VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 37: 11 September to 17 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**	1.12	0.00	6	4	1	166.67
Green Bank (Burlington Co.)/25	**Coastal**	2.53	0.08	62 (66)	11 (12)		
Corbin City (Atlantic Co.)/25	**Coastal**	1.70	1.00	243 (268)	17 (18)	1	3.73
Dennisville (Cape May Co.)/50	**Coastal**	4.76	0.00	69	12		
Winslow (Camden Co.)/50	**Inland**	1.34	1.16	952	26	2	2.10
Centerton (Salem Co.)/50	**Inland**	3.44	0.26	257	16		
Turkey Swamp (Monmouth Co.)/50	**Inland**	2.11	nd	96	15	1	10.42
Glassboro (Gloucester Co.)/50	**Inland**	0.90	0.06	105	16	1	9.52

*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 a traditional resting box site. Total positive EEE pools detected is 10, with 8 pools of *Cs. melanura* and 2 pools of *Culex pipiens*. A total of 4 horse cases have been found.

Traditional Resting Box Sites: 1790 *Cs. melanura* from 117 pools have been tested for EEE, with 2 pools of 29 *Cs. melanura* to be tested. One new positive melanura pool was detected at the Bass River site, collected 7 Sep. Statewide, 4486 *Cs. melanura* have been tested, with eight positive pools detected (six traditional, two county sites), for an overall *Cs. melanura* MFIR of 1.78, an increase from 1.62 last week. 16,427 specimens from 22 other species have also been tested, with two positives *Culex pipiens* pools. Overall MFIR for all species statewide is 0.48.

	Additional *Cs. melanura* trapped by counties *traps with positives indicated in **BOLD.**				
County	**Trap types***	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Atlantic	CO_2, RB	26	382		
Burlington	CO_2	47	1199		
Cape May	CDC, CO_2, GR, RB	157	378		
Cumberland	CDC, RB	16	88		
Middlesex	**RB**	44	581	2	3.44
Ocean	CO_2, GR, RB	17	40		
Sussex	CO_2, GR	4	5		
Union	LT	1	23		
TOTAL		**312**	**2696**	**2**	**0.74**

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. Two positive pools were detected in Middlesex, the first on 25 July.

Species other than *Cs. melanura*	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Aedes albopictus	4	9		
Aedes canadensis canadensis	2	65		
Aedes cantator	25	52		
Aedes japonicus	1	4		
Aedes mitchellae	1	6		
Aedes sollicitans	21	706		
Aedes taeniorhynchus	4	195		
Aedes trivittatus	2	2		
Aedes vexans	7	49		
Anopheles bradleyi	76	378		
Anopheles crucians	4	67		
Anopheles punctipennis	22	75		
Anopheles quadrimaculatus	2	5		
Anopheles walkeri	1	1		
Coquillettidia perturbans	101	1909		
Culex erraticus	84	657		
Culex pipiens	738	9044	2	0.221
Culex restuans	2	4		
Culex salinarius	311	2805		
Culex sp.	59	378		
Culex territans	1	12		
Psorophora columbiae	1	2		
Psorophora ferox	1	2		
State Total	**1470**	**16427**	**2**	**0.122**

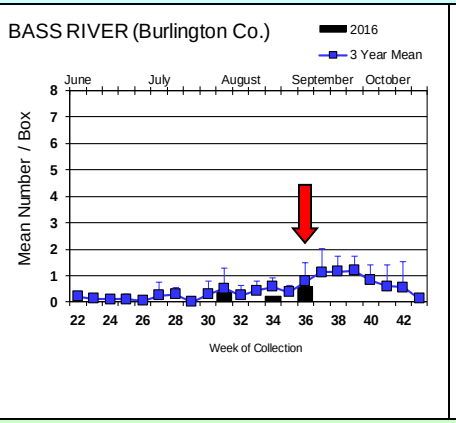
Additional Species: Twenty-one additional species were tested for EEE. First positive pools were detected in *Culex pipiens,* an ornithophilic species, in Cape May, collected on 6 July.

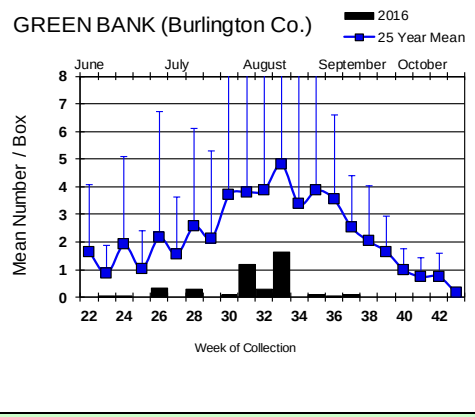
Horses and Humans: Four horses have been detected with EEE, two from Morris, one from Ocean and one from Passaic. All horses were not up to date with vaccinations. ***Horse owners are urged to make sure their horses are up to date on their vaccinations. Horse cases are known to occur through October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

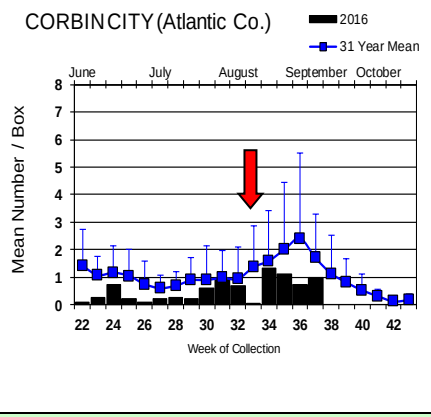
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

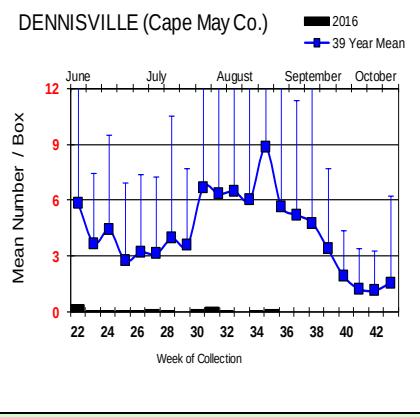
Culiseta melanura Population Graphs

Coastal

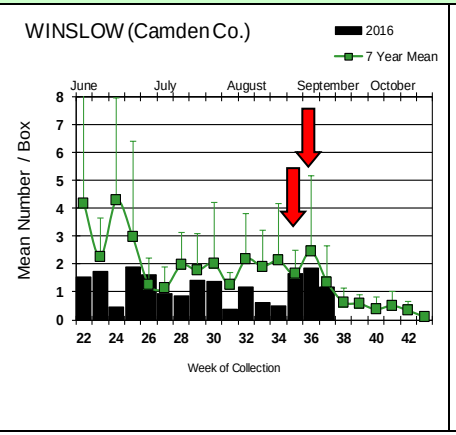


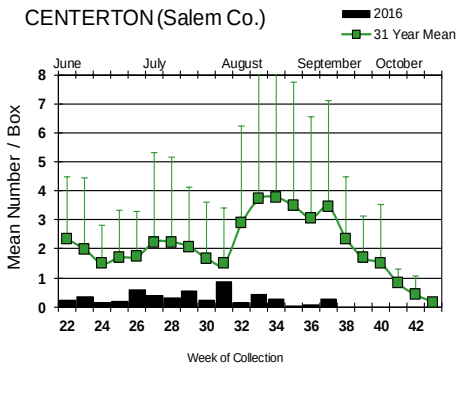


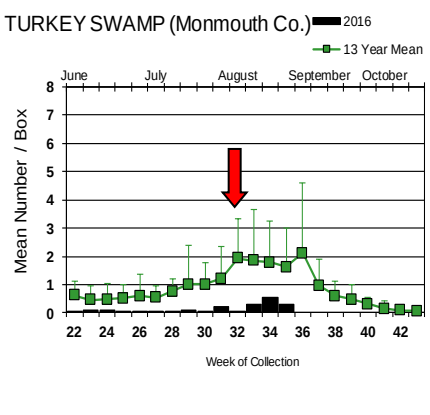


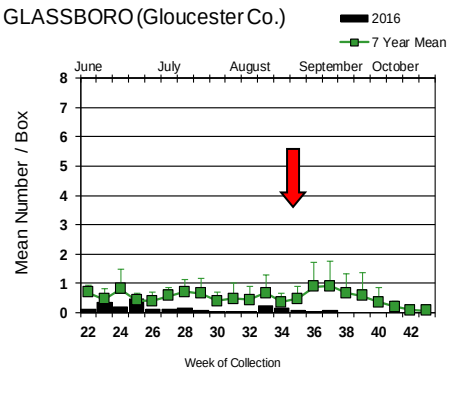


Inland





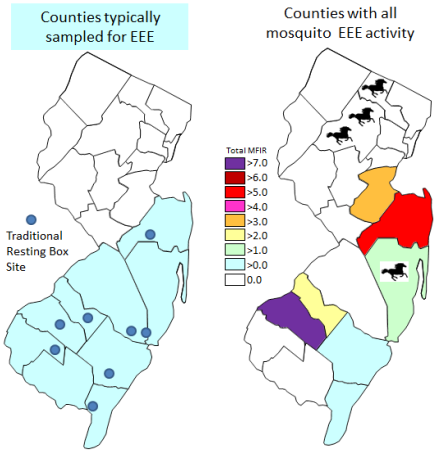




A total of 6 positive pools of *Cs. melanura* have been detected at the traditional resting box sites, the latest at the Bass River site. This positive in a population of extremely low numbers reinforces the ability of EEE to transmit through low population levels of the enzootic vector.

Maps to right: Note that Middlesex County (in orange, 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(1) NC(1) NJ(4) NY(1) SC(14) TN(1) TX(1) VA(6) WI(3)
- mosquito pools: LA(1) MA(4) NJ(10) NY(5) RI(1)
- sentinel: FL(73) 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	83/87	0	0	41/47
Arkansas				0	1
California	1186/1235	3105/3176	248/279	15/18	155/199
Colorado	10	103		1	76/98
Connecticut		85/88			1
Delaware					
DC					1
Florida		5	96	1	3/4
Georgia		0			0
Hawaii					
Idaho	0	29/34		4/7	5/6
Illinois	48/58	2037/2198		1	15/30
Indiana	0	186		0	2
Iowa		5/19		6/9	6/7
Kansas	1	0		1	7/9
Kentucky				2	
Louisiana	20	159		2	24
Maine		0			0
Maryland		1			
Mass.		157/176		0	1/2
Michigan	13	4		1/2	7/11
Minnesota		6		7/12	24
Mississippi		22			20/21
Missouri		8		1/2	1/2

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					3/5
Nebraska	2	90		1	36/47
Nevada				2/6	4/7
New Hampshire		0		0	0
New Jersey		292/343		0	2/3
New Mexico					1/2
New York		424/447		1/3	1
North Carolina					
North Dakota	8	15		4	50/60
Ohio		8		1	4
Oklahoma		7		2	12/14
Oregon	8/9	44/49	0	3/5	3
Pennsylvania	7/9	1119/1265			5/6
Rhode Island		1			
South Carolina		6			4
South Dakota		203/242			95/111
Tennessee					1/2
Texas	1/3	1318/1420	2	13/15	108/126
Utah		190/203		3	7/8
Vermont		13			2
Virginia					
Washington	1	95		18/25	6/8
West Virginia					
Wisconsin	23/44	8		5	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 17 September 2016

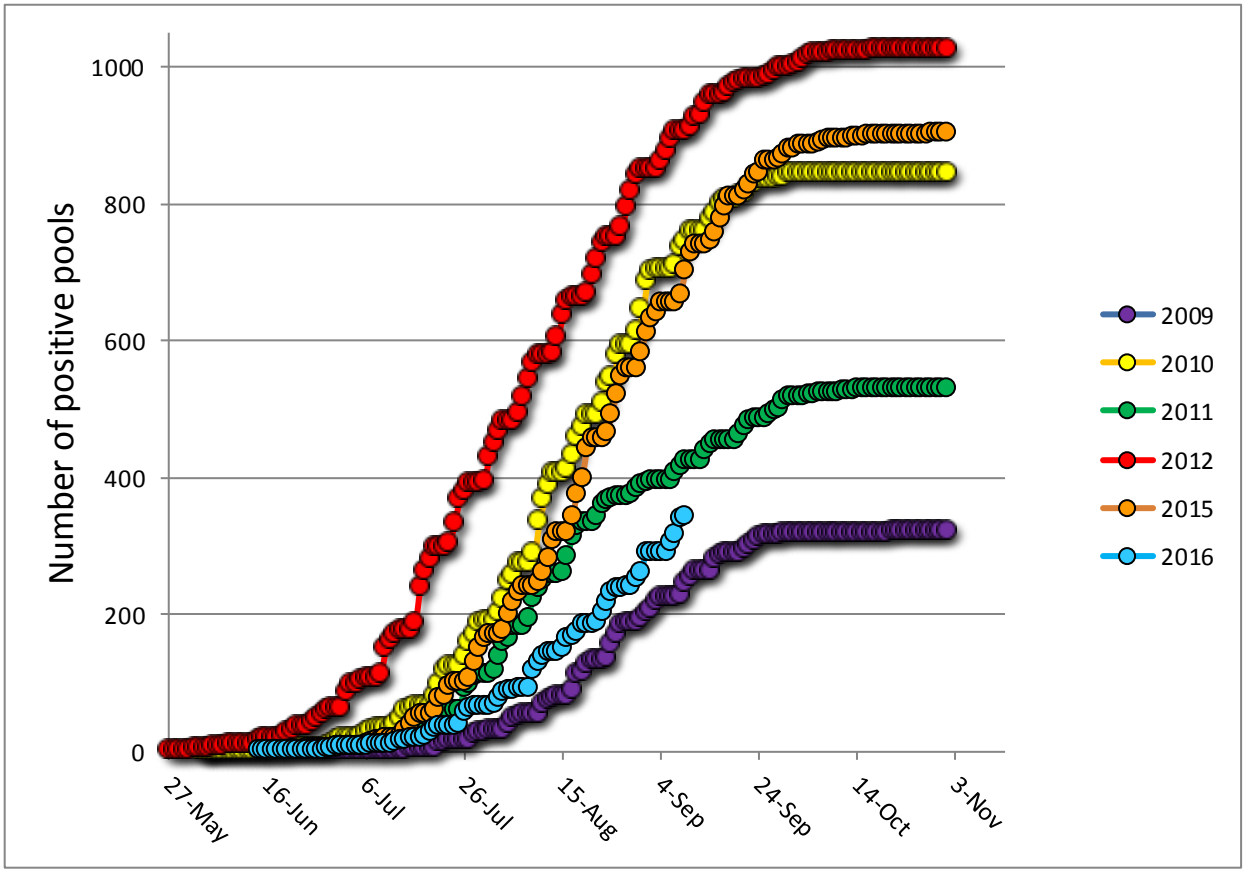
Species	Pools	Mosquitoes	Positives	MFIR
Aedes albopictus	1756	19298	4	0.207
Aedes atlanticus	16	44		
Aedes atropalpus	26	76		
Aedes canadensis canadensis	36	698		
Aedes cantator	36	246		
Aedes grossbecki	1	1		
Aedes japonicus	465	2629	2	0.761
Aedes mitchellae	1	6		
Aedes sollicitans	29	876		
Aedes sticticus	1	6		
Aedes taeniorhynchus	24	659		
Aedes triseriatus	235	499		
Aedes trivittatus	4	36		
Aedes vexans	91	1003	1	0.997
Anopheles atropos	1	1		
Anopheles barberi	2	2		
Anopheles bradleyi	90	695		
Anopheles crucians	7	74		
Anopheles punctipennis	76	273		
Anopheles quadrimaculatus	140	1156		
Anopheles walkeri	1	1		
Coquillettidia perturbans	120	2836	1	0.353
Culex erraticus	119	996		
Culex pipiens	1056	25624	41	1.600
Culex restuans	745	8059	7	0.869
Culex salinarius	325	3155		
Culex spp.	2762	105841	285	2.693
Culex territans	42	365		
Culiseta melanura	431	4459	2	0.449
Orthopodomyia signifera	4	4		
Psorophora ciliata	1	1		
Psorophora columbiae	17	107		
Psorophora ferox	18	135		
Uranotaenia sapphirina	2	6		
Grand Total	**8680**	**179867**	**343**	**1.907**

Remarks: To date, 8,680 pools of 179,867 mosquitoes from 33 species have been tested, with 343 positive pools detected. Most new positives continue to be detected in *Culex* Mix 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 three human cases have been detected; one most recently from Middlesex County (no onset date given). Currently, case count is Camden (1), Middlesex (1) and Monmouth (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 17 September 2016

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**244**	**6809**	**11**	**1.616**
	Aedes albopictus	45	450		
	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	22	524		
	Culex erraticus	13	135		
	Culex pipiens	27	1433	8	5.583
	Culex restuans	3	52		
	Culex salinarius	6	220		
	Culex spp.	38	1736	2	1.152
	Culiseta melanura	43	625	1	1.600

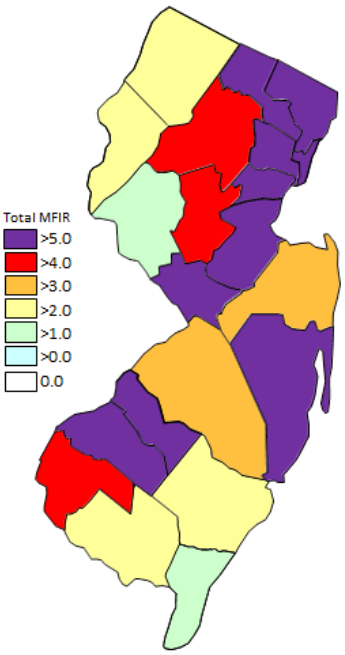
	Psorophora columbiae	1	10		
	Psorophora ferox	4	71		
Bergen		**242**	**15011**	**72**	**4.796**
	Aedes albopictus	45	381		
	Aedes japonicus	7	380		
	Culex spp.	190	14250	72	5.053
Burlington		**177**	**6079**	**7**	**1.152**
	Aedes albopictus	9	246		
	Aedes atropalpus	3	18		
	Aedes canadensis canadensis	2	65		
	Aedes japonicus	8	174		
	Aedes mitchellae	1	6		
	Aedes taeniorhynchus	4	195		
	Aedes triseriatus	8	28		
	Anopheles barberi	1	1		
	Anopheles bradleyi	2	58		
	Anopheles crucians	2	40		
	Coquillettidia perturbans	5	303	1	3.300
	Culex erraticus	5	110		
	Culex salinarius	14	519		
	Culex spp.	69	3185	6	1.884
	Culex territans	1	12		
	Culiseta melanura	43	1119		
Camden		**194**	**4435**	**5**	**1.127**
	Aedes albopictus	37	158		
	Aedes japonicus	23	81		
	Culex spp.	108	3244	5	1.541
	Culiseta melanura	26	952		
Cape May		**2991**	**18874**	**2**	**0.106**
	Aedes albopictus	402	823		
	Aedes atlanticus	13	31		
	Aedes atropalpus	23	58		
	Aedes canadensis canadensis	13	249		
	Aedes cantator	25	52		
	Aedes japonicus	209	405		
	Aedes sollicitans	4	6		
	Aedes taeniorhynchus	4	5		
	Aedes triseriatus	162	290		
	Aedes vexans	11	15		
	Anopheles atropos	1	1		
	Anopheles bradleyi	74	320		
	Anopheles punctipennis	10	11		
	Anopheles quadrimaculatus	116	1069		
	Coquillettidia perturbans	27	426		
	Culex erraticus	22	43		
	Culex pipiens	739	9045		
	Culex restuans	609	4305	1	0.232
	Culex salinarius	265	787		
	Culex spp.	41	113		
	Culex territans	41	353		
	Culiseta melanura	169	447	1	2.237
	Orthopodomyia signifera	3	3		

	Psorophora columbiae	2	2		
	Psorophora ferox	4	9		
	Uranotaenia sapphirina	2	6		
Cumberland		**210**	**3584**	**1**	**0.279**
	Aedes albopictus	27	333		
	Aedes cantator	1	1		
	Aedes japonicus	9	18		
	Aedes sollicitans	10	223		
	Aedes taeniorhynchus	3	26		
	Aedes triseriatus	2	4		
	Aedes vexans	36	528	1	1.894
	Anopheles bradleyi	5	157		
	Anopheles crucians	1	5		
	Anopheles punctipennis	8	61		
	Anopheles quadrimaculatus	2	6		
	Coquillettidia perturbans	7	110		
	Culex erraticus	14	183		
	Culex pipiens	2	9		
	Culex salinarius	31	1430		
	Culex spp.	22	296		
	Culiseta melanura	16	88		
	Orthopodomyia signifera	1	1		
	Psorophora ciliata	1	1		
	Psorophora columbiae	11	91		
	Psorophora ferox	1	13		
Essex		**244**	**1470**	**2**	**1.361**
	Aedes albopictus	105	562		
	Aedes japonicus	5	8		
	Aedes triseriatus	2	2		
	Anopheles punctipennis	1	1		
	Anopheles quadrimaculatus	1	1		
	Culex spp.	130	896	2	2.232
Gloucester		**414**	**17404**	**29**	**1.666**
	Aedes albopictus	136	2831	1	0.353
	Aedes japonicus	21	246		
	Aedes triseriatus	3	10		
	Anopheles punctipennis	4	14		
	Culex pipiens	234	14198	28	1.972
	Culiseta melanura	16	105		
Hudson		**205**	**9563**	**25**	**2.614**
	Aedes albopictus	47	2082	1	0.480
	Culex spp.	158	7481	24	3.208
Hunterdon		**200**	**9228**	**21**	**2.276**
	Aedes albopictus	6	234		
	Culex spp.	194	8994	21	2.335
Mercer		**389**	**8062**	**16**	**1.985**
	Aedes albopictus	99	1162		
	Aedes japonicus	25	103		
	Aedes triseriatus	2	24		

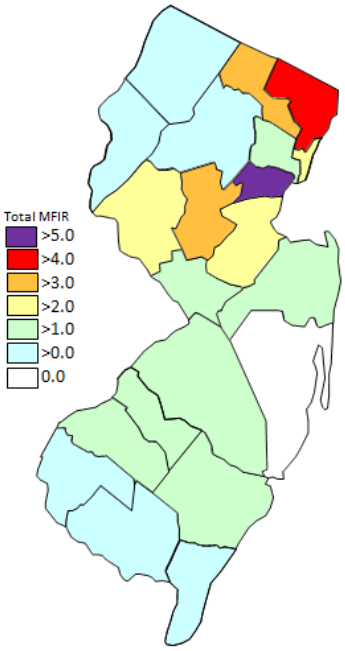
	Aedes vexans	3	12		
	Culex erraticus	10	38		
	Culex pipiens	48	929	5	5.382
	Culex restuans	122	3685	6	1.628
	Culex spp.	80	2109	5	2.371
Middlesex		**368**	**12401**	**26**	**2.097**
	Aedes albopictus	80	742		
	Coquillettidia perturbans	1	2		
	Culex erraticus	3	4		
	Culex spp.	239	11071	26	2.348
	Culiseta melanura	45	582		
Monmouth		**686**	**8240**	**15**	**1.820**
	Aedes albopictus	401	4600	1	0.217
	Aedes atlanticus	3	13		
	Aedes canadensis canadensis	20	314		
	Aedes cantator	10	193		
	Aedes grossbecki	1	1		
	Aedes japonicus	34	107		
	Aedes sollicitans	5	11		
	Aedes taeniorhynchus	6	70		
	Aedes triseriatus	8	15		
	Aedes trivittatus	1	1		
	Aedes vexans	10	29		
	Anopheles barberi	1	1		
	Anopheles crucians	2	2		
	Anopheles punctipennis	35	74		
	Anopheles quadrimaculatus	5	5		
	Coquillettidia perturbans	4	5		
	Culex erraticus	6	17		
	Culex restuans	2	4		
	Culex spp.	109	2651	14	5.281
	Culiseta melanura	17	97		
	Psorophora columbiae	2	3		
	Psorophora ferox	4	27		
Morris		**359**	**12136**	**8**	**0.659**
	Aedes albopictus	56	888		
	Aedes trivittatus	2	2		
	Aedes vexans	2	5		
	Anopheles punctipennis	5	35		
	Anopheles quadrimaculatus	1	4		
	Anopheles walkeri	1	1		
	Coquillettidia perturbans	2	20		
	Culex spp.	289	11179	8	0.716
	Psorophora ferox	1	2		
Ocean		**313**	**4261**		
	Aedes albopictus	107	1456		
	Aedes canadensis canadensis	1	70		
	Aedes japonicus	26	85		
	Aedes triseriatus	12	20		
	Aedes vexans	1	1		
	Anopheles crucians	2	27		
	Anopheles punctipennis	4	5		

	Coquillettidia perturbans	23	461		
	Culex erraticus	10	58		
	Culex restuans	1	2		
	Culex spp.	92	1954		
	Culiseta melanura	33	113		
	Psorophora ferox	1	9		
Passaic		**271**	**6675**	**21**	**3.146**
	Aedes albopictus	13	53		
	Aedes japonicus	61	412	2	4.854
	Aedes triseriatus	7	11		
	Aedes vexans	13	37		
	Culex spp.	177	6162	19	3.083
Salem		**259**	**1696**	**1**	**0.590**
	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	26	295		
	Culex pipiens	3	3		
	Culex restuans	7	8		
	Culex spp.	65	595		
	Culiseta melanura	16	257		
	Psorophora columbiae	1	1		
	Psorophora ferox	3	4		
Somerset		**195**	**3712**	**12**	**3.233**
	Aedes albopictus	17	79		
	Aedes japonicus	4	35		
	Aedes triseriatus	4	26		
	Anopheles punctipennis	1	5		
	Culex spp.	169	3567	12	3.364
Sussex		**314**	**9216**	**5**	**0.543**
	Aedes albopictus	10	39		
	Aedes japonicus	15	523		
	Aedes triseriatus	3	37		
	Aedes trivittatus	1	33		
	Aedes vexans	5	44		
	Anopheles punctipennis	1	44		
	Coquillettidia perturbans	17	900		
	Culex erraticus	1	2		
	Culex pipiens	3	7		
	Culex restuans	1	3		
	Culex salinarius	9	199		
	Culex spp.	244	7380	5	0.678
	Culiseta melanura	4	5		
Union		**193**	**10806**	**63**	**5.830**
	Aedes albopictus	45	1853		
	Culex erraticus	9	111		

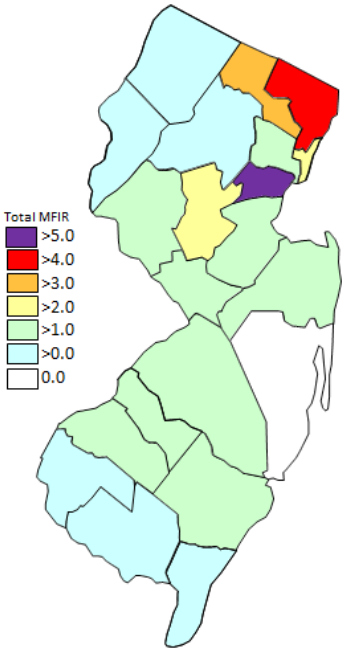
	Culex spp.	136	8773	63	7.181
	Culiseta melanura	3	69		
Warren		**212**	**10205**	**1**	**0.098**
	Culex spp.	212	10205	1	0.098
Grand Total		**8680**	**179867**	**343**	**1.907**



Cumulative WNV activity in 2015.



WNV activity to 17 September 2016.



WNV activity last week, 2016.

Saint Louis Encephalitis (SLE) to 17 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		**74**	**3277**		
	Anopheles barberi	1	1		
	Culex erraticus	4	91		
	Culex spp.	69	3185		
Cape May		**779**	**9157**		
	Culex pipiens	738	9044		
	Culex spp.	41	113		
Grand Total		**853**	**12434**		

La Crosse Encephalitis (LAC) to 17 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		**28**	**466**		
	Aedes albopictus	9	246		
	Aedes atropalpus	3	18		
	Aedes japonicus	8	174		
	Aedes triseriatus	8	28		
Grand Total		**28**	**466**		

Dengue (DENV) to 17 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 39 imported human cases of Dengue.

County	Species	DENV1		DENV2		DENV3		DENV4		Pos.	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		**45**	**450**	**45**	**450**	**45**	**450**	**45**	**450**		
	Aedes albopictus	45	450	45	450	45	450	45	450		
Bergen		**45**	**381**	**45**	**381**	**45**	**381**	**45**	**381**		
	Aedes albopictus	45	381	45	381	45	381	45	381		
Camden		**37**	**158**	**37**	**158**	**37**	**158**	**37**	**158**		
	Aedes albopictus	37	158	37	158	37	158	37	158		
Cumberland		**27**	**333**	**27**	**333**	**27**	**333**	**27**	**333**		
	Aedes albopictus	27	333	27	333	27	333	27	333		
Essex		**105**	**562**	**105**	**562**	**105**	**562**	**105**	**562**		
	Aedes albopictus	105	562	105	562	105	562	105	562		
Gloucester		**120**	**2632**	**120**	**2632**	**120**	**2632**	**120**	**2632**		
	Aedes albopictus	120	2632	120	2632	120	2632	120	2632		
Hudson		**47**	**2082**	**47**	**2082**	**47**	**2082**	**47**	**2082**		
	Aedes albopictus	47	2082	47	2082	47	2082	47	2082		

Hunterdon		**6**	**234**	**6**	**234**	**6**	**234**	**6**	**234**		
	Aedes albopictus	6	234	6	234	6	234	6	234		
Mercer		**99**	**1162**	**99**	**1162**	**99**	**1162**	**99**	**1162**		
	Aedes albopictus	99	1162	99	1162	99	1162	99	1162		
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		**340**	**4264**	**340**	**4264**	**340**	**4264**	**340**	**4264**		
	Aedes albopictus	340	4264	340	4264	340	4264	340	4264		
Morris		**55**	**888**	**55**	**888**	**55**	**888**	**55**	**888**		
	Aedes albopictus	53	885	53	885	53	885	53	885		
	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		**1157**	**16246**	**1157**	**16246**	**1157**	**16246**	**1157**	**16246**		

Chikungunya (CHIK) to 17 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 3 imported human case of Chikungunya.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**45**	**450**		
	Aedes albopictus	45	450		
Bergen		**45**	**381**		
	Aedes albopictus	45	381		
Camden		**37**	**158**		
	Aedes albopictus	37	158		
Cape May		**402**	**823**		
	Aedes albopictus	402	823		
Cumberland		**27**	**333**		
	Aedes albopictus	27	333		
Essex		**105**	**562**		
	Aedes albopictus	105	562		
Gloucester		**120**	**2632**		

	Aedes albopictus	120	2632		
Hudson		**47**	**2082**		
	Aedes albopictus	47	2082		
Hunterdon		**6**	**234**		
	Aedes albopictus	6	234		
Mercer		**99**	**1162**		
	Aedes albopictus	99	1162		
Middlesex		**81**	**743**		
	Aedes albopictus	80	742		
	Culiseta melanura	1	1		
Monmouth		**340**	**4264**		
	Aedes albopictus	340	4264		
Morris		**55**	**888**		
	Aedes albopictus	53	885		
	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		**1559**	**17069**		

Zika (ZIKV) to 17 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 128 imported human cases of Zika.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**32**	**293**		
	Aedes albopictus	32	293		
Bergen		**30**	**309**		
	Aedes albopictus	30	309		
Camden		**21**	**92**		
	Aedes albopictus	21	92		
Cape May		**402**	**823**		
	Aedes albopictus	402	823		
Cumberland		**21**	**246**		
	Aedes albopictus	21	246		
Essex		**66**	**397**		
	Aedes albopictus	66	397		

Gloucester		**120**	**2632**		
	Aedes albopictus	120	2632		
Hudson		**29**	**1659**		
	Aedes albopictus	29	1659		
Hunterdon		**6**	**234**		
	Aedes albopictus	6	234		
Mercer		**184**	**2498**		
	Aedes albopictus	184	2498		
Middlesex		**47**	**525**		
	Aedes albopictus	47	525		
Monmouth		**170**	**2690**		
	Aedes albopictus	170	2690		
Morris		**40**	**833**		
	Aedes albopictus	40	833		
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		**1282**	**15459**		