VECTOR SURVEILLANCE IN NEW JERSEY

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

Prepared by Lisa M. Reed and Dina Fonseca
Center for Vector Biology, Rutgers University

CDC WEEK 38: 17 September to 23 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**	1.12	0.20	28 (29)	6 (7)		
Green Bank (Burlington Co.)/18	**Coastal**	1.95	0.48	151 (163)	10 (11)		
Corbin City (Atlantic Co.)/25	**Coastal**	1.11	1.20	287 (317)	16 (17)	1	3.48
Dennisville (Cape May Co.)/50	**Coastal**	3.28	0.56	134	12		
Winslow (Camden Co.)/50	**Inland**	0.50	0.72	866	26		
Centerton (Salem Co.)/50	**Inland**	2.28	2.52	689	24	3	4.35
Turkey Swamp (Monmouth Co.)/50	**Inland**	0.60	0.38	205 (224)	15 (16)		
Glassboro (Gloucester Co.)/50	**Inland**	0.36	0.50	188	16		

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

Remarks: A total of eleven positive EEE pools have been detected in a *Culiseta melanura*. The latest positive pool was found at a traditional resting box site (Corbin City) in Atlantic County. A second horse was reported infected with EEE, also in Atlantic County. The first horse case 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. This second horse infection reinforces the need for continued vigilance.

Statewide, 6,760 *Cs. melanura* from 528 pools have been tested, with eleven positive pools detected for an overall *Cs. melanura* MFIR of 1.627. 12,589 specimens from 20 other species have also been tested, with no positives detected. Overall MFIR for all species statewide is 0.569.

Traditional Resting Box Sites: 2,548 *Cs. melanura* from 125 pools have been tested for EEE, with 62 additional *Cs. melanura* from 4 pools to be tested. One new positive pool of Cs. melanura from the Corbin City site was detected and collected on 13 September. Three positive pools were previously detected at the Centerton site; the last two positive pools were collected 6 Sept.

	Additional *Cs. melanura* trapped by counties *traps with positives indicated in **BOLD.**				
County	**Trap types***	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Atlantic	GR, LT, RB	35	538		
Burlington	CO_2, **UVLT**	55	1737	3	1.73
Cape May	BGS, GR, **RB**	161	837	3	3.58
Cumberland	LT, **RB**	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	20	85		
Passaic	RB	6	6		
Salem	LT	5	35		
Sussex	ABC, BGS, GR, RB	40	161		
Warren	LT	2	14		
TOTAL		**403**	**4212**	**7**	**1.66**

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: A second horse case has been detected with EEE. This horse was a 9 yo mare with date of onset 17 September and no vaccination history for 2017, but reportedly vaccinated two years ago. The first horse case 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.

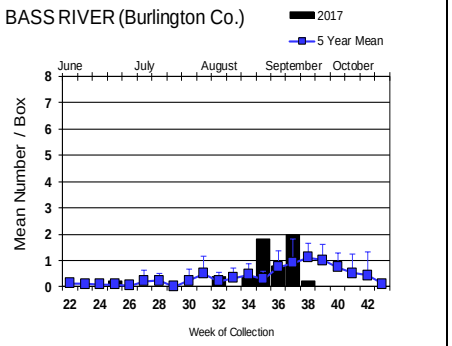
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

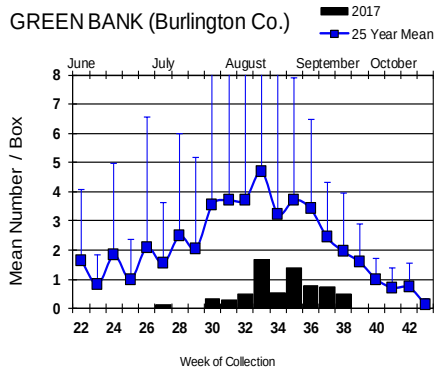
Additional Species: Twenty additional species were tested for EEE. No additional positives were detected. Previously reported *Aedes provocans* was re-assigned to *Anopheles punctipennis.*

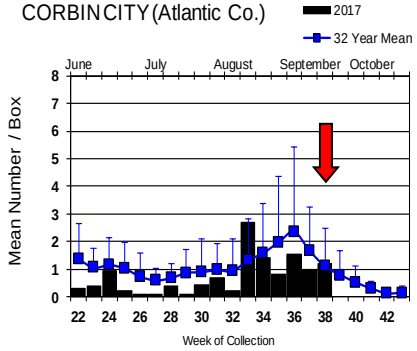
Species other than *Cs. melanura*	Pools	Mosquitoes	Positives	MFIR
Aedes canadensis canadensis	13	194		
Aedes cantator	11	27		
Aedes japonicus	2	20		
Aedes mitchellae	1	9		
Aedes sollicitans	8	26		
Aedes taeniorhynchus	2	11		
Aedes triseriatus	1	4		
Aedes vexans	6	150		
Anopheles bradleyi	127	924		
Anopheles crucians	3	93		
Anopheles punctipennis	33	307		
Anopheles quadrimaculatus	16	223		
Coquillettidia perturbans	77	1442		
Culex erraticus	83	1726		
Culex pipiens	641	5697		
Culex restuans	1	1		
Culex salinarius	247	1587		
Culex sp.	37	127		
Psorophora columbiae	2	12		
Psorophora cyanescens	1	1		
Psorophora ferox	2	8		
State Total	**1314**	**12589**		

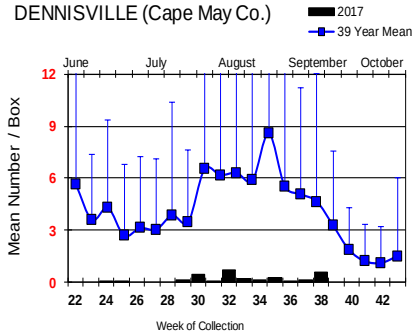
Culiseta melanura Population Graphs

Coastal

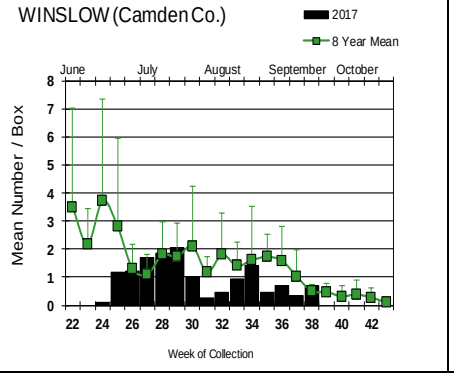


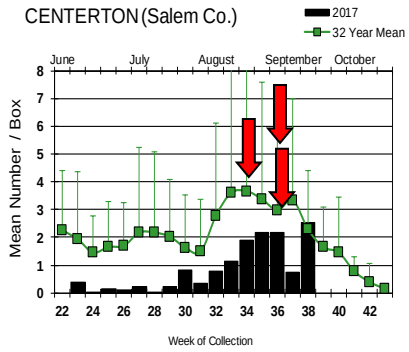


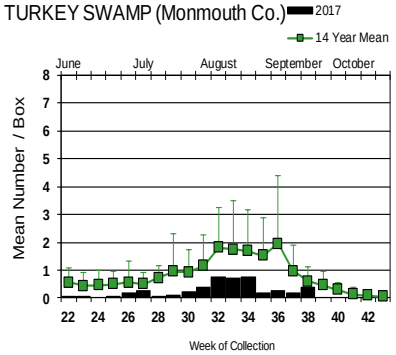


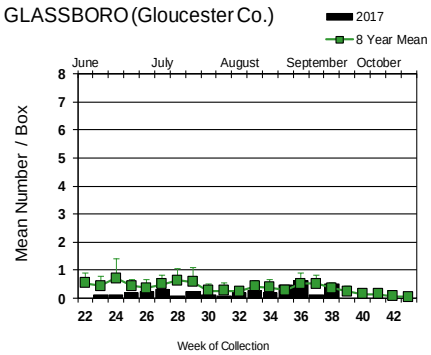


Inland









One additional pool of *Cs.* melanura at the traditional resting box sites at Corbin City, collected 13 September. Three previous detections of EEE had occurred at Centerton, the last two collected 6 September. Mosquito populations at the traditional resting box sites increased at 6 of the 8 locations. With two positive horse cases, 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(4/1 deer) GA(**5**) LA(2) MI(3) NC(1) NJ(2) OH(1) SC(8) TX(1) WI(14)
- mosquito pools: MA(1) NJ(11) NY(30) RI(2)
- sentinel: FL(33) 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					28
Alaska					
Arizona	0	245		0	58
Arkansas				0	10/11
California	336/395	2981/3116	204/235	13	143/174
Colorado	5	136		5	25/29
Connecticut		113/116			1
Delaware					
DC					
Florida	1	2	41/45	2	0
Georgia		0		1	19/22
Hawaii					
Idaho	1/3	121/122		4/5	10/11
Illinois	20/21	1754/1829			33/37
Indiana	0	580/600		9/10	11/12
Iowa	1	61/67		1/2	6
Kansas		13		0	10
Kentucky				8/11	4
Louisiana	36/43	378/390			33/34
Maine		0		0	0
Maryland					
Mass.		265/276		0	1/2
Michigan	148	86		9/13	4/16
Minnesota					13/20
Mississippi		244		1	49/53
Missouri		0		2	8

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					7
Nebraska	1	69/72		0	31/32
Nevada					24/31
New Hampshire		4		0	0
New Jersey		640/689		0	2
New Mexico					2/9
New York		1085/1172		2	11/16
North Carolina					2
North Dakota	11	16		1	57
Ohio		1945		5	18
Oklahoma					19
Oregon		78/91		5	5
Pennsylvania	31/37	2753/2935		5/7	10/12
Rhode Island		3		0	0
South Carolina	7/9	42			5/6
South Dakota	2	55			52/55
Tennessee					15
Texas		820/893		5	74/80
Utah		378/423		4/7	22/28
Vermont					
Virginia				1	6
Washington	4	32/34		8/9	
West Virginia					1
Wisconsin	78/79	37		14/18	4/7
Wyoming				1	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 22 September 2017

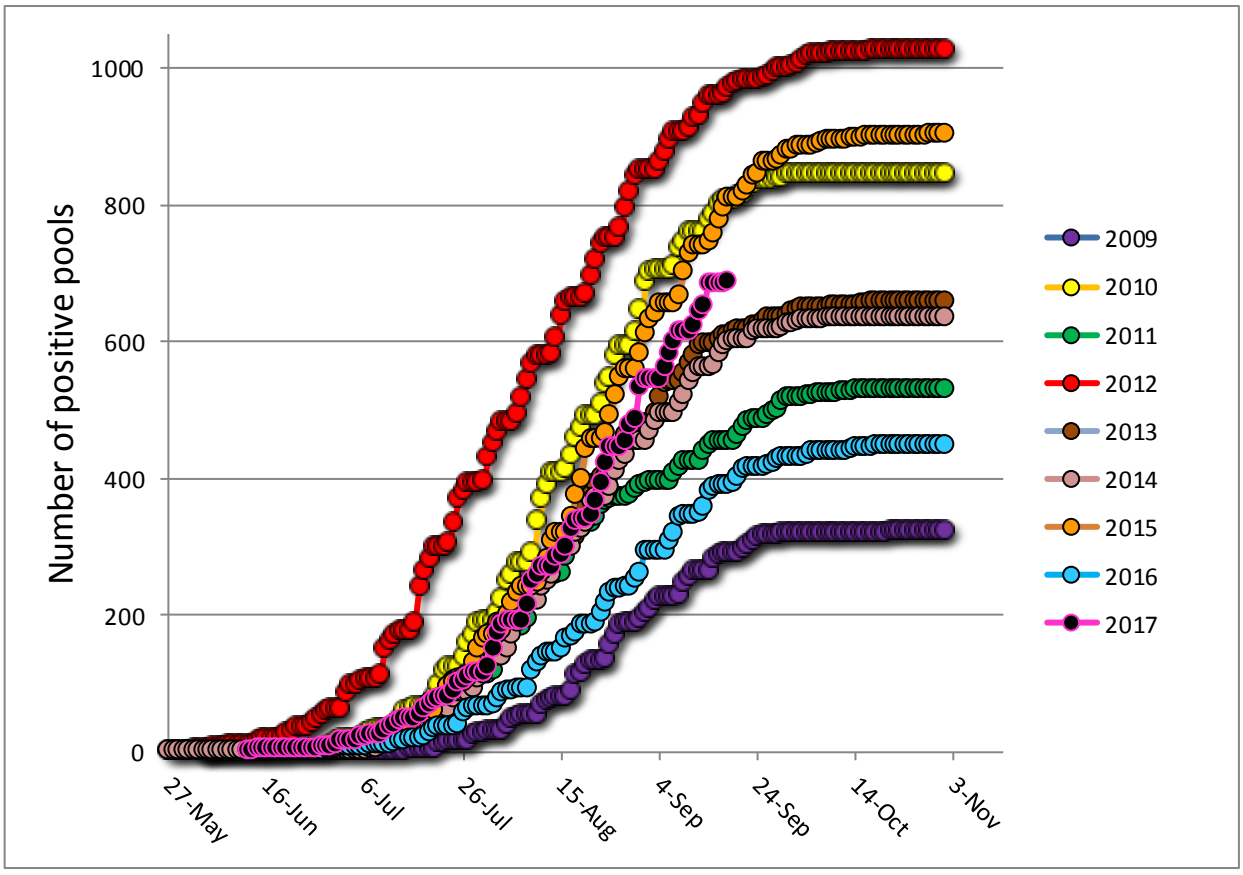
Species	Pools	Mosquitoes	Positives	MFIR
Aedes albopictus	1200	13975	11	0.787
Aedes atlanticus	13	43		
Aedes atropalpus	27	112		
Aedes canadensis canadensis	54	590		
Aedes cantator	29	241		
Aedes cinereus	1	54		
Aedes grossbecki	2	4		
Aedes japonicus	363	1566	2	1.277
Aedes mitchellae	1	9		
Aedes sollicitans	29	661		
Aedes stimulans	1	10		
Aedes taeniorhynchus	13	93		
Aedes triseriatus	255	630		
Aedes trivittatus	6	40		
Aedes vexans	104	1060		
Anopheles barberi	3	3		
Anopheles bradleyi	141	1316		
Anopheles crucians	5	169	1	5.917
Anopheles earlei	1	1		
Anopheles punctipennis	81	465		
Anopheles quadrimaculatus	153	1096		
Coquillettidia perturbans	93	1559		
Culex erraticus	98	1828		
Culex pipiens	766	8396	17	2.025
Culex restuans	598	3054	10	3.274
Culex salinarius	272	2279	3	1.316
Culex spp.	2444	100436	635	6.322
Culex territans	45	120		
Culiseta inornata	1	1		
Culiseta melanura	531	6767	9	1.330
Orthopodomyia signifera	6	6		
Psorophora ciliata	4	8		
Psorophora columbiae	24	95	1	10.526
Psorophora cyanescens	1	1		
Psorophora ferox	17	286		
Uranotaenia sapphirina	3	34		
Grand Total	**7385**	**147008**	**689**	**4.687**

Remarks: To date, 7,385 pools of 147,008 mosquitoes from 35 species have been tested. 689 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 4.687, up from 4.561 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 previously 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). It will be a race with the end of the season to see if 2017 hits the activity level of 2010.

WNV Results by County through 22 September 2017.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**181**	**4154**	**2**	**0.481**
	Aedes albopictus	21	208		
	Aedes canadensis canadensis	1	3		
	Aedes japonicus	4	119		
	Aedes sollicitans	6	318		
	Aedes taeniorhynchus	3	71		
	Aedes triseriatus	2	14		
	Aedes vexans	6	274		
	Anopheles bradleyi	10	359		
	Coquillettidia perturbans	14	468		
	Culex erraticus	7	154		
	Culex pipiens	25	730	1	1.370
	Culex salinarius	6	73		
	Culex spp.	21	453		

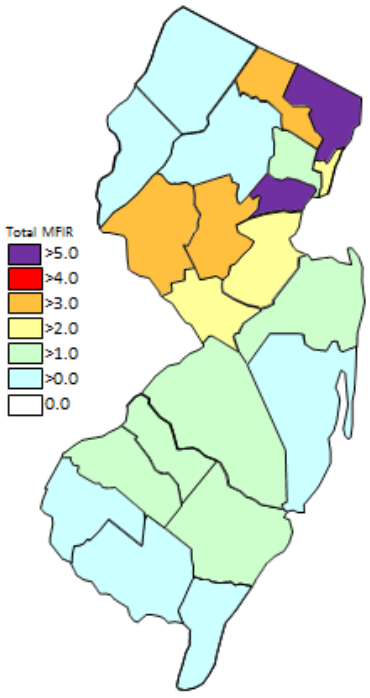
	Culiseta melanura	51	825	1	1.212
	Psorophora columbiae	1	1		
	Psorophora ferox	3	84		
Bergen		**185**	**8800**	**101**	**11.477**
	Aedes albopictus	4	129		
	Aedes japonicus	9	86		
	Culex spp.	172	8585	101	11.765
Burlington		**225**	**7303**	**25**	**3.423**
	Aedes albopictus	11	205		
	Aedes canadensis canadensis	9	184		
	Aedes cantator	2	18		
	Aedes japonicus	4	92		
	Aedes mitchellae	1	9		
	Aedes taeniorhynchus	2	11		
	Aedes triseriatus	5	41		
	Aedes vexans	5	149		
	Anopheles bradleyi	4	224		
	Anopheles crucians	3	93		
	Coquillettidia perturbans	2	124		
	Culex erraticus	3	215		
	Culex salinarius	14	666		
	Culex spp.	87	3353	21	6.263
	Culiseta melanura	71	1916	4	2.088
	Orthopodomyia signifera	1	1		
	Psorophora columbiae	1	2		
Camden		**169**	**5922**	**34**	**5.741**
	Aedes albopictus	25	149	4	26.846
	Aedes japonicus	18	67	1	14.925
	Culex spp.	100	4840	29	5.992
	Culiseta melanura	26	866		
Cape May		**2976**	**14436**	**16**	**1.108**
	Aedes albopictus	537	1740		
	Aedes atlanticus	13	43		
	Aedes atropalpus	26	102		
	Aedes canadensis canadensis	20	30		
	Aedes cantator	9	9		
	Aedes japonicus	185	413		
	Aedes sollicitans	6	6		
	Aedes taeniorhynchus	3	3		
	Aedes triseriatus	176	296		
	Aedes vexans	40	119		
	Anopheles bradleyi	124	645		
	Anopheles punctipennis	9	13		
	Anopheles quadrimaculatus	113	769		
	Coquillettidia perturbans	17	22		
	Culex erraticus	50	1126		
	Culex pipiens	643	5724	9	1.572
	Culex restuans	513	1493	4	2.679
	Culex salinarius	228	676	2	2.959
	Culex spp.	26	50		
	Culex territans	45	120		
	Culiseta melanura	174	972	1	1.029

	Orthopodomyia signifera	4	4		
	Psorophora columbiae	8	9		
	Psorophora ferox	4	18		
	Uranotaenia sapphirina	3	34		
Cumberland		**157**	**2168**	**2**	**0.923**
	Aedes albopictus	22	332		
	Aedes canadensis canadensis	1	1		
	Aedes japonicus	8	36		
	Aedes sollicitans	2	20		
	Aedes triseriatus	1	2		
	Aedes vexans	19	354		
	Anopheles bradleyi	1	75		
	Anopheles punctipennis	1	5		
	Anopheles quadrimaculatus	10	62		
	Coquillettidia perturbans	11	105		
	Culex erraticus	4	20		
	Culex salinarius	6	246		
	Culex spp.	49	601	2	3.328
	Culiseta melanura	14	173		
	Psorophora columbiae	3	32		
	Psorophora ferox	5	104		
Essex		**143**	**963**	**6**	**6.231**
	Aedes albopictus	63	271		
	Aedes japonicus	10	15		
	Culex spp.	70	677	6	8.863
Gloucester		**388**	**15819**	**66**	**4.172**
	Aedes albopictus	75	2006	2	0.997
	Aedes atropalpus	1	10		
	Aedes japonicus	13	144		
	Aedes triseriatus	5	38		
	Aedes vexans	1	1		
	Anopheles crucians	1	75	1	13.333
	Anopheles punctipennis	25	270		
	Anopheles quadrimaculatus	15	222		
	Coquillettidia perturbans	3	8		
	Culex pipiens	14	788	1	1.269
	Culex spp.	173	11677	62	5.310
	Culiseta melanura	60	504		
	Psorophora ferox	2	76		
Hudson		**163**	**6929**	**65**	**9.381**
	Culex spp.	163	6929	65	9.381
Hunterdon		**236**	**11059**	**67**	**6.058**
	Culex erraticus	3	54		
	Culex spp.	233	11005	67	6.088
Mercer		**195**	**2923**	**17**	**5.816**
	Aedes albopictus	11	110		
	Aedes japonicus	32	119		
	Culex pipiens	17	210	1	4.762
	Culex restuans	51	909	2	2.200

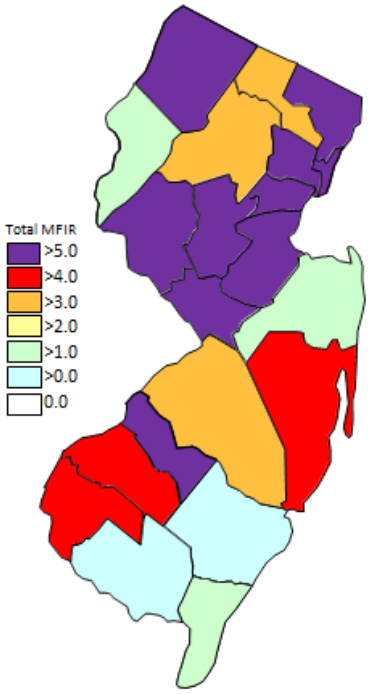
	Culex spp.	84	1575	14	8.889
Middlesex		**185**	**7351**	**49**	**6.666**
	Culex spp.	166	7043	48	6.815
	Culiseta melanura	19	308	1	3.247
Monmouth		**529**	**8984**	**12**	**1.336**
	Aedes albopictus	223	5993		
	Aedes canadensis canadensis	23	372		
	Aedes cantator	17	176		
	Aedes grossbecki	2	4		
	Aedes japonicus	24	96		
	Aedes sollicitans	15	317		
	Aedes taeniorhynchus	5	8		
	Aedes triseriatus	15	39		
	Aedes trivittatus	2	2		
	Aedes vexans	26	64		
	Anopheles barberi	3	3		
	Anopheles bradleyi	2	13		
	Anopheles crucians	1	1		
	Anopheles earlei	1	1		
	Anopheles punctipennis	40	105		
	Anopheles quadrimaculatus	8	29		
	Coquillettidia perturbans	8	18		
	Culex erraticus	8	30		
	Culex restuans	1	1		
	Culex salinarius	3	58	1	17.241
	Culex spp.	69	1398	11	7.868
	Culiseta inornata	1	1		
	Culiseta melanura	18	212		
	Orthopodomyia signifera	1	1		
	Psorophora ciliata	3	3		
	Psorophora columbiae	8	37		
	Psorophora cyanescens	1	1		
	Psorophora ferox	1	1		
Morris		**255**	**7920**	**26**	**3.283**
	Aedes albopictus	36	152		
	Coquillettidia perturbans	12	429		
	Culex spp.	206	7338	26	3.543
	Culiseta melanura	1	1		
Ocean		**193**	**2949**	**13**	**4.408**
	Aedes albopictus	72	1491	2	1.341
	Aedes japonicus	7	42		
	Aedes triseriatus	4	12		
	Anopheles punctipennis	1	1		
	Coquillettidia perturbans	5	103		
	Culex erraticus	6	99		
	Culex spp.	78	1116	11	9.857
	Culiseta melanura	20	85		
Passaic		**124**	**1063**	**4**	**3.763**
	Aedes albopictus	8	54		
	Aedes japonicus	21	135		

	Aedes triseriatus	3	11		
	Coquillettidia perturbans	8	12		
	Culex erraticus	2	4		
	Culex pipiens	56	682	3	4.399
	Culex restuans	12	79	1	12.658
	Culex spp.	8	80		
	Culiseta melanura	6	6		
Salem		**183**	**2283**	**10**	**4.380**
	Aedes albopictus	43	236	1	4.237
	Aedes japonicus	8	20	1	50.000
	Aedes triseriatus	15	37		
	Aedes vexans	4	9		
	Anopheles quadrimaculatus	6	11		
	Coquillettidia perturbans	6	66		
	Culex erraticus	15	126		
	Culex pipiens	5	6	1	166.667
	Culex restuans	2	4		
	Culex salinarius	1	1		
	Culex spp.	45	1027	4	3.895
	Culiseta melanura	29	724	2	2.762
	Psorophora columbiae	3	14	1	71.429
	Psorophora ferox	1	2		
Somerset		**204**	**5574**	**33**	**5.920**
	Aedes albopictus	8	43		
	Aedes japonicus	10	57		
	Aedes triseriatus	4	13		
	Anopheles punctipennis	3	21		
	Culex spp.	179	5440	33	6.066
Sussex		**240**	**5645**	**29**	**5.137**
	Aedes albopictus	9	18		
	Aedes japonicus	3	57		
	Aedes triseriatus	24	124		
	Anopheles punctipennis	1	40		
	Coquillettidia perturbans	5	90		
	Culex pipiens	6	256	1	3.906
	Culex restuans	19	568	3	5.282
	Culex salinarius	14	559		
	Culex spp.	119	3772	25	6.628
	Culiseta melanura	40	161		
Union		**185**	**11613**	**89**	**7.664**
	Aedes albopictus	31	837	2	2.389
	Culex spp.	154	10776	87	8.073
Warren		**269**	**13150**	**23**	**1.749**
	Aedes albopictus	1	1		
	Aedes cantator	1	38		
	Aedes cinereus	1	54		
	Aedes japonicus	7	68		
	Aedes stimulans	1	10		
	Aedes triseriatus	1	3		
	Aedes trivittatus	4	38		

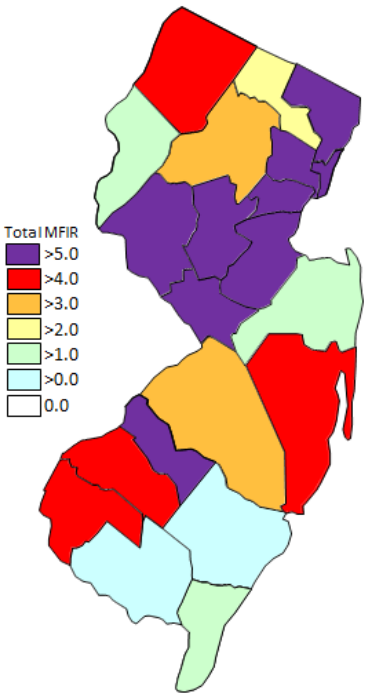
	Aedes vexans	3	90		
	Anopheles punctipennis	1	10		
	Anopheles quadrimaculatis	1	3		
	Coquillettidia perturbans	2	114		
	Culex spp.	242	12701	23	1.811
	Culiseta melanura	2	14		
	Psorophora ferox	1	5		
Grand Total		**7385**	**147008**	**689**	**4.687**



Cumulative WNV activity in 2016.



WNV activity to 22 September 2017.



WNV activity last week, 2017

Saint Louis Encephalitis (SLE) to 22 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
Burlington		**19**	**996**		
	Culex spp.	19	996		
Cape May		**667**	**5747**		
	Culex pipiens	641	5697		
	Culex spp.	26	50		
Grand Total		**686**	**6743**		

La Crosse Encephalitis (LAC) to 22 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
Burlington		**17**	**304**		
	Aedes albopictus	8	171		
	Aedes japonicus	4	92		
	Aedes triseriatus	5	41		
Cape May		**11**	**25**		
	Aedes triseriatus	11	25		
Sussex		**24**	**124**		
	Aedes triseriatus	24	124		
Grand Total		**52**	**453**		

Dengue (DENV) to 22 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.		
Mercer		**8**	**87**	**8**	**87**	**8**	**87**	**8**	**87**		
	Aedes albopictus	8	87	8	87	8	87	8	87		
Grand Total		**8**	**87**	**8**	**87**	**8**	**87**	**8**	**87**		

Chikungunya (CHIK) to 22 September2017.

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
Cape May		**432**	**1173**		
	Aedes albopictus	432	1173		
Mercer		**8**	**87**		
	Aedes albopictus	8	87		
Grand Total		**440**	**1260**		

Zika (ZIKV) to 22 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
Cape May		**535**	**1733**		
	Aedes albopictus	535	1733		
Mercer		**8**	**87**		
	Aedes albopictus	8	87		
Grand Total		**543**	**1820**		