VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 34: 21 August to 27 August, 2016

This New Jersey Agricultural Experiment Station report is supported by Rutgers University, Hatch funds, funding from the NJ State Mosquito Control Commission and with the participation of the Department of Health, Department of Agriculture and of the 21 county mosquito control agencies of New Jersey.

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**	0.58	0.20	2 (3)	2 (3)		
Green Bank (Burlington Co.)/25	**Coastal**	3.37	0.00	59	8		
Corbin City (Atlantic Co.)/25	**Coastal**	1.60	1.32	164 (197)	13 (14)	1	6.10
Dennisville (Cape May Co.)/50	**Coastal**	8.82	0.06	63	11		
Winslow (Camden Co.)/50	**Inland**	2.12	0.52	727	20		
Centerton (Salem Co.)/50	**Inland**	3.77	0.28	238	13		
Turkey Swamp (Monmouth Co.)/50	**Inland**	1.78	0.54	53 (80)	13 (14)	1	18.87
Glassboro (Gloucester Co.)/50	**Inland**	0.35	0.14	98	13		

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

Remarks: One new positive EEE pool in *Culiseta melanura* was detected in NJ. Total positive EEE pools detected is 6, with 4 pools of *Cs. melanura* and 2 pools of *Culex pipiens*. Two horse cases have been detected in Morris County (see next page for details).

Traditional Resting Box Sites: 1404 *Cs. melanura* from 94 pools have been tested for EEE, with 3 pools of 61 *Cs. melanura* to be tested. One new positive melanura pool was detected at the Corbin City site, collected 16 Aug. Previous positive pool was from Turkey Swamp, collected 3 Aug. Statewide, 3741 *Cs. melanura* have been tested, with four positive pools detected (two traditional, two county sites), for an overall *Cs. melanura* MFIR of 1.07. 14,355 specimens from 18 other species have also been tested, with two reported positives *Culex pipiens* pools. Overall MFIR for all species statewide is 0.33.

	Additional *Cs. melanura* trapped by counties *traps with positives indicated in **BOLD.**				
County	**Trap types***	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Atlantic	CO_2, RB	23	354		
Burlington	CO_2	42	1055		
Cape May	CDC, CO_2, GR, RB	110	284		
Cumberland	CDC, RB	13	63		
Middlesex	**RB**	35	553	2	3.76
Ocean	CO_2, GR, RB	11	28		
TOTAL		**236**	**2337**	**2**	**0.93**

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	1	6		
Aedes canadensis canadensis	1	19		
Aedes cantator	25	52		
Aedes japonicus	1	4		
Aedes mitchellae	1	6		
Aedes sollicitans	17	696		
Aedes taeniorhynchus	4	195		
Anopheles bradleyi	63	337		
Anopheles crucians	2	40		
Anopheles punctipennis	12	24		
Anopheles quadrimaculatus	1	1		
Coquillettidia perturbans	85	1585		
Culex erraticus	38	320		
Culex pipiens	626	8258	2	0.242
Culex restuans	1	3		
Culex salinarius	263	2672		
Culex sp.	44	123		
Culex territans	1	12		
Psorophora columbiae	1	2		
State Total	**1187**	**14355**	**2**	**0.140**

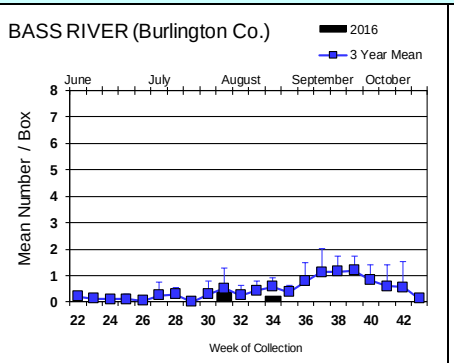
Additional Species: Thirteen additional species were tested for EEE. First positive pools were detected in *Culex pipiens,* an ornithophilic species, in Cape May, collected on 6 July.

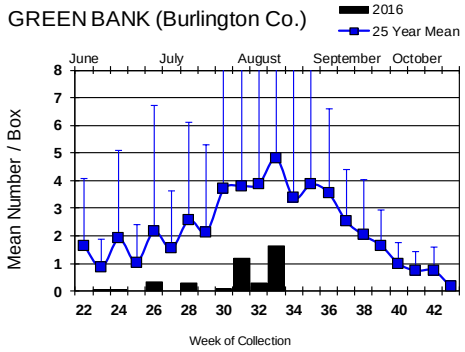
Horses and Humans: Two positive horses have been reported, both from Morris County and less than 5 miles from each other. First horse was a 7 yo mare with symptom onset on 9 Aug, euthanized 13 Aug. Second horse was a 3 yo gelding, symptom onset 23 Aug, euthanized same day. Both horses had either an unknown or no vaccination history and no travel history. ***Horse owners are urged to make sure their horses are up to date on their vaccinations.*** Other sensitive species are non-native birds, such as Ostriches/Emus and Gallinaceous birds such as pheasants of Eurasian origins.

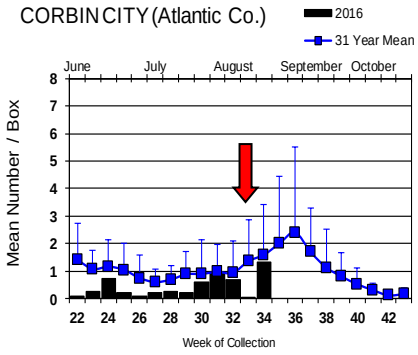
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

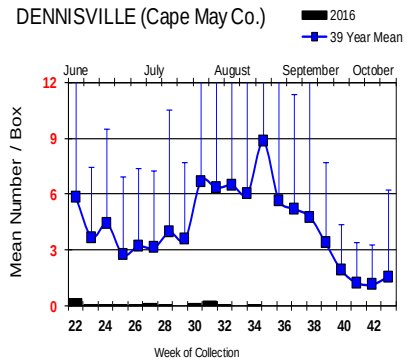
Culiseta melanura Population Graphs

Coastal

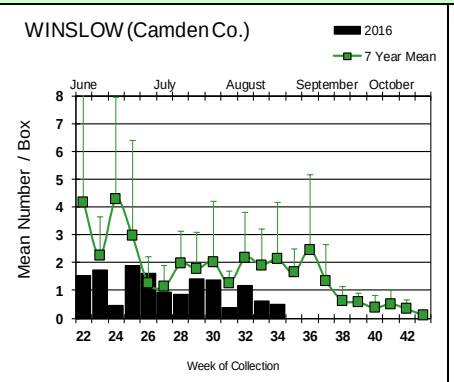


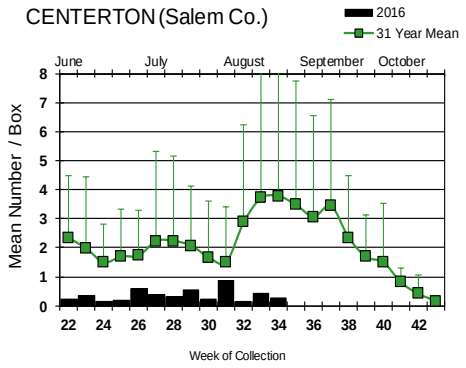


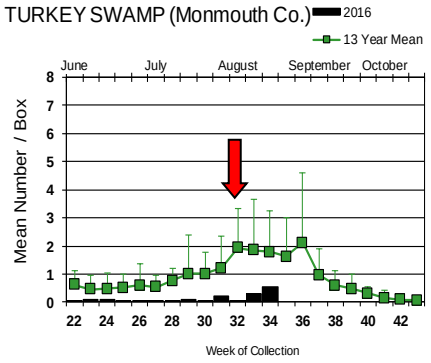


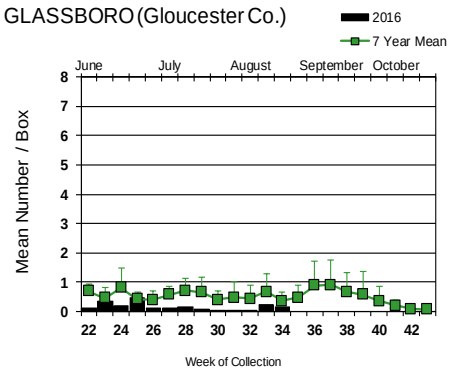


Inland



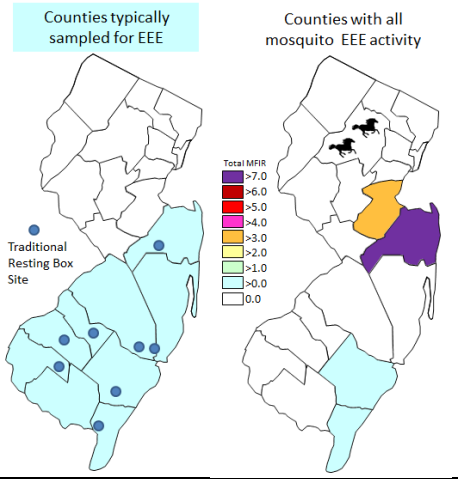






Population numbers of *Culiseta melanura* continue to appear low at most resting box sites, although the Corbin City site appears to have numbers approaching historical trends. This is also the site with the most recent positive pool.

Maps to right: Note that Middlesex County (in orange, far right) and Morris County (with two 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.



= 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(2) FL(19) GA(5) LA(6) MS(3) NC(1) NJ(2) SC(14) TN(1) TX(1) VA(6)
- mosquito pools: LA(1) NJ(6) MA(4) RI(1)
- sentinel: FL(60) 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					4/5
Alaska					
Arizona	1	61/63	0	0	34/35
Arkansas				0	1
California	1007/1081	2562/2780	161/213	8/9	46/78
Colorado	10	103		1	17/49
Connecticut		42/54			0
Delaware					
DC					
Florida		2	57	1	2
Georgia		0			0
Hawaii					
Idaho	0	21/26		3/4	1/2
Illinois	15/20	1389/1756		1	5
Indiana	0	86/114		0	1
Iowa		2		1	2
Kansas	1	0		1	6/7
Kentucky				2	
Louisiana	13	145		1	14
Maine		0			0
Maryland		1			
Mass.		90/118		0	1
Michigan	13	4		1	2
Minnesota		6		7	2
Mississippi		22			9/15
Missouri		8		1	0

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					
Nebraska	2	47/54		1	16/21
Nevada				2	1
New Hampshire		0		0	0
New Jersey		135/190		0	2
New Mexico					1
New York		195/239		1	0
North Carolina					
North Dakota	6	15		2	21/26
Ohio		8		0	4
Oklahoma		7		1/2	4/6
Oregon	2/6	18/32	0	1	0
Pennsylvania	5	534/766			2/5
Rhode Island		1			
South Carolina					
South Dakota		118/139			53/64
Tennessee					1/2
Texas	1	1017/1164	2	7	48/69
Utah		92/140		2	2/3
Vermont		2/10			2
Virginia					
Washington	1	68/79		1/10	2/3
West Virginia					
Wisconsin	14	6		1	1/2
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 27 August 2016

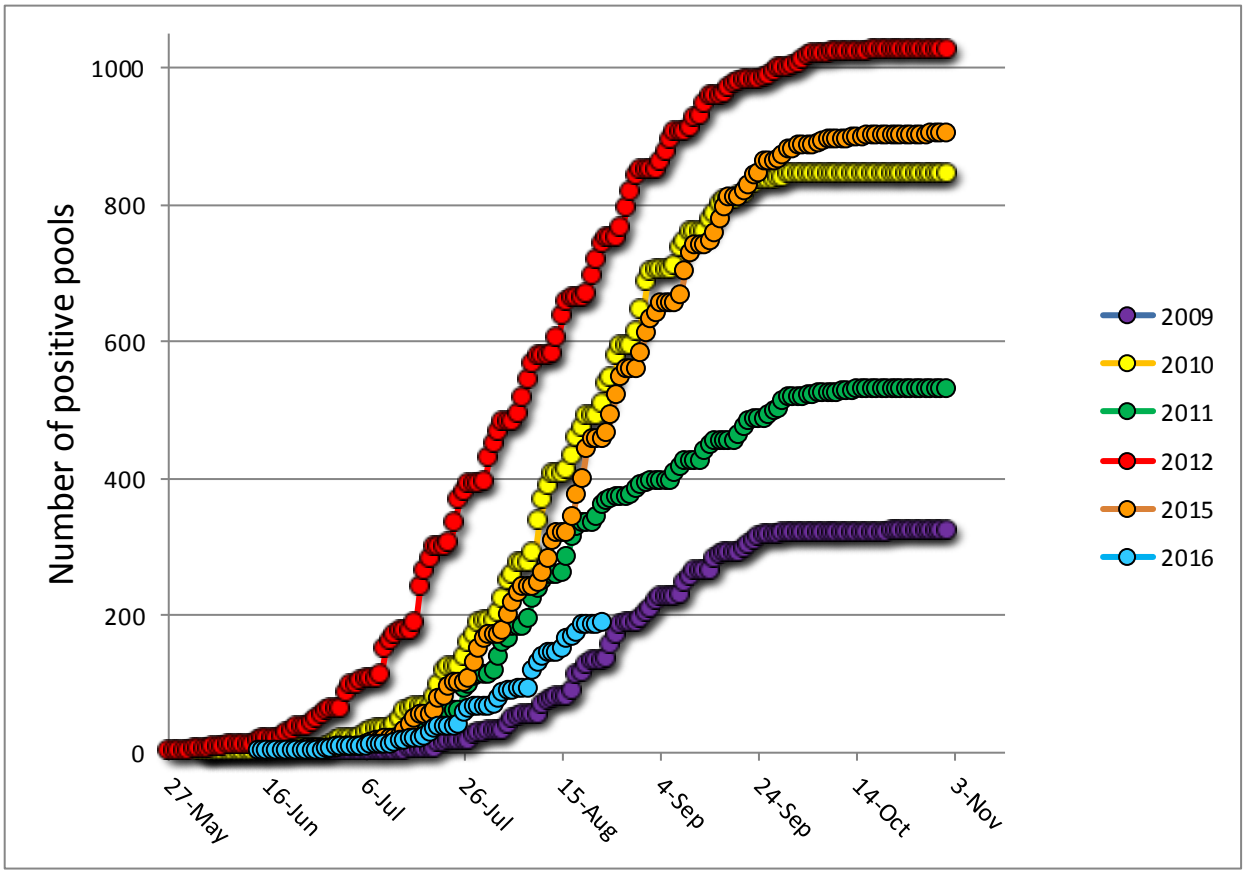
Species	Pools	Mosquitoes	Positives	MFIR
Aedes albopictus	1177	10863	4	0.368
Aedes atlanticus	6	8		
Aedes atropalpus	22	69		
Aedes canadensis canadensis	34	650		
Aedes cantator	36	246		
Aedes grossbecki	1	1		
Aedes japonicus	421	2311	2	0.865
Aedes mitchellae	1	6		
Aedes sollicitans	24	815		
Aedes sticticus	1	6		
Aedes taeniorhynchus	20	570		
Aedes triseriatus	190	381		
Aedes trivittatus	2	34		
Aedes vexans	62	705		
Anopheles atropos	1	1		
Anopheles barberi	2	2		
Anopheles bradleyi	72	563		
Anopheles crucians	4	46		
Anopheles punctipennis	51	164		
Anopheles quadrimaculatus	109	1004		
Coquillettidia perturbans	104	2512	1	0.398
Culex erraticus	59	517		
Culex pipiens	877	22086	25	1.132
Culex restuans	673	7605	3	0.394
Culex salinarius	274	2917		
Culex spp.	2170	85164	155	1.820
Culex territans	34	319		
Culiseta melanura	329	3667		
Orthopodomyia signifera	3	3		
Psorophora ciliata	1	1		
Psorophora columbiae	14	80		
Psorophora ferox	13	116		
Uranotaenia sapphirina	2	6		
Grand Total	**6789**	**143438**	**190**	**1.325**

Remarks: To date, 6,789 pools of 143,438 mosquitoes from 32 species have been tested, with 190 positive pools detected. Most new positives were detected in *Culex pipiens* or *Culex* Mix pools. A *Coquillettidia perturbans* pool from Burlington County was collected on 22 Aug. 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: Two human cases have been detected; one most recently from Monmouth County, with an onset date of 2 Aug. Currently, case count is Camden (1) and Monmouth (1).The human case from Camden County had an onset date of early July. 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 27 August 2016

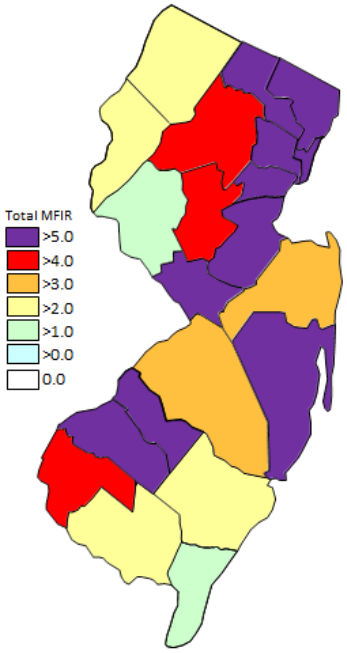
County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**173**	**5049**	**5**	**0.990**
	Aedes albopictus	25	280		
	Aedes japonicus	3	15		
	Aedes sollicitans	9	585		
	Aedes sticticus	1	6		
	Aedes taeniorhynchus	5	277		
	Aedes vexans	6	203		
	Anopheles bradleyi	4	97		
	Anopheles quadrimaculatus	1	4		
	Coquillettidia perturbans	21	517		
	Culex erraticus	8	82		
	Culex pipiens	17	943	5	5.302
	Culex restuans	3	52		
	Culex salinarius	4	123		
	Culex spp.	25	1276		
	Culiseta melanura	37	518		
	Psorophora ferox	4	71		
Bergen		**175**	**11102**	**39**	**3.513**
	Aedes albopictus	30	267		
	Aedes japonicus	4	260		
	Culex spp.	141	10575	39	3.688

Burlington		**160**	**5365**	**6**	**1.118**
	Aedes albopictus	6	86		
	Aedes atropalpus	3	18		
	Aedes canadensis canadensis	1	19		
	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	3	176	1	5.682
	Culex erraticus	4	52		
	Culex salinarius	13	463		
	Culex spp.	65	3062	5	1.633
	Culex territans	1	12		
	Culiseta melanura	38	975		
Camden		**165**	**3940**	**3**	**0.761**
	Aedes albopictus	30	118		
	Aedes japonicus	22	80		
	Culex spp.	93	3015	3	0.995
	Culiseta melanura	20	727		
Cape May		**2453**	**16938**		
	Aedes albopictus	262	438		
	Aedes atlanticus	5	6		
	Aedes atropalpus	19	51		
	Aedes canadensis canadensis	13	249		
	Aedes cantator	25	52		
	Aedes japonicus	194	382		
	Aedes sollicitans	2	4		
	Aedes taeniorhynchus	2	2		
	Aedes triseriatus	128	222		
	Aedes vexans	9	12		
	Anopheles atropos	1	1		
	Anopheles bradleyi	61	279		
	Anopheles punctipennis	10	11		
	Anopheles quadrimaculatus	94	964		
	Coquillettidia perturbans	27	426		
	Culex erraticus	11	23		
	Culex pipiens	627	8259		
	Culex restuans	545	4066		
	Culex salinarius	219	720		
	Culex spp.	36	99		
	Culex territans	33	307		
	Culiseta melanura	121	347		
	Orthopodomyia signifera	2	2		
	Psorophora columbiae	2	2		
	Psorophora ferox	3	8		
	Uranotaenia sapphirina	2	6		
Cumberland		**158**	**3126**		
	Aedes albopictus	12	217		
	Aedes cantator	1	1		

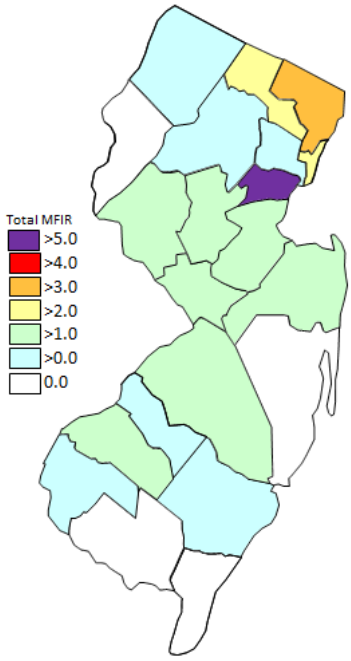
	Aedes japonicus	8	13		
	Aedes sollicitans	8	215		
	Aedes taeniorhynchus	3	26		
	Aedes triseriatus	2	4		
	Aedes vexans	27	428		
	Anopheles bradleyi	4	122		
	Anopheles crucians	1	5		
	Anopheles punctipennis	6	45		
	Anopheles quadrimaculatus	1	3		
	Coquillettidia perturbans	7	110		
	Culex erraticus	7	116		
	Culex pipiens	2	9		
	Culex salinarius	30	1420		
	Culex spp.	14	240		
	Culiseta melanura	13	63		
	Orthopodomyia signifera	1	1		
	Psorophora ciliata	1	1		
	Psorophora columbiae	9	74		
	Psorophora ferox	1	13		
Essex		**182**	**1123**	**1**	**0.890**
	Aedes albopictus	72	353		
	Aedes japonicus	5	8		
	Aedes triseriatus	2	2		
	Anopheles punctipennis	1	1		
	Anopheles quadrimaculatus	1	1		
	Culex spp.	101	758	1	1.319
Gloucester		**335**	**14550**	**20**	**1.375**
	Aedes albopictus	98	1975	1	0.506
	Aedes japonicus	17	218		
	Aedes triseriatus	3	10		
	Anopheles punctipennis	2	10		
	Culex pipiens	202	12239	19	1.552
	Culiseta melanura	13	98		
Hudson		**158**	**7523**	**16**	**2.127**
	Aedes albopictus	27	908	1	1.101
	Culex spp.	131	6615	15	2.268
Hunterdon		**149**	**6744**	**7**	**1.038**
	Culex spp.	149	6744	7	1.038
Mercer		**288**	**6370**	**7**	**1.099**
	Aedes albopictus	58	594		
	Aedes japonicus	21	97		
	Aedes triseriatus	2	24		
	Aedes vexans	1	3		
	Culex erraticus	1	2		
	Culex pipiens	28	635	1	1.575
	Culex restuans	117	3476	3	0.863
	Culex spp.	60	1539	3	1.949
Middlesex		**283**	**10047**	**12**	**1.194**
	Aedes albopictus	59	478		

	Coquillettidia perturbans	1	2		
	Culex erraticus	1	1		
	Culex spp.	184	9012	12	1.332
	Culiseta melanura	38	554		
Monmouth		**532**	**6107**	**12**	**1.965**
	Aedes albopictus	304	3034	1	0.330
	Aedes atlanticus	1	2		
	Aedes canadensis canadensis	19	312		
	Aedes cantator	10	193		
	Aedes grossbecki	1	1		
	Aedes japonicus	27	63		
	Aedes sollicitans	5	11		
	Aedes taeniorhynchus	6	70		
	Aedes triseriatus	6	13		
	Aedes trivittatus	1	1		
	Aedes vexans	5	21		
	Anopheles barberi	1	1		
	Anopheles crucians	1	1		
	Anopheles punctipennis	25	47		
	Anopheles quadrimaculatus	3	3		
	Coquillettidia perturbans	4	5		
	Culex erraticus	4	15		
	Culex restuans	1	3		
	Culex spp.	90	2234	11	4.924
	Culiseta melanura	14	54		
	Psorophora columbiae	2	3		
	Psorophora ferox	2	20		
Morris		**259**	**9489**	**2**	**0.211**
	Aedes albopictus	34	475		
	Culex spp.	225	9014	2	0.222
Ocean		**233**	**3559**		
	Aedes albopictus	71	1046		
	Aedes canadensis canadensis	1	70		
	Aedes japonicus	25	84		
	Aedes triseriatus	9	16		
	Aedes vexans	1	1		
	Anopheles punctipennis	2	2		
	Coquillettidia perturbans	19	337		
	Culex erraticus	4	37		
	Culex restuans	1	2		
	Culex spp.	78	1871		
	Culiseta melanura	22	93		
Passaic		**233**	**5758**	**12**	**2.084**
	Aedes albopictus	10	40		
	Aedes japonicus	57	381	2	5.249
	Aedes triseriatus	7	11		
	Aedes vexans	13	37		
	Culex spp.	146	5289	10	1.891
Salem		**215**	**1432**	**1**	**0.698**
	Aedes albopictus	53	228	1	4.386

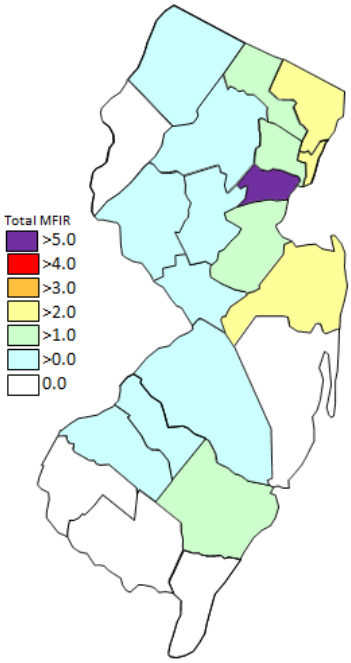
	Aedes japonicus	13	33		
	Aedes triseriatus	21	31		
	Anopheles bradleyi	1	7		
	Anopheles punctipennis	4	4		
	Anopheles quadrimaculatus	9	29		
	Coquillettidia perturbans	10	83		
	Culex erraticus	19	189		
	Culex pipiens	1	1		
	Culex restuans	6	6		
	Culex spp.	61	578		
	Culiseta melanura	13	238		
	Psorophora columbiae	1	1		
	Psorophora ferox	3	4		
Somerset		**139**	**2957**	**3**	**1.015**
	Aedes albopictus	7	31		
	Aedes japonicus	4	35		
	Aedes triseriatus	1	4		
	Culex spp.	127	2887	3	1.039
Sussex		**237**	**8009**	**3**	**0.375**
	Aedes albopictus	3	4		
	Aedes japonicus	13	468		
	Aedes triseriatus	1	16		
	Aedes trivittatus	1	33		
	Anopheles punctipennis	1	44		
	Coquillettidia perturbans	12	856		
	Culex salinarius	8	191		
	Culex spp.	198	6397	3	0.469
Union		**111**	**6313**	**41**	**6.495**
	Aedes albopictus	16	291		
	Culex spp.	95	6022	41	6.808
Warren		**151**	**7937**		
	Culex spp.	151	7937		
Grand Total		**6789**	**143438**	**190**	**1.325**



Cumulative WNV activity in 2015.



WNV activity to 27 August 2016.



WNV activity last week, 2016.

Saint Louis Encephalitis (SLE) to 27 August 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		**69**	**3096**		
	Anopheles barberi	1	1		
	Culex erraticus	3	33		
	Culex spp.	65	3062		
Cape May		**662**	**8357**		
	Culex pipiens	626	8258		
	Culex spp.	36	99		
Grand Total		**731**	**11453**		

La Crosse Encephalitis (LAC) to 27 August 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		**25**	**306**		
	Aedes albopictus	6	86		
	Aedes atropalpus	3	18		
	Aedes japonicus	8	174		
	Aedes triseriatus	8	28		
Grand Total		**25**	**306**		

Dengue (DENV) to 27 August 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 34 imported human cases of Dengue.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		**25**	**280**	**25**	**280**	**25**	**280**	**25**	**280**		
	Aedes albopictus	25	280	25	280	25	280	25	280		
Bergen		**30**	**267**	**30**	**267**	**30**	**267**	**30**	**267**		
	Aedes albopictus	30	267	30	267	30	267	30	267		
Camden		**30**	**118**	**30**	**118**	**30**	**118**	**30**	**118**		
	Aedes albopictus	30	118	30	118	30	118	30	118		
Cumberland		**12**	**217**	**12**	**217**	**12**	**217**	**12**	**217**		
	Aedes albopictus	12	217	12	217	12	217	12	217		
Essex		**72**	**353**	**72**	**353**	**72**	**353**	**72**	**353**		
	Aedes albopictus	72	353	72	353	72	353	72	353		
Gloucester		**82**	**1776**	**82**	**1776**	**82**	**1776**	**82**	**1776**		
	Aedes albopictus	82	1776	82	1776	82	1776	82	1776		
Hudson		**27**	**908**	**27**	**908**	**27**	**908**	**27**	**908**		
	Aedes albopictus	27	908	27	908	27	908	27	908		
Mercer		**58**	**594**	**58**	**594**	**58**	**594**	**58**	**594**		
	Aedes albopictus	58	594	58	594	58	594	58	594		
Middlesex		**60**	**479**	**60**	**479**	**60**	**479**	**60**	**479**		
	Aedes albopictus	59	478	59	478	59	478	59	478		
	Culiseta melanura	1	1	1	1	1	1	1	1		
Monmouth		**257**	**2846**	**257**	**2846**	**257**	**2846**	**257**	**2846**		
	Aedes albopictus	257	2846	257	2846	257	2846	257	2846		
Morris		**36**	**478**	**36**	**478**	**36**	**478**	**36**	**478**		
	Aedes albopictus	34	475	34	475	34	475	34	475		
	Culex spp.	2	3	2	3	2	3	2	3		

Passaic		**2**	**3**	**2**	**3**	**2**	**3**	**2**	**3**		
	Aedes albopictus	2	3	2	3	2	3	2	3		
Salem		**53**	**228**	**53**	**228**	**53**	**228**	**53**	**228**		
	Aedes albopictus	53	228	53	228	53	228	53	228		
Somerset		**3**	**15**	**3**	**15**	**3**	**15**	**3**	**15**		
	Aedes albopictus	3	15	3	15	3	15	3	15		
Sussex		**3**	**4**	**3**	**4**	**3**	**4**	**3**	**4**		
	Aedes albopictus	3	4	3	4	3	4	3	4		
Union		**9**	**158**	**9**	**158**	**9**	**158**	**9**	**158**		
	Aedes albopictus	9	158	9	158	9	158	9	158		
Grand Total		**759**	**8724**	**759**	**8724**	**759**	**8724**	**759**	**8724**		

Chikungunya (CHIK) to 27 August 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 2 imported human case of Chikungunya.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**25**	**280**		
	Aedes albopictus	25	280		
Bergen		**30**	**267**		
	Aedes albopictus	30	267		
Camden		**30**	**118**		
	Aedes albopictus	30	118		
Cape May		**262**	**438**		
	Aedes albopictus	262	438		
Cumberland		**12**	**217**		
	Aedes albopictus	12	217		
Essex		**72**	**353**		
	Aedes albopictus	72	353		
Gloucester		**82**	**1776**		
	Aedes albopictus	82	1776		
Hudson		**27**	**908**		
	Aedes albopictus	27	908		
Mercer		**58**	**594**		
	Aedes albopictus	58	594		
Middlesex		**60**	**479**		
	Aedes albopictus	59	478		
	Culiseta melanura	1	1		
Monmouth		**257**	**2846**		
	Aedes albopictus	257	2846		
Morris		**36**	**478**		
	Aedes albopictus	34	475		
	Culex spp.	2	3		
Passaic		**2**	**3**		
	Aedes albopictus	2	3		

Salem		**53**	**228**		
	Aedes albopictus	53	228		
Somerset		**3**	**15**		
	Aedes albopictus	3	15		
Sussex		**3**	**4**		
	Aedes albopictus	3	4		
Union		**9**	**158**		
	Aedes albopictus	9	158		
Grand Total		**1021**	**9162**		

Zika (ZIKV) to 27 August 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 102 imported human cases of Zika.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**12**	**123**		
	Aedes albopictus	12	123		
Bergen		**15**	**195**		
	Aedes albopictus	15	195		
Camden		**14**	**52**		
	Aedes albopictus	14	52		
Cape May		**262**	**438**		
	Aedes albopictus	262	438		
Cumberland		**6**	**130**		
	Aedes albopictus	6	130		
Essex		**33**	**188**		
	Aedes albopictus	33	188		
Gloucester		**82**	**1776**		
	Aedes albopictus	82	1776		
Hudson		**9**	**485**		
	Aedes albopictus	9	485		
Mercer		**107**	**1475**		
	Aedes albopictus	107	1475		
Middlesex		**26**	**261**		
	Aedes albopictus	26	261		
Monmouth		**87**	**1272**		
	Aedes albopictus	87	1272		
Morris		**21**	**423**		
	Aedes albopictus	21	423		
Salem		**19**	**102**		
	Aedes albopictus	19	102		
Somerset		**3**	**15**		
	Aedes albopictus	3	15		
Sussex		**3**	**4**		
	Aedes albopictus	3	4		
Union		**9**	**158**		

Aedes albopictus		9	158		
Grand Total		**708**	**7097**		