VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 33: 12 August to 18 August, 2018

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Culiseta melanura and Eastern Equine Encephalitis

SITE/Boxes	Inland or Coastal	Historic Population Mean	Current Weekly Mean	Total Tested* (Collected)	Total Pools Tested* (Submitted)	EEE Isolation Pools	MFIR
Bass River (Burlington Co.)/5	**Coastal**	0.28	0.40	1 (3)	1 (2)		
Green Bank (Burlington Co.)/25	**Coastal**	4.57	0.24	36 (42)	7 (8)		
Corbin City (Atlantic Co.)/25	**Coastal**	1.37	1.40	77‡ (106)	10 (11)		
Dennisville (Cape May Co.)/50	**Coastal**	5.74	0.44	284	13		
Winslow (Camden Co.)/50	**Inland**	1.66	3.58	1647	39	4	2.429
Centerton (Salem Co.)/50	**Inland**	3.53	0.44	219	12	2	9.132
Turkey Swamp (Monmouth Co.)/50	**Inland**	1.68	0.92	195 (213)	11 (12)		
Glassboro (Gloucester Co.)/50	**Inland**	0.57	0.02	117	10		

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

Remarks: Currently for the 2018 season, there are seven detections of EEE among submitted mosquito pools, six at resting box sites (4 at Winslow and 2 at Centerton) with the two latest from the traditional resting box sites. All are in the enzootic vector, *Culiseta melanura.*

Statewide, 4903 *Cs. melanura* from 312 pools have been tested, with seven positive pools detected for an overall *Cs. melanura* MFIR of 1.428. 10021 specimens in 845 pools from 16 other species have also been tested, with no positives detected. Overall MFIR for all species statewide is 0.402.

Traditional Resting Box Sites: 2576 *Cs. melanura* from 103 pools have been tested for EEE (plus four pools totaling 89 to be tested) in 2018. Two additional EEE pools were detected, collected during week 33 at Centerton and Winslow, in addition to the four positive EEE pools previously detected from these two sites.

	Additional *Cs. melanura* trapped by counties *traps with positives indicated in **BOLD.**				
County	**Trap types***	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Atlantic	CO2, RB	22	566		
Bergen	RB	6	14		
Burlington	CDCL	27	1160	1	0.862
Cape May	GR, RB	111	292		
Cumberland	BGSCL, RB	11	55		
Morris	CDCL	1	1		
Ocean	CDCL, RB	18	117		
Passaic	RB	1	1		
Salem	CDCL	3	46		
Sussex	ABC	8	69		
Warren	CDCL	1	6		
TOTAL		**209**	**2327**	1	0.430

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. One positive pool has been detected, collected on 6 August in Burlington County in a CDC trap with light.

Horses and Humans: Currently, there is no horse or human cases reported. Last year, there were 6 horses detected with EEE. EEE is nearly always fatal for those horses without a complete vaccination history. Horses in New Jersey that have gone down in the past with EEE have either an incomplete vaccination history or NO vaccination history. Note that Florida is experiencing early and continued EEE activity with horse and now 1 human case. ***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.

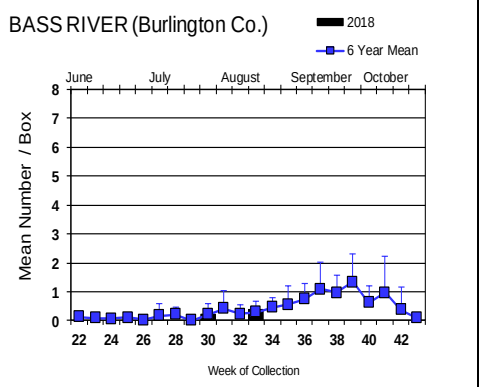
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

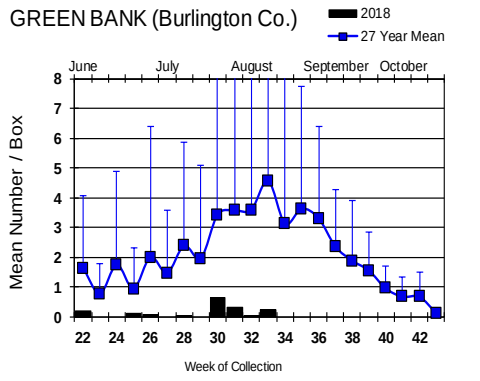
Additional Species: Sixeen additional species were tested for EEE. No positives were detected.

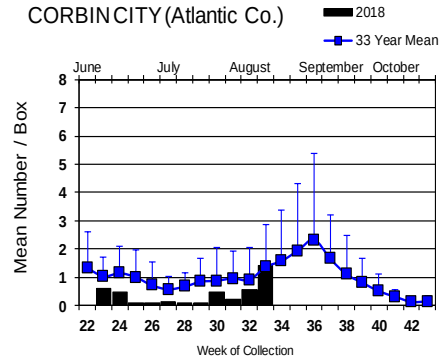
Species other than *Cs. melanura*	Pools	Mosquitoes	Positives	MFIR
Aedes albopictus	1	1		
Aedes canadensis canadensis	1	10		
Aedes cantator	2	2		
Aedes infirmatus	1	1		
Aedes sollicitans	6	32		
Aedes taeniorhynchus	2	46		
Aedes vexans	1	6		
Anopheles bradleyi	19	95		
Anopheles punctipennis	8	32		
Anopheles quadrimaculatus	1	1		
Coquillettidia perturbans	72	1655		
Culex erraticus	34	192		
Culex pipiens	494	6858		
Culex salinarius	165	665		
Culex spp.	33	115		
Culiseta inornata	1	10		
Psorophora ferox	4	300		
State Total	**845**	**10021**		

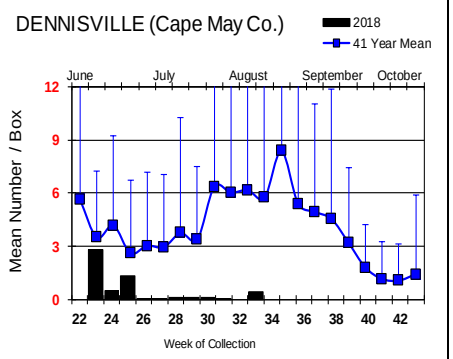
Culiseta melanura Populations

Coastal

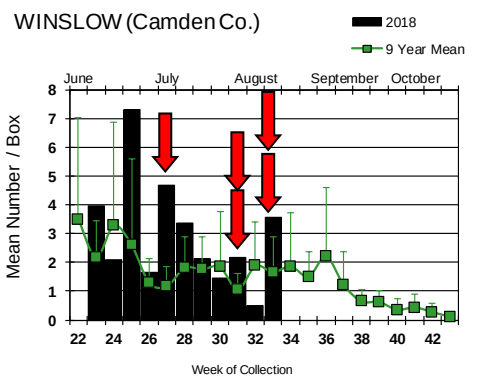


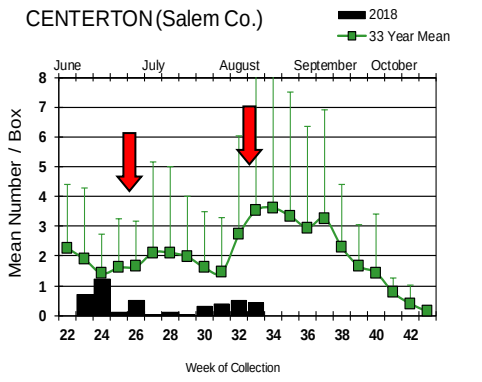


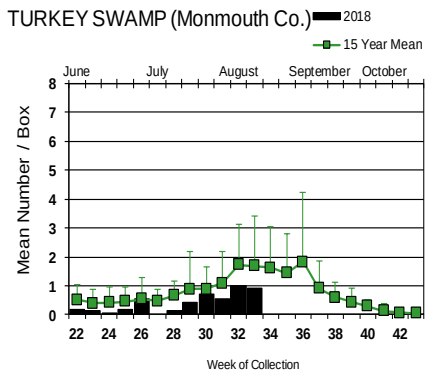


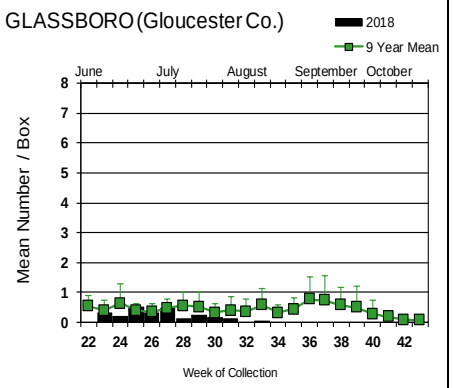


Inland









Winslow had not only a high increase in abunadances, but two additional detections of EEE virus. Populations have increased at Bass River, Green Bank, Corbin City, Dennisville, Winslow and Glassboro from the previous week.

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

EEE in US (2018 cumulative cases): (Black or Red = previous + new reported cases occurring)

- **equine: FL(48/2 mule & donkey)**
- **mosquito pools: FL(2) NJ(7) NY(3) RI(4)**
- **sentinel: FL(123/6 owl emus & 5 emu flocks) DE(2)**
- **human: FL(3)**

West Nile Virus Positive Organisms in US, 2018

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					4
Alaska					
Arizona		21/48			1/3
Arkansas					
California	232/285	674/942	14/38		12/21
Colorado	Present	Present			3
Connecticut		103/140			
Delaware	12		17		1
DC	1				2
Florida	1	13/18	57/92		1
Georgia		Present			1
Hawaii					
Idaho		10/23		1	1
Illinois	10/12	1301/1775		1	4
Indiana		226/311			1/2
Iowa		Present			
Kansas					
Kentucky		Present			
Louisiana	7/35	253/655		2	13/39
Maine					
Maryland	1	8/18			2/3
Mass.		172/241			
Michigan	40/42	47/62			
Minnesota		Present			4
Mississippi		65/86			17/23
Missouri	1	3		1	1

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana		3/6		2/10	2
Nebraska	1	15/37			4/8
Nevada		Present			
New Hampshire		1			
New Jersey		330/505			1/3
New Mexico					
New York		220/568			1
North Carolina					1
North Dakota	10/11	34/42		1	18/38
Ohio		1078/1498			2
Oklahoma		12/13			1
Oregon		17/18			
Pennsylvania	35/38	1100/2140			1
Rhode Island		2			
South Carolina					1
South Dakota		8/9counties			27/41
Tennessee					2
Texas		368/461		1	8/13
Utah		26/40			1
Vermont		33/41			
Virginia					2
Washington		27/31		1	
West Virginia		1			
Wisconsin	19/30	19/30		1	
Wyoming					

* 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 through 17 August 2018

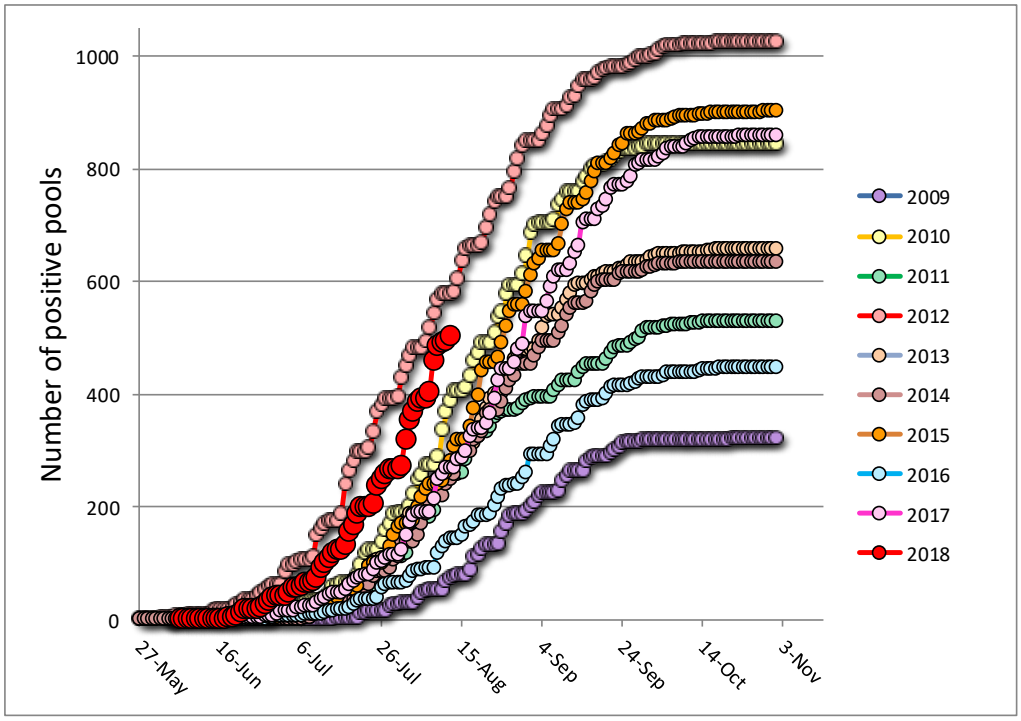
Species	Pools	Mosquitoes	Positives	MFIR
Aedes abserratus	1	11		
Aedes albopictus	572	3647	14	3.839
Aedes atropalpus	16	46		
Aedes canadensis canadensis	25	195		
Aedes cantator	7	52		
Aedes excrucians	1	2		
Aedes grossbecki	2	10		
Aedes infirmatus	2	2		
Aedes japonicus	431	2822	11	3.898
Aedes sollicitans	12	121		
Aedes sticticus	3	37		
Aedes taeniorhynchus	5	126	1	7.937
Aedes thibaulti	1	10		
Aedes triseriatus	157	420	1	2.381
Aedes trivittatus	7	63		
Aedes vexans	44	673	1	1.486
Anopheles barberi	1	7		
Anopheles bradleyi	24	116		
Anopheles punctipennis	41	140	1	7.143
Anopheles quadrimaculatus	115	2010		
Coquillettidia perturbans	93	2590	1	0.386
Culex erraticus	51	275	1	3.636
Culex pipiens	552	7981	14	1.754
Culex restuans	372	3530	6	1.700
Culex salinarius	193	2001	1	0.500
Culex spp.	1939	82241	447	5.435
Culex territans	13	62		
Culiseta inornata	1	10		
Culiseta melanura	314	4905	6	1.223
Orthopodomyia signifera	2	3		
Psorophora ciliata	1	6		
Psorophora columbiae	8	25		
Psorophora ferox	33	526		
Uranotaenia sapphirina	1	1		
Grand Total	**5040**	**114666**	**505**	**4.404**

Remarks: To date, 5040 pools of 114,666 mosquitoes from 33 species have been tested. A total of 505 positive WNV pools have been detected throughout the state. The bulk of new positives continue to be in the enzootic vector(s) *Culex* spp. First positive WNV pool detected has been revised from 7 June 2018 in Warren County to 5 June in Gloucester County, in *Culex pipiens*. Last year, the first positive *Culex* Mix pool was detected in Sussex County on 12 June and the first non-*Culex* positive was collected in *Aedes albopictus* on 14 July in Gloucester County. This year, the first non-*Culex* positive species was *Aedes japonicus*, also collected in Gloucester County on 7 JUNE, more than one month earlier. Other positive non-*Culex* species include *Aedes albopictus, Ae. triseriatus, Ae. taeniorhynchus, Ae. vexans, Anopheles punctipennis, Coquillettidia perturbans, Culex erraticus,* and *Culiseta melanura*. The statewide MFIR rate for all mosquitoes is 4.404.

***NOTE* - *Additional* WNV pools have been reported to the counties, but are not yet in the database. This report should be considered up for revision as necessary.**

Humans, Horses and Wild Birds: Currently three human cases of WNV have been detected; the latest two detected in Essex and Hudson counties in addition to the first case having occurred in Hunterdon county. No horse cases of WNV have been detected. In 2017, eight human cases of WNV were detected and two horse cases were detected. 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 previous 9 years, inclusive of the most active (2012) and least active (2009) years. The red series represents this year and is suggestive of increased activity.

WNV Results by County through 17 August 2018.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**128**	**3296**	**9**	**2.731**
	Aedes albopictus	18	217	1	4.608
	Aedes canadensis canadensis	3	54		
	Aedes japonicus	6	64		
	Aedes sollicitans	2	57		
	Aedes sticticus	1	35		
	Aedes taeniorhynchus	3	121		
	Aedes vexans	6	66		
	Anopheles bradleyi	2	15		
	Coquillettidia perturbans	9	280		
	Culex erraticus	5	30		
	Culex pipiens	9	392	1	2.551
	Culex restuans	1	23		
	Culex salinarius	1	24		
	Culex spp.	21	824	7	8.495
	Culiseta melanura	32	643		
	Psorophora ferox	9	451		

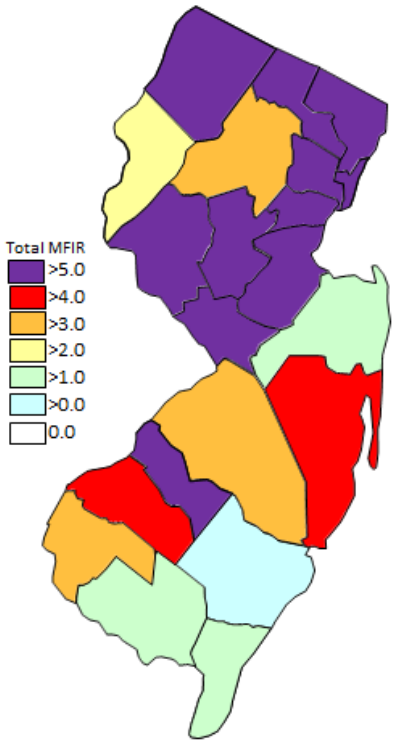
Bergen		**176**	**11856**	**84**	**7.085**
	Aedes albopictus	3	89		
	Aedes japonicus	3	13	1	76.923
	Coquillettidia perturbans	4	50		
	Culex spp.	160	11690	83	7.100
	Culiseta melanura	6	14		
Burlington		**120**	**4200**	**16**	**3.810**
	Aedes albopictus	7	75		
	Aedes canadensis canadensis	1	10		
	Aedes infirmatus	1	1		
	Aedes japonicus	7	120	1	8.333
	Aedes triseriatus	2	7		
	Aedes vexans	1	6		
	Coquillettidia perturbans	2	127		
	Culex erraticus	2	11		
	Culex pipiens	1	1		
	Culex salinarius	5	101		
	Culex spp.	56	2544	12	4.717
	Culiseta melanura	35	1197	3	2.506
Camden		**125**	**4426**	**20**	**4.519**
	Aedes albopictus	15	23	2	86.957
	Aedes excrucians	1	2		
	Aedes japonicus	18	118	1	8.475
	Anopheles punctipennis	2	3		
	Culex spp.	49	2631	17	6.461
	Culiseta melanura	39	1647		
	Psorophora ferox	1	2		
Cape May		**1796**	**12868**	**8**	**0.622**
	Aedes albopictus	246	438		
	Aedes atropalpus	16	46		
	Aedes canadensis canadensis	7	11		
	Aedes cantator	2	2		
	Aedes infirmatus	1	1		
	Aedes japonicus	170	413		
	Aedes sollicitans	4	4		
	Aedes sticticus	1	1		
	Aedes triseriatus	84	166		
	Aedes vexans	3	3		
	Anopheles bradleyi	19	95		
	Anopheles punctipennis	6	8		
	Anopheles quadrimaculatus	99	1772		
	Coquillettidia perturbans	8	10		
	Culex erraticus	12	92		
	Culex pipiens	497	6861	8	1.166
	Culex restuans	291	1637		
	Culex salinarius	158	562		
	Culex spp.	28	98		
	Culex territans	13	62		
	Culiseta melanura	124	576		
	Orthopodomyia signifera	2	3		
	Psorophora columbiae	1	1		
	Psorophora ferox	3	5		
	Uranotaenia sapphirina	1	1		

Cumberland		**130**	**1170**	**4**	**3.419**
	Aedes albopictus	34	363		
	Aedes japonicus	8	41		
	Aedes sticticus	1	1		
	Aedes triseriatus	6	13		
	Aedes trivittatus	1	8		
	Aedes vexans	10	154		
	Anopheles punctipennis	7	35		
	Anopheles quadrimaculatus	9	222		
	Coquillettidia perturbans	1	1		
	Culex erraticus	6	46	1	21.739
	Culex pipiens	4	39		
	Culex restuans	1	1		
	Culex salinarius	2	2		
	Culex spp.	20	158	1	6.329
	Culiseta melanura	11	55	2	36.364
	Psorophora columbiae	3	9		
	Psorophora ferox	6	22		
Essex		**102**	**490**	**7**	**14.286**
	Aedes albopictus	24	55		
	Aedes japonicus	17	28	3	107.143
	Aedes trivittatus	9	12		
	Aedes vexans	1	2		
	Culex spp.	51	393	4	10.178
Gloucester		**203**	**6321**	**39**	**6.170**
	Aedes albopictus	40	300		
	Aedes japonicus	41	549	4	7.286
	Aedes triseriatus	9	41		
	Anopheles barberi	1	7		
	Anopheles punctipennis	4	21	1	47.619
	Anopheles quadrimaculatus	1	3		
	Culex pipiens	13	269	4	14.870
	Culex spp.	84	5014	30	5.983
	Culiseta melanura	10	117		
Hudson		**120**	**6225**	**37**	**5.944**
	Culex spp.	120	6225	37	5.944
Hunterdon		**204**	**9925**	**42**	**4.232**
	Culex spp.	204	9925	42	4.232
Mercer		**180**	**4079**	**32**	**7.845**
	Aedes albopictus	27	244	2	8.197
	Aedes canadensis canadensis	1	6		
	Aedes japonicus	47	229	1	4.367
	Aedes triseriatus	2	7		
	Aedes vexans	8	116	1	8.621
	Culex pipiens	5	59	1	16.949
	Culex restuans	37	1100	6	5.455
	Culex spp.	53	2318	21	9.060
Middlesex		**141**	**4775**	**25**	**5.236**

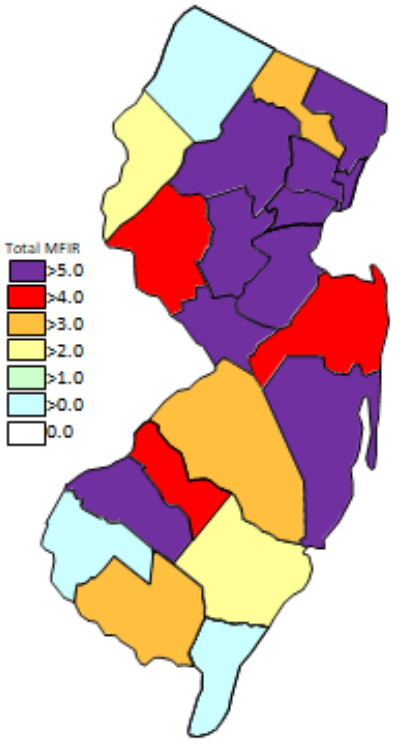
	Aedes albopictus	4	43		
	Aedes japonicus	1	64		
	Anopheles punctipennis	1	1		
	Coquillettidia perturbans	1	1		
	Culex spp.	133	4656	25	5.369
	Culiseta inornata	1	10		
Monmouth		**293**	**5957**	**26**	**4.365**
	Aedes albopictus	60	1142	2	1.751
	Aedes canadensis canadensis	11	101		
	Aedes cantator	5	50		
	Aedes grossbecki	2	10		
	Aedes japonicus	14	44		
	Aedes sollicitans	5	37		
	Aedes taeniorhynchus	1	1		
	Aedes triseriatus	9	76		
	Aedes trivittatus	6	55		
	Aedes vexans	8	40		
	Anopheles bradleyi	1	1		
	Anopheles punctipennis	18	69		
	Anopheles quadrimaculatus	1	1		
	Coquillettidia perturbans	3	4		
	Culex erraticus	1	1		
	Culex salinarius	7	243		
	Culex spp.	117	3851	24	6.232
	Culiseta melanura	13	197		
	Psorophora ferox	11	34		
Morris		**249**	**9800**	**54**	**5.510**
	Coquillettidia perturbans	6	300		
	Culex spp	242	9499	54	5.685
	Culiseta melanura	1	1		
Ocean		**178**	**1235**	**10**	**8.097**
	Aedes albopictus	52	384	4	10.417
	Aedes japonicus	22	62		
	Aedes triseriatus	14	40	1	25.000
	Aedes vexans	1	2		
	Anopheles punctipennis	1	1		
	Anopheles quadrimaculatus	2	5		
	Coquillettidia perturbans	19	163	1	6.135
	Culex erraticus	4	5		
	Culex salinarius	2	3		
	Culex spp.	42	452	4	8.850
	Culiseta melanura	18	117		
	Psorophora ferox	1	1		
Passaic		**113**	**1027**	**4**	**3.895**
	Aedes abserratus	1	11		
	Aedes albopictus	7	30		
	Aedes japonicus	27	151		
	Aedes thibaulti	1	10		
	Aedes triseriatus	2	6		
	Coquillettidia perturbans	5	40		
	Culex erraticus	5	8		
	Culex pipiens	11	202		

	Culex restuans	9	95		
	Culex spp.	44	473	4	8.457
	Culiseta melanura	1	1		
Salem		**223**	**5462**	**3**	**0.549**
	Aedes albopictus	24	48		
	Aedes canadensis canadensis	1	1		
	Aedes japonicus	21	141		
	Aedes sollicitans	1	23		
	Aedes taeniorhynchus	1	4	1	250.000
	Aedes triseriatus	15	20		
	Aedes vexans	2	79		
	Anopheles bradleyi	2	5		
	Anopheles punctipennis	2	2		
	Anopheles quadrimaculatus	3	7		
	Coquillettidia perturbans	19	549		
	Culex erraticus	16	82		
	Culex pipiens	6	7		
	Culex restuans	2	13		
	Culex salinarius	11	759	1	1.318
	Culex spp.	76	3434		
	Culiseta melanura	15	265	1	3.774
	Psorophora ciliate	1	6		
	Psorophora columbiae	3	6		
	Psorophora ferox	2	11		
Somerset		**155**	**5740**	**34**	**5.923**
	Aedes albopictus	1	2		
	Aedes canadensis canadensis	1	12		
	Aedes japonicus	10	137		
	Aedes triseriatus	1	3		
	Culex spp.	142	5586	34	6.087
Sussex		**176**	**5324**	**5**	**0.939**
	Aedes albopictus	1	3		
	Aedes japonicus	2	56		
	Aedes triseriatus	3	27		
	Aedes vexans	3	185		
	Coquillettidia perturbans	14	976		
	Culex pipiens	6	151		
	Culex restuans	31	661		
	Culex salinarius	7	307		
	Culex spp.	101	2889	5	1.731
	Culiseta melanura	8	69		
Union		**33**	**1702**	**20**	**11.751**
	Aedes albopictus	5	137	2	14.599
	Culex spp	28	1565	18	11.502
Warren		**195**	**8788**	**26**	**2.959**
	Aedes albopictus	4	54	1	18.519
	Aedes japonicus	17	592		
	Aedes triseriatus	1	2		
	Aedes vexans	1	20		
	Coquillettidia perturbans	2	89		

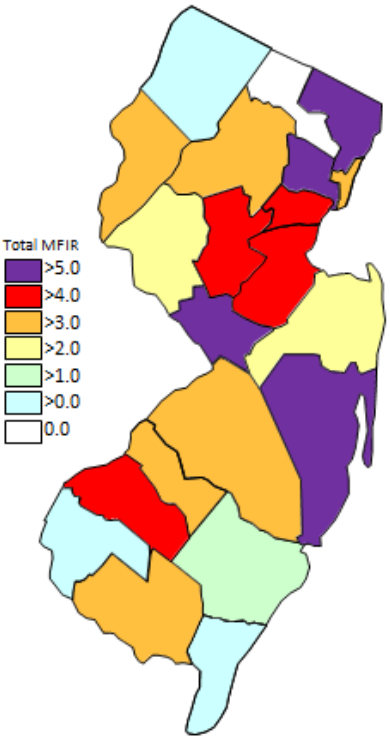
	Culex spp.	168	8016	25	3.119
	Culiseta melanura	1	6		
	Psorophora columbiae	1	9		
Grand Total		**5040**	**114666**	**505**	**4.404**



Cumulative WNV activity in 2017.



WNV activity to 17 August 2018.



WNV activity last week, 2018

Saint Louis Encephalitis (SLE) to 17 August 2018.

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 2018. No human cases have been reported.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		**32**	**1775**		
	Culex spp	32	1775		
Cape May		**521**	**6954**		
	Culex pipiens	494	6858		
	Culex spp.	27	96		
Grand Total		**553**	**8729**		

La Crosse Encephalitis (LAC) to 17 August 2018.

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 LAC have been tested yet for 2018. No human cases have been reported.

County	Species			Positives	MFIR
Burlington		**10**	**153**		
	Aedes albopictus	2	29		
	Aedes japonicus	6	117		
	Aedes triseriatus	2	7		
Ocean		**4**	**9**		
	Aedes albopictus	2	3		
	Aedes japonicus	1	1		
	Aedes triseriatus	1	5		
Salem		**1**	**1**		
	Aedes triseriatus	1	1		
Sussex		**3**	**27**		
	Aedes triseriatus	3	27		
Grand Total		**18**	**190**		

Dengue (DENV) to 17 August 2018.

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 been tested yet in 2018. There are currently 5 travel-related human cases in NJ.

County	Species	DENV1		DENV2		DENV3		DENV4		Pos.	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		**18**	**217**	**18**	**217**	**18**	**217**	**18**	**217**		
	Aedes albopictus	18	217	18	217	18	217	18	217		
Bergen		**1**	**14**	**1**	**14**	**1**	**14**	**1**	**14**		
	Aedes albopictus	1	14	1	14	1	14	1	14		
Middlesex		**2**	**12**	**2**	**12**	**2**	**12**	**2**	**12**		
	Aedes albopictus	2	12	2	12	2	12	2	12		
Ocean		**29**	**280**	**29**	**280**	**29**	**280**	**29**	**280**		

	Aedes albopictus	29	280	29	280	29	280	29	280		
Sussex		**1**	**3**	**1**	**3**	**1**	**3**	**1**	**3**		
	Aedes albopictus	1	3	1	3	1	3	1	3		
Grand Total		**51**	**526**	**51**	**526**	**51**	**526**	**51**	**526**		

Chikungunya (CHIK) to 17 August 2018.

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 been tested yet in 2018. There are currently 5 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**18**	**217**		
	Aedes albopictus	18	217		
Bergen		**1**	**14**		
	Aedes albopictus	1	14		
Middlesex		**2**	**12**		
	Aedes albopictus	2	12		
Ocean		**29**	**280**		
	Aedes albopictus	29	280		
Sussex		**1**	**3**		
	Aedes albopictus	1	3		
Grand Total		**51**	**526**		

Zika (ZIKV) to 17 August 2018.

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 2018. There are currently 6 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**18**	**217**		
	Aedes albopictus	18	217		
Bergen		**1**	**14**		
	Aedes albopictus	1	14		
Cape May		**245**	**437**		
	Aedes albopictus	244	435		
	Culiseta melanura	1	2		
Middlesex		**2**	**12**		
	Aedes albopictus	2	12		
Ocean		**29**	**280**		

	Aedes albopictus	29	280		
Sussex		**1**	**3**		
	Aedes albopictus	1	3		
Grand Total		**296**	**963**		