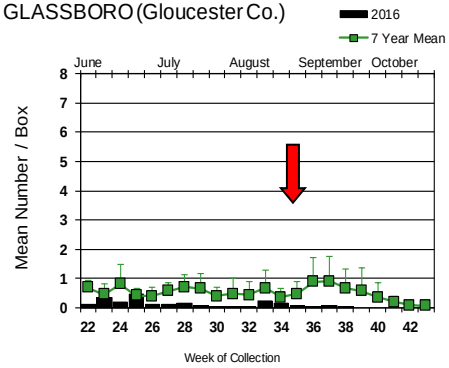


Inland



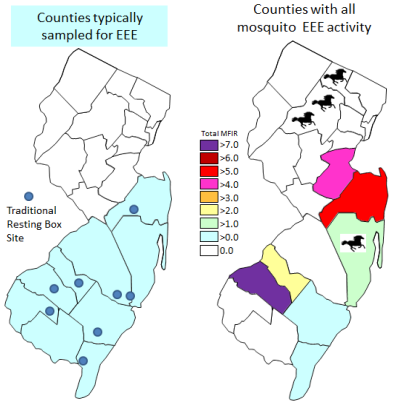






A total of 6 positive pools of *Cs. melanura* have been detected at the traditional resting box sites.

Maps to right: Note that Middlesex County (in pink, far right) and Passaic and Morris County (with a total of three horse symbols, representing the positive horses – symbols do not point to location within the county of the horse cases) are north of the areas typically sampled for EEE (left map). Horse cases have occurred on occasion in the northern half of the state. (map to right up-to-date for all species mosquito MFIR).



= 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(7) FL(19) GA(5) LA(7) MS(7) MI(2) NC(1) NJ(4) NY(1) SC(14) TN(1) TX(1) VA(6) WI(4)
- mosquito pools: CT(1) LA(1) MA(4) NJ(11) NY(5) RI(1)
- sentinel: FL(75) GA(2) TX(24)
- 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					5
Alaska					
Arizona	1	87	0	1	47/53
Arkansas				0	1/3
California	1235/1276	3176/3249	279/295	18/19	199/234
Colorado	10/17	103/207		1/3	98
Connecticut		88/106			1
Delaware					
DC					1
Florida		5	96/113	1	4
Georgia		0			1
Hawaii					
Idaho	0	34		7/9	6/8
Illinois	58/61	2198/2271		1	30
Indiana	0	186/213		0	2/6
Iowa		19		9	7
Kansas	1	0		1	9/15
Kentucky				2/4	
Louisiana	20/31	159/168		2/3	24/26
Maine		0			0
Maryland		1			
Mass.		176/185		0	2/5
Michigan	13	4		1/2	11/22
Minnesota		6		7/12	24
Mississippi		22/24			21/22
Missouri		8		2	2

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					5
Nebraska	2	90		1	47/52
Nevada				2/6	4/7
New Hampshire		1		0	0
New Jersey		343/384		0	4/6
New Mexico					2
New York		447/497		3	1
North Carolina					
North Dakota	8	15		4	60/69
Ohio		8		1	4
Oklahoma		7		2	14
Oregon	9	49/51	0	5/6	3
Pennsylvania	9/12	1265/1352		3	6/7
Rhode Island		1			
South Carolina		6			4
South Dakota		242			111/127
Tennessee					2/4
Texas	3/4	1420/1457	2	15	126/144
Utah		203		3	8
Vermont		13/17			2/3
Virginia					
Washington	1	95		25	8/9
West Virginia				1	
Wisconsin	44	8		5/6	2
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 24 September 2016

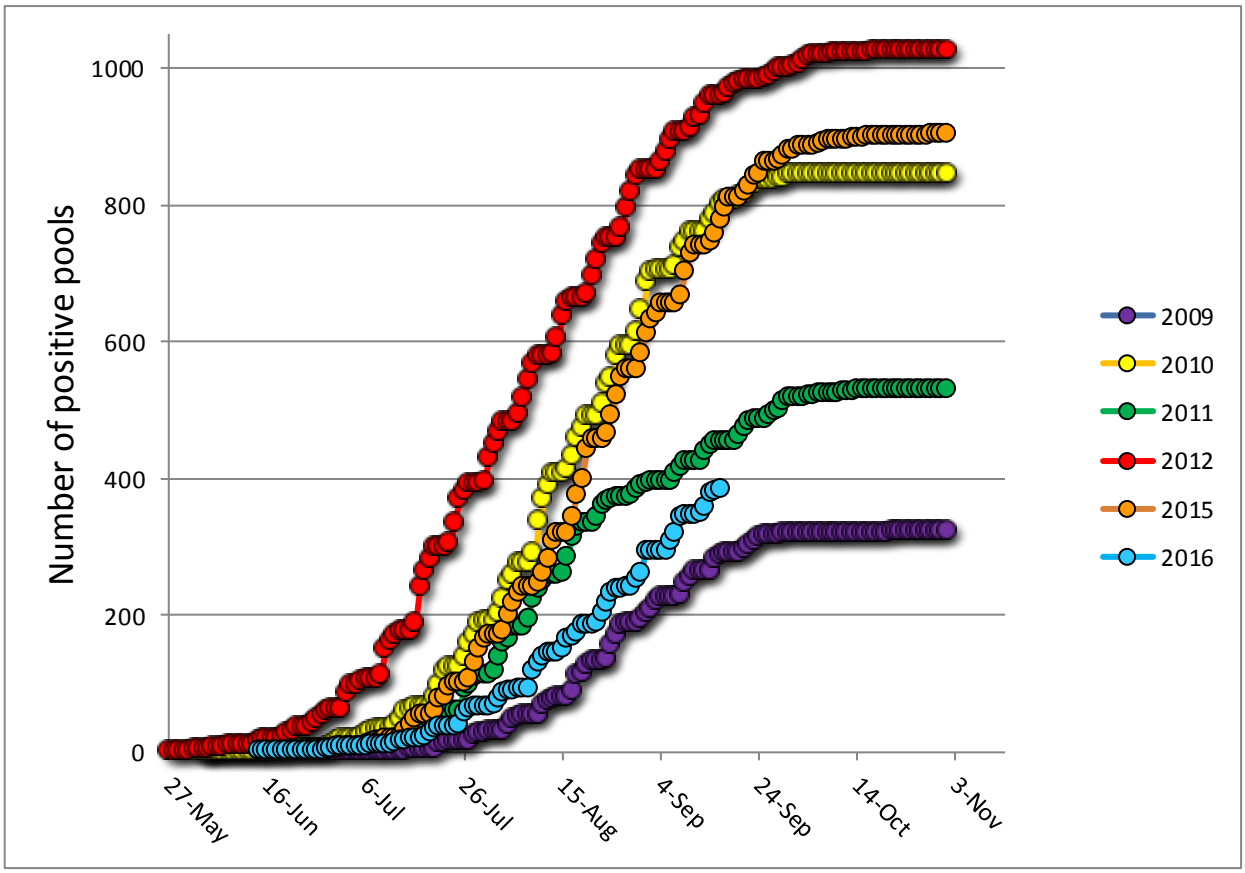
Species	Pools	Mosquitoes	Positives	MFIR
Aedes albopictus	1875	20376	4	0.196
Aedes atlanticus	16	44		
Aedes atropalpus	26	76		
Aedes canadensis canadensis	37	707		
Aedes cantator	36	246		
Aedes grossbecki	1	1		
Aedes japonicus	484	2792	2	0.716
Aedes mitchellae	1	6		
Aedes sollicitans	30	885		
Aedes sticticus	1	6		
Aedes taeniorhynchus	24	659		
Aedes triseriatus	241	543		
Aedes trivittatus	4	36		
Aedes vexans	96	1112	1	0.899
Anopheles atropos	1	1		
Anopheles barberi	2	2		
Anopheles bradleyi	95	726		
Anopheles crucians	8	79		
Anopheles punctipennis	83	320		
Anopheles quadrimaculatus	149	1197		
Anopheles walkeri	1	1		
Coquillettidia perturbans	126	2849	1	0.351
Culex erraticus	141	1212		
Culex pipiens	1118	28096	47	1.673
Culex restuans	764	8117	7	0.862
Culex salinarius	329	3178		
Culex spp.	2954	111091	320	2.881
Culex territans	42	365		
Culiseta melanura	458	4569	2	0.438
Orthopodomyia signifera	4	4		
Psorophora ciliata	1	1		
Psorophora columbiae	17	107		
Psorophora ferox	19	137		
Uranotaenia sapphirina	2	6		
Grand Total	**9186**	**189547**	**384**	**2.026**

Remarks: To date, 9,186 pools of 189,547 mosquitoes from 33 species have been tested, with 384 positive pools detected. New positives were all detected in *Culex* pools. 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: A total of six human cases have been detected; one most recently from Camden County (no onset date given). Currently, case count is Camden (2), Gloucester (1), Middlesex (1) Monmouth (1) and Passaic (1). No horse cases are currently reported. 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. A slight increase in activity from the previous week has occurred, with numbers trending between low (2009) and moderate (2011) activity.



WNV Results by County through 24 September 2016

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**265**	**7251**	**11**	**1.517**
	Aedes albopictus	52	505		
	Aedes japonicus	4	18		
	Aedes sollicitans	10	636		
	Aedes sticticus	1	6		
	Aedes taeniorhynchus	7	363		
	Aedes vexans	10	332		
	Anopheles bradleyi	6	146		
	Anopheles punctipennis	2	18		
	Anopheles quadrimaculatus	2	34		
	Coquillettidia perturbans	23	526		
	Culex erraticus	15	139		
	Culex pipiens	30	1581	8	5.060
	Culex restuans	3	52		
	Culex salinarius	6	220		
	Culex spp.	44	1932	2	1.035
	Culiseta melanura	45	662	1	1.511
	Psorophora columbiae	1	10		

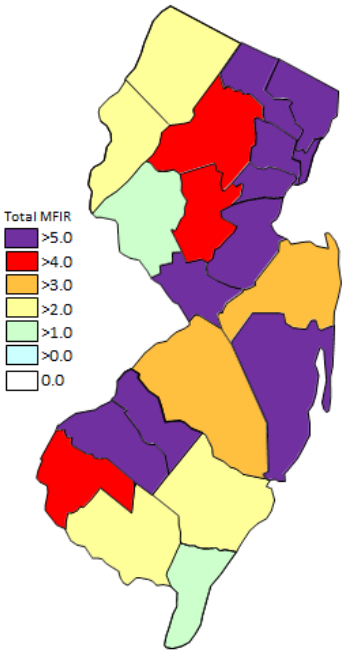
	Psorophora ferox	4	71		
Bergen		**258**	**16028**	**79**	**4.929**
	Aedes albopictus	47	398		
	Aedes japonicus	8	405		
	Culex spp.	203	15225	79	5.189
Burlington		**194**	**6280**	**7**	**1.115**
	Aedes albopictus	10	251		
	Aedes atropalpus	3	18		
	Aedes canadensis canadensis	3	74		
	Aedes japonicus	9	203		
	Aedes mitchellae	1	6		
	Aedes taeniorhynchus	4	195		
	Aedes triseriatus	9	35		
	Anopheles barberi	1	1		
	Anopheles bradleyi	3	81		
	Anopheles crucians	3	45		
	Anopheles punctipennis	1	11		
	Anopheles quadrimaculatus	1	3		
	Coquillettidia perturbans	5	303	1	3.300
	Culex erraticus	5	110		
	Culex salinarius	16	538		
	Culex spp.	73	3260	6	1.840
	Culex territans	1	12		
	Culiseta melanura	46	1134		
Camden		**208**	**4646**	**6**	**1.291**
	Aedes albopictus	41	165		
	Aedes japonicus	24	82		
	Anopheles punctipennis	1	4		
	Culex spp.	115	3435	6	1.747
	Culiseta melanura	27	960		
Cape May		**3085**	**19195**	**2**	**0.104**
	Aedes albopictus	427	871		
	Aedes atlanticus	13	31		
	Aedes atropalpus	23	58		
	Aedes canadensis canadensis	13	249		
	Aedes cantator	25	52		
	Aedes japonicus	210	406		
	Aedes sollicitans	4	6		
	Aedes taeniorhynchus	4	5		
	Aedes triseriatus	163	291		
	Aedes vexans	11	15		
	Anopheles atropos	1	1		
	Anopheles bradleyi	78	328		
	Anopheles punctipennis	10	11		
	Anopheles quadrimaculatus	121	1090		
	Coquillettidia perturbans	27	426		
	Culex erraticus	26	75		
	Culex pipiens	762	9191		
	Culex restuans	624	4340	1	0.230
	Culex salinarius	267	791		
	Culex spp.	43	118		
	Culex territans	41	353		

	Culiseta melanura	181	467	1	2.141
	Orthopodomyia signifera	3	3		
	Psorophora columbiae	2	2		
	Psorophora ferox	4	9		
	Uranotaenia sapphirina	2	6		
Cumberland		**228**	**3784**	**1**	**0.264**
	Aedes albopictus	27	333		
	Aedes cantator	1	1		
	Aedes japonicus	9	18		
	Aedes sollicitans	11	232		
	Aedes taeniorhynchus	3	26		
	Aedes triseriatus	2	4		
	Aedes vexans	39	612	1	1.634
	Anopheles bradleyi	5	157		
	Anopheles crucians	1	5		
	Anopheles punctipennis	8	61		
	Anopheles quadrimaculatus	3	18		
	Coquillettidia perturbans	7	110		
	Culex erraticus	20	205		
	Culex pipiens	2	9		
	Culex salinarius	31	1430		
	Culex spp.	29	369		
	Culiseta melanura	16	88		
	Orthopodomyia signifera	1	1		
	Psorophora ciliata	1	1		
	Psorophora columbiae	11	91		
	Psorophora ferox	1	13		
Essex		**268**	**1541**	**2**	**1.298**
	Aedes albopictus	116	599		
	Aedes japonicus	7	14		
	Aedes triseriatus	2	2		
	Anopheles punctipennis	1	1		
	Anopheles quadrimaculatus	1	1		
	Culex spp.	141	924	2	2.165
Gloucester		**455**	**19589**	**35**	**1.787**
	Aedes albopictus	136	2831	1	0.353
	Aedes japonicus	24	254		
	Aedes triseriatus	4	13		
	Anopheles punctipennis	6	16		
	Culex pipiens	268	16369	34	2.077
	Culiseta melanura	17	106		
Hudson		**211**	**9776**	**25**	**2.557**
	Aedes albopictus	49	2194	1	0.456
	Culex spp.	162	7582	24	3.165
Hunterdon		**215**	**9906**	**31**	**3.129**
	Aedes albopictus	6	234		
	Culex spp.	209	9672	31	3.205
Mercer		**429**	**8544**	**18**	**2.107**
	Aedes albopictus	119	1389		

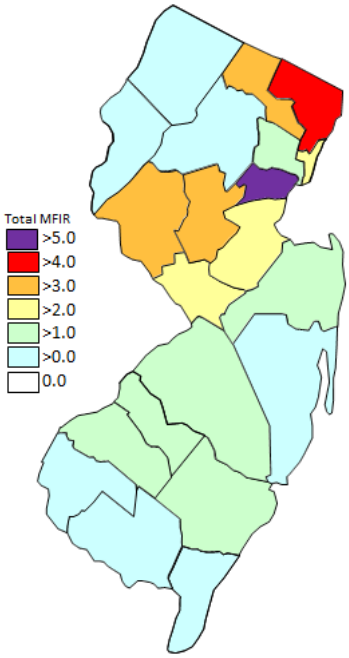
	Aedes japonicus	26	106		
	Aedes triseriatus	2	24		
	Aedes vexans	3	12		
	Culex erraticus	12	40		
	Culex pipiens	49	935	5	5.348
	Culex restuans	125	3703	6	1.620
	Culex spp.	93	2335	7	2.998
Middlesex		**384**	**12642**	**28**	**2.215**
	Aedes albopictus	80	742		
	Coquillettidia perturbans	1	2		
	Culex erraticus	3	4		
	Culex spp.	253	11293	28	2.479
	Culiseta melanura	47	601		
Monmouth		**733**	**8854**	**15**	**1.694**
	Aedes albopictus	434	5071	1	0.197
	Aedes atlanticus	3	13		
	Aedes canadensis canadensis	20	314		
	Aedes cantator	10	193		
	Aedes grossbecki	1	1		
	Aedes japonicus	36	113		
	Aedes sollicitans	5	11		
	Aedes taeniorhynchus	6	70		
	Aedes triseriatus	10	19		
	Aedes trivittatus	1	1		
	Aedes vexans	10	29		
	Anopheles barberi	1	1		
	Anopheles crucians	2	2		
	Anopheles punctipennis	37	78		
	Anopheles quadrimaculatus	6	6		
	Coquillettidia perturbans	4	5		
	Culex erraticus	6	17		
	Culex restuans	2	4		
	Culex spp.	116	2779	14	5.038
	Culiseta melanura	17	97		
	Psorophora columbiae	2	3		
	Psorophora ferox	4	27		
Morris		**396**	**12788**	**10**	**0.782**
	Aedes albopictus	70	987		
	Aedes trivittatus	2	2		
	Aedes vexans	2	5		
	Anopheles punctipennis	6	61		
	Anopheles quadrimaculatus	2	8		
	Anopheles walkeri	1	1		
	Coquillettidia perturbans	2	20		
	Culex spp.	309	11700	10	0.855
	Psorophora ferox	2	4		
Ocean		**327**	**4316**	**1**	**0.232**
	Aedes albopictus	107	1456		
	Aedes canadensis canadensis	1	70		
	Aedes japonicus	28	89		
	Aedes triseriatus	12	20		
	Aedes vexans	1	1		

	Anopheles crucians	2	27		
	Anopheles punctipennis	4	5		
	Coquillettidia perturbans	25	463		
	Culex erraticus	12	71		
	Culex restuans	1	2		
	Culex spp.	96	1982	1	0.505
	Culiseta melanura	37	121		
	Psorophora ferox	1	9		
Passaic		**287**	**7010**	**22**	**3.138**
	Aedes albopictus	13	53		
	Aedes japonicus	62	423	2	4.728
	Aedes triseriatus	7	11		
	Aedes vexans	13	37		
	Coquillettidia perturbans	2	5		
	Culex spp.	189	6480	20	3.086
	Culiseta melanura	1	1		
Salem		**267**	**1843**	**1**	**0.543**
	Aedes albopictus	69	326	1	3.067
	Aedes japonicus	14	34		
	Aedes triseriatus	22	32		
	Anopheles bradleyi	3	14		
	Anopheles punctipennis	5	5		
	Anopheles quadrimaculatus	13	37		
	Coquillettidia perturbans	12	85		
	Culex erraticus	31	431		
	Culex pipiens	4	4		
	Culex restuans	7	8		
	Culex spp.	67	605		
	Culiseta melanura	16	257		
	Psorophora columbiae	1	1		
	Psorophora ferox	3	4		
Somerset		**210**	**3855**	**13**	**3.372**
	Aedes albopictus	17	79		
	Aedes japonicus	4	35		
	Aedes triseriatus	4	26		
	Anopheles punctipennis	1	5		
	Culex spp.	184	3710	13	3.504
Sussex		**339**	**9587**	**5**	**0.522**
	Aedes albopictus	10	39		
	Aedes japonicus	19	592		
	Aedes triseriatus	4	66		
	Aedes trivittatus	1	33		
	Aedes vexans	7	69		
	Anopheles punctipennis	1	44		
	Coquillettidia perturbans	18	904		
	Culex erraticus	2	9		
	Culex pipiens	3	7		
	Culex restuans	2	8		
	Culex salinarius	9	199		
	Culex spp.	258	7611	5	0.657
	Culiseta melanura	5	6		

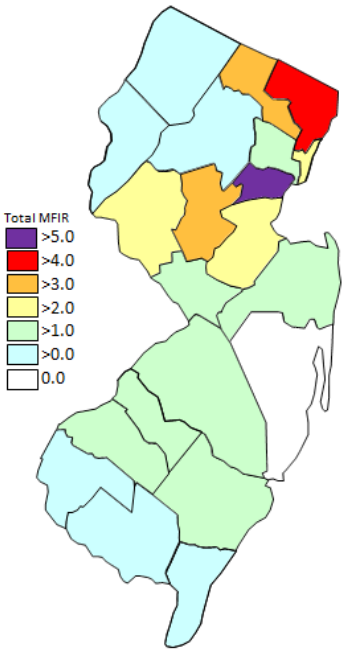
Union		**208**	**11838**	**71**	**5.998**
	Aedes albopictus	45	1853		
	Culex erraticus	9	111		
	Culex spp.	151	9805	71	7.241
	Culiseta melanura	3	69		
Warren		**219**	**10274**	**1**	**0.097**
	Culex spp.	219	10274	1	0.097
Grand Total		**9186**	**189547**	**384**	**2.026**



Cumulative WNV activity in 2015.



WNV activity to 24 September 2016.



WNV activity last week, 2016.

Saint Louis Encephalitis (SLE) to 24 September 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		**78**	**3352**		
	Anopheles barberi	1	1		
	Culex erraticus	4	91		
	Culex spp.	73	3260		
Cape May		**804**	**9312**		
	Culex pipiens	762	9197		
	Culex spp.	42	115		
Grand Total		**882**	**12664**		

La Crosse Encephalitis (LAC) to 24 September 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			Positives	MFIR
Burlington		**31**	**507**		
	Aedes albopictus	10	251		
	Aedes atropalpus	3	18		
	Aedes japonicus	9	203		
	Aedes triseriatus	9	35		
Grand Total		**31**	**507**		

Dengue (DENV) to 24 September 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 55 imported human cases of Dengue.

County	Species	DENV1		DENV2		DENV3		DENV4		Pos.	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		**52**	**505**	**52**	**505**	**52**	**505**	**52**	**505**		
	Aedes albopictus	52	505	52	505	52	505	52	505		
Bergen		**47**	**398**	**47**	**398**	**47**	**398**	**47**	**398**		
	Aedes albopictus	47	398	47	398	47	398	47	398		
Camden		**41**	**165**	**41**	**165**	**41**	**165**	**41**	**165**		
	Aedes albopictus	41	165	41	165	41	165	41	165		
Cumberland		**27**	**333**	**27**	**333**	**27**	**333**	**27**	**333**		
	Aedes albopictus	27	333	27	333	27	333	27	333		
Essex		**116**	**599**	**116**	**599**	**116**	**599**	**116**	**599**		
	Aedes albopictus	116	599	116	599	116	599	116	599		
Gloucester		**120**	**2632**	**120**	**2632**	**120**	**2632**	**120**	**2632**		
	Aedes albopictus	120	2632	120	2632	120	2632	120	2632		

Hudson		**49**	**2194**	**49**	**2194**	**49**	**2194**	**49**	**2194**		
	Aedes albopictus	49	2194	49	2194	49	2194	49	2194		
Hunterdon		**6**	**234**	**6**	**234**	**6**	**234**	**6**	**234**		
	Aedes albopictus	6	234	6	234	6	234	6	234		
Mercer		**119**	**1389**	**119**	**1389**	**119**	**1389**	**119**	**1389**		
	Aedes albopictus	119	1389	119	1389	119	1389	119	1389		
Middlesex		**81**	**743**	**81**	**743**	**81**	**743**	**81**	**743**		
	Aedes albopictus	80	742	80	742	80	742	80	742		
	Culiseta melanura	1	1	1	1	1	1	1	1		
Monmouth		**367**	**4673**	**367**	**4673**	**367**	**4673**	**367**	**4673**		
	Aedes albopictus	367	4673	367	4673	367	4673	367	4673		
Morris		**68**	**986**	**68**	**986**	**68**	**986**	**68**	**986**		
	Aedes albopictus	66	983	66	983	66	983	66	983		
	Culex spp.	2	3	2	3	2	3	2	3		
Ocean		**16**	**196**	**16**	**196**	**16**	**196**	**16**	**196**		
	Aedes albopictus	16	196	16	196	16	196	16	196		
Passaic		**4**	**13**	**4**	**13**	**4**	**13**	**4**	**13**		
	Aedes albopictus	4	13	4	13	4	13	4	13		
Salem		**69**	**326**	**69**	**326**	**69**	**326**	**69**	**326**		
	Aedes albopictus	69	326	69	326	69	326	69	326		
Somerset		**13**	**63**	**13**	**63**	**13**	**63**	**13**	**63**		
	Aedes albopictus	13	63	13	63	13	63	13	63		
Sussex		**10**	**39**	**10**	**39**	**10**	**39**	**10**	**39**		
	Aedes albopictus	10	39	10	39	10	39	10	39		
Union		**38**	**1720**	**38**	**1720**	**38**	**1720**	**38**	**1720**		
	Aedes albopictus	38	1720	38	1720	38	1720	38	1720		
Grand Total		**1243**	**17208**	**1243**	**17208**	**1243**	**17208**	**1243**	**17208**		

Chikungunya (CHIK) to 24 September 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 5 imported human case of Chikungunya.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**52**	**505**		
	Aedes albopictus	52	505		
Bergen		**47**	**398**		
	Aedes albopictus	47	398		
Camden		**41**	**165**		
	Aedes albopictus	41	165		
Cape May		**427**	**871**		
	Aedes albopictus	427	871		
Cumberland		**27**	**333**		
	Aedes albopictus	27	333		
Essex		**116**	**599**		

	Aedes albopictus	116	599		
Gloucester		**120**	**2632**		
	Aedes albopictus	120	2632		
Hudson		**49**	**2194**		
	Aedes albopictus	49	2194		
Hunterdon		**6**	**234**		
	Aedes albopictus	6	234		
Mercer		**119**	**1389**		
	Aedes albopictus	119	1389		
Middlesex		**81**	**743**		
	Aedes albopictus	80	742		
	Culiseta melanura	1	1		
Monmouth		**367**	**4673**		
	Aedes albopictus	367	4673		
Morris		**68**	**986**		
	Aedes albopictus	66	983		
	Culex spp.	2	3		
Ocean		**16**	**196**		
	Aedes albopictus	16	196		
Passaic		**4**	**13**		
	Aedes albopictus	4	13		
Salem		**69**	**326**		
	Aedes albopictus	69	326		
Somerset		**13**	**63**		
	Aedes albopictus	13	63		
Sussex		**10**	**39**		
	Aedes albopictus	10	39		
Union		**38**	**1720**		
	Aedes albopictus	38	1720		
Grand Total		**1670**	**18079**		

Zika (ZIKV) to 24 September 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 142 imported human cases of Zika.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**39**	**348**		
	Aedes albopictus	39	348		
Bergen		**32**	**326**		
	Aedes albopictus	32	326		
Camden		**25**	**99**		
	Aedes albopictus	25	99		
Cape May		**427**	**871**		
	Aedes albopictus	427	871		
Cumberland		**21**	**246**		
	Aedes albopictus	21	246		

Essex		**77**	**434**		
	Aedes albopictus	77	434		
Gloucester		**120**	**2632**		
	Aedes albopictus	120	2632		
Hudson		**31**	**1771**		
	Aedes albopictus	31	1771		
Hunterdon		**6**	**234**		
	Aedes albopictus	6	234		
Mercer		**223**	**2902**		
	Aedes albopictus	223	2902		
Middlesex		**47**	**525**		
	Aedes albopictus	47	525		
Monmouth		**197**	**3099**		
	Aedes albopictus	197	3099		
Morris		**53**	**931**		
	Aedes albopictus	53	931		
Ocean		**16**	**196**		
	Aedes albopictus	16	196		
Passaic		**2**	**10**		
	Aedes albopictus	2	10		
Salem		**35**	**200**		
	Aedes albopictus	35	200		
Somerset		**13**	**63**		
	Aedes albopictus	13	63		
Sussex		**10**	**39**		
	Aedes albopictus	10	39		
Union		**38**	**1720**		
	Aedes albopictus	38	1720		
Grand Total		**1412**	**16646**		