

VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 35: 26 August to 1 September, 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	0.55	0.00	3	2		
Green Bank (Burlington Co.)/25	Coastal	3.63	0.08	42 (44) ‡	9 (10)		
Corbin City (Atlantic Co.)/25	Coastal	1.95	0.80	124 (144)	12 (13)		
Dennisville (Cape May Co.)/50	Coastal	5.40	0.00	289	14		
Winslow (Camden Co.)/50	Inland	1.51	1.96	1839	43	4	2.175
Centerton (Salem Co.)/50	Inland	3.34	0.54	267	14	2	7.491
Turkey Swamp (Monmouth Co.)/50	Inland	1.43	1.20	319‡	14‡	1	3.135
Glassboro (Gloucester Co.)/50	Inland	0.43	0.12	130	12		

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

Remarks: Currently for the 2018 season, there are ten detections of EEE among submitted mosquito pools, seven at resting box sites (4 at Winslow, 2 at Centerton, 1 at Turkey Swamp) and three from county-set traps. All positive pools are in the enzootic vector, *Culiseta melanura*. Two horses have tested positive for EEE; both were not vaccinated and both were euthanized.

Statewide, 6034 *Cs. melanura* from 364 pools have been tested, with ten positive pools detected for an overall *Cs. melanura* MFIR of 1.657. 12420 specimens in 1098 pools from 17 other species have also been tested, with no positives detected. Overall MFIR for all species statewide is 0.542.

Traditional Resting Box Sites: 3013 *Cs. melanura* from 119 pools have been tested for EEE (plus two pools totaling 22 to be tested) in 2018. One additional positive pool was detected, a first for Turkey Swamp this season.

Additional <i>Cs. melanura</i> trapped by counties					
*traps with positives indicated in BOLD .					
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO2, RB	27	721		
Bergen	RB	7	21		
Burlington	CDCL	37	1639	3	1.830
Cape May	GR, RB	123	325		
Cumberland	BGSCCL, RB	12	58		
Monmouth	OTHER	1	2		
Morris	CDCL	1	1		
Ocean	CDCL, RB	20	126		
Passaic	RB	4	4		
Salem	CDCL	4	49		
Sussex	ABC	8	69		
Warren	CDCL	1	6		
TOTAL		245	3021	3	0.993

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. No new positive pools were detected this past week. Three total positive pools have been detected, all in Burlington, all caught with a CDC trap and all at different locations. Positive pools were caught on the 6th and 14th of August.

Horses and Humans: A second horse with EEE was reported and euthanized on 27 Aug in Camden County. This 12 year old gelding had not been vaccinated this year. The first horse case of EEE was reported in a 5 year-old mare in Monmouth County. This horse was reportedly vaccinated last year, but was not current for 2018. She was euthanized on the 18th of August. 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.

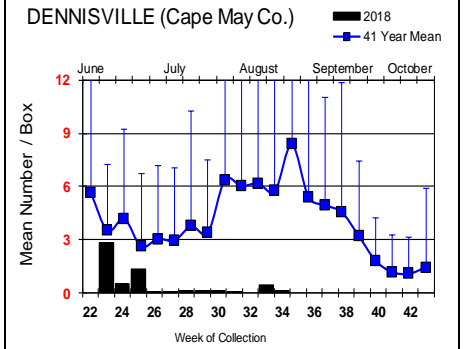
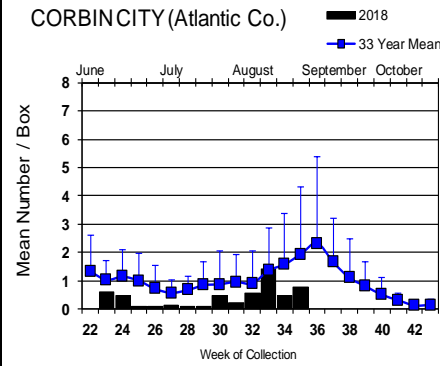
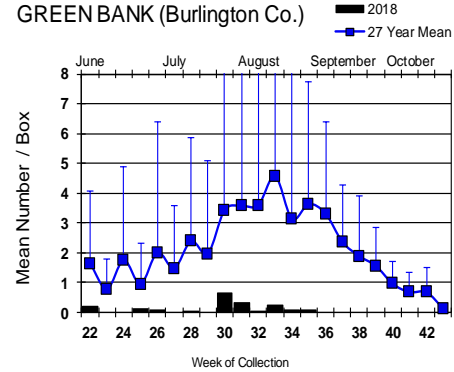
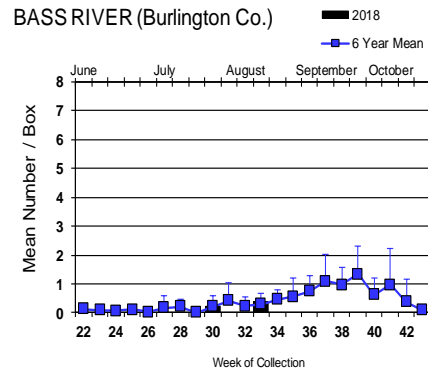
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

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

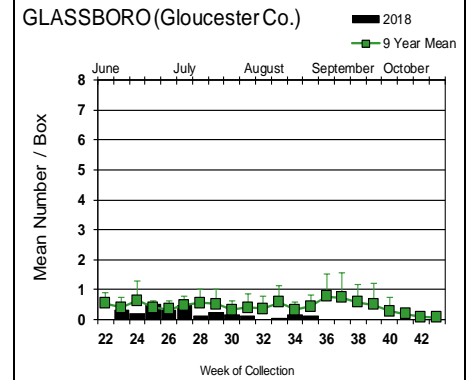
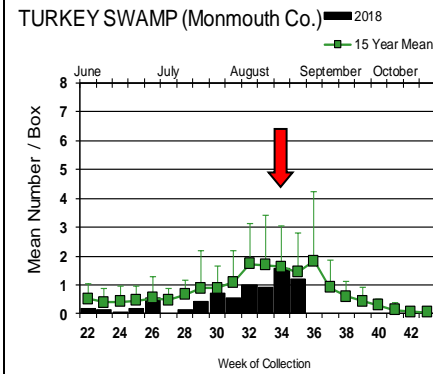
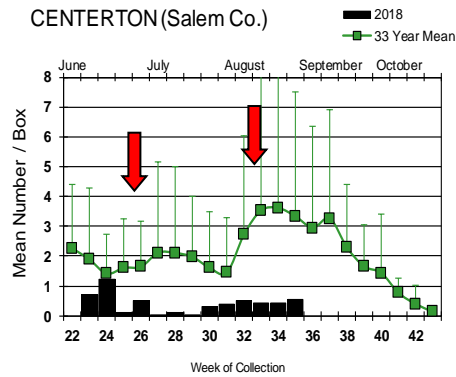
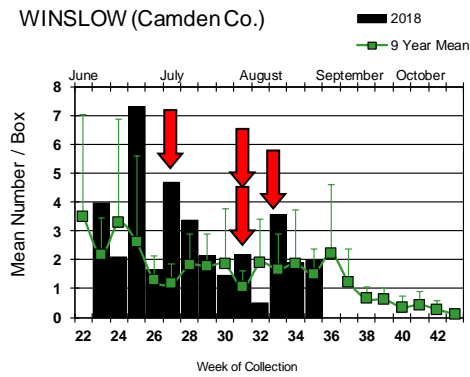
Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	4	18		
<i>Aedes canadensis canadensis</i>	1	10		
<i>Aedes cantator</i>	2	2		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes sollicitans</i>	7	33		
<i>Aedes taeniorhynchus</i>	2	46		
<i>Aedes vexans</i>	1	6		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	33	291		
<i>Anopheles punctipennis</i>	11	40		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	77	1722		
<i>Culex erraticus</i>	54	392		
<i>Culex pipiens</i>	622	8394		
<i>Culex salinarius</i>	235	1000		
<i>Culex</i> spp.	41	153		
<i>Culiseta inornata</i>	1	10		
<i>Psorophora ferox</i>	4	300		
State Total	1098	12420		

Culiseta melanura Populations



Coastal



Inland



Last week, Turkey Swamp population abundances were the highest for the season at that site. A positive pool was detected there, collected 23 Aug.



 = 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(49/2 mule & donkey) NY(1)
- mosquito pools: FL(2) NJ(9) NY(12) RI(4)
- sentinel: FL(139/6 owl emus & 5 emu flocks) DE(3)
- 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					4/7
Alaska					
Arizona		51/55			5/7
Arkansas					
California	316/363	1,119/1,296	44/76	5/6	21/31
Colorado	Present	Present			6
Connecticut		181/227			
Delaware	12/15		17/28		1/2
DC	1	12/14			2/6
Florida	1	18/20	118/165	1	1/6
Georgia		Present			1/4
Hawaii					
Idaho		34/39		1/2	2
Illinois	18	2,159/2,516		1	4/22
Indiana		324/378			3/4
Iowa		28/45		2/3	9/13
Kansas					2
Kentucky		Present			1
Louisiana	54/60	739/829		2	53/60
Maine					1
Maryland(+DC)	1	21/23			5/12
Mass.		308/363		1	4
Michigan	66/69	74/109			8/16
Minnesota		Present		Present	4
Mississippi		92			26/30
Missouri	1	3		1/2	2

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana		8		14/17	19
Nebraska	1	46/47			19/36
Nevada		Present			
New Hampshire	4	2/12			
New Jersey		591/730			5/6
New Mexico					
New York		568/897		1	1/7
North Carolina					1
North Dakota	12	62/71		1/3	54/74
Ohio		1,984/2,333		1/3	5/8
Oklahoma		14/15traps			1
Oregon		28/49			1
Pennsylvania	38	2,140		3	1
Rhode Island		5/8			
South Carolina					2
South Dakota		9counties			56/77
Tennessee		393/514			2/3
Texas		556/612		1	17/33
Utah		40/108			2/4
Vermont		80/84			
Virginia					3
Washington		36/44		1	
West Virginia		18			
Wisconsin	35/36	50/64		1	1
Wyoming		2/5			

* 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 31 August 2018

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	1	11		
<i>Aedes albopictus</i>	844	6366	23	3.613
<i>Aedes atlanticus</i>	1	1		
<i>Aedes atropalpus</i>	16	46		
<i>Aedes canadensis canadensis</i>	27	227		
<i>Aedes cantator</i>	7	52		
<i>Aedes excrucians</i>	1	2		
<i>Aedes grossbecki</i>	2	10		
<i>Aedes infirmatus</i>	2	2		
<i>Aedes japonicus</i>	524	3264	16	4.902
<i>Aedes sollicitans</i>	15	126		
<i>Aedes sticticus</i>	3	37		
<i>Aedes taeniorhynchus</i>	7	129	1	7.752
<i>Aedes thibaulti</i>	1	10		
<i>Aedes triseriatus</i>	195	502	2	3.984
<i>Aedes trivittatus</i>	14	129	1	7.752
<i>Aedes vexans</i>	80	1298	1	0.770
<i>Anopheles barberi</i>	2	8		
<i>Anopheles bradleyi</i>	38	312		
<i>Anopheles punctipennis</i>	50	166	1	6.024
<i>Anopheles quadrimaculatus</i>	134	2260	1	0.442
<i>Coquillettidia perturbans</i>	99	2618	1	0.382
<i>Culex erraticus</i>	78	546	2	3.663
<i>Culex pipiens</i>	689	9853	22	2.233
<i>Culex restuans</i>	400	3607	6	1.663
<i>Culex salinarius</i>	265	2448	2	0.817
<i>Culex</i> spp.	2317	94642	642	6.783
<i>Culex territans</i>	14	63		
<i>Culiseta inornata</i>	1	10		
<i>Culiseta melanura</i>	367	6092	7	1.149
<i>Orthopodomyia signifera</i>	2	3		
<i>Psorophora ciliata</i>	2	61		
<i>Psorophora columbiae</i>	14	94	1	10.638
<i>Psorophora cyanescens</i>	1	14		
<i>Psorophora ferox</i>	35	528		
<i>Psorophora howardii</i>	1	2	1	500.000
<i>Uranotaenia sapphirina</i>	2	11		
Grand Total	6251	135550	730	5.385

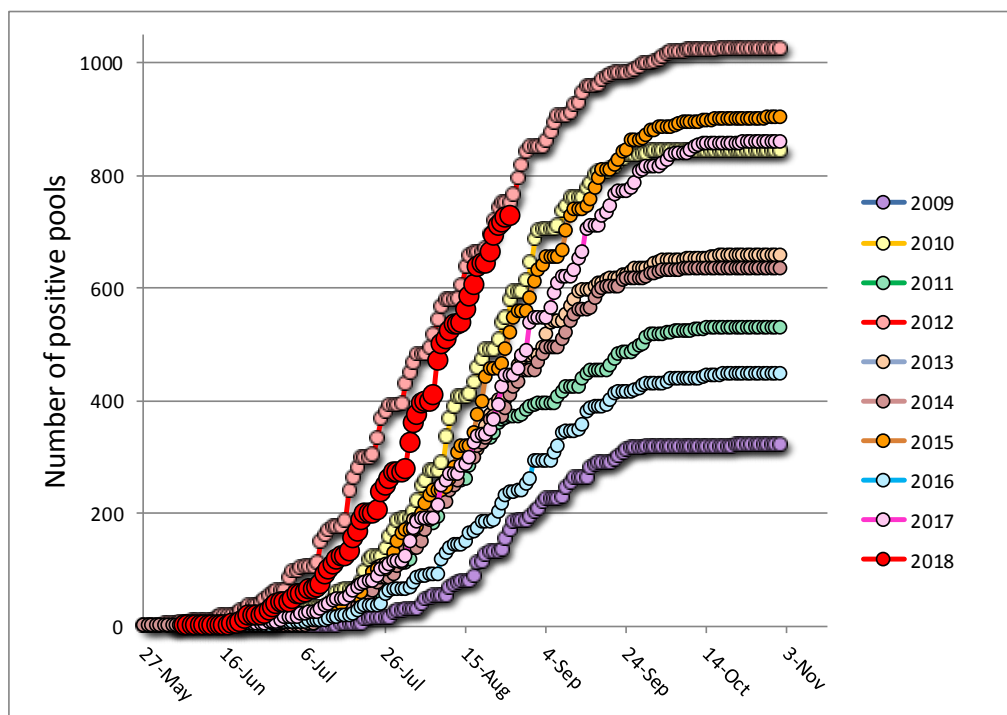
Remarks: To date, 6251 pools of 135,550 mosquitoes from 36 species have been tested. A total of 730 positive WNV pools have been detected throughout the state. The bulk of new positives continue to be in the enzootic vector(s) *Culex* spp. First positive WNV pool detected has been revised from 7 June 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.

Psorophora columbiae and *Ps. howardii* each had positive pools in this last round of testing. Other positive non-*Culex* species include *Aedes albopictus*, *Ae. taeniorhynchus*, *Ae. triseriatus*, *Ae. trivittatus*, *Ae. vexans*, *Anopheles punctipennis*, *Coquillettidia perturbans*, *Culex erraticus*, and *Culiseta melanura*. The statewide MFIR rate for all mosquitoes is 5.385.

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 six human cases of WNV have been detected; the latest detected in Bergen county, in addition to the five previous cases in Essex, Hudson, Hunterdon, Ocean and Somerset counties, one each. No horse cases of WNV have been reported. 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 on track for high activity.

WNV Results by County through 31 August 2018.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		171	4657	15	3.221
	<i>Aedes albopictus</i>	33	809	1	1.236
	<i>Aedes canadensis canadensis</i>	3	54		
	<i>Aedes japonicus</i>	6	64		
	<i>Aedes sollicitans</i>	2	57		
	<i>Aedes sticticus</i>	1	35		
	<i>Aedes taeniorhynchus</i>	3	121		
	<i>Aedes vexans</i>	10	124		
	<i>Anopheles bradleyi</i>	2	15		
	<i>Coquillettidia perturbans</i>	10	295		
	<i>Culex erraticus</i>	7	50		
	<i>Culex pipiens</i>	17	706	6	8.499
	<i>Culex restuans</i>	1	23		
	<i>Culex salinarius</i>	1	24		

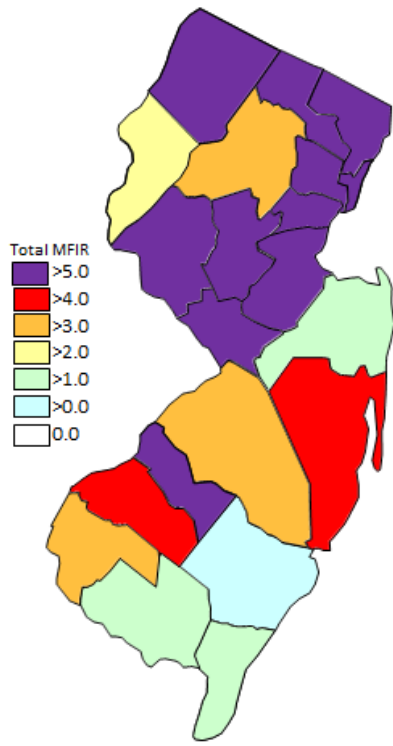
<i>Culex</i> spp.	27	984	8	8.130
<i>Culiseta melanura</i>	39	845		
<i>Psorophora ferox</i>	9	451		
Bergen	212	13749	103	7.491
<i>Aedes albopictus</i>	10	191		
<i>Aedes japonicus</i>	5	20	1	50.000
<i>Coquillettidia perturbans</i>	4	50		
<i>Culex</i> spp.	185	13465	101	7.501
<i>Culiseta melanura</i>	7	21		
<i>Psorophora howardii</i>	1	2	1	500.000
Burlington	158	5205	23	4.419
<i>Aedes albopictus</i>	13	129		
<i>Aedes canadensis canadensis</i>	1	10		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	9	138	1	7.246
<i>Aedes triseriatus</i>	2	7		
<i>Aedes vexans</i>	1	6		
<i>Anopheles bradleyi</i>	1	75		
<i>Coquillettidia perturbans</i>	2	127		
<i>Culex erraticus</i>	3	64		
<i>Culex pipiens</i>	1	1		
<i>Culex salinarius</i>	6	162		
<i>Culex</i> spp.	71	2801	18	6.426
<i>Culiseta melanura</i>	47	1684	4	2.375
Camden	152	5029	26	5.170
<i>Aedes albopictus</i>	22	66	2	30.303
<i>Aedes excrucians</i>	1	2		
<i>Aedes japonicus</i>	24	129	1	7.752
<i>Anopheles punctipennis</i>	2	3		
<i>Culex</i> spp.	59	2988	23	7.697
<i>Culiseta melanura</i>	43	1839		
<i>Psorophora ferox</i>	1	2		
Cape May	2259	15629	11	0.704
<i>Aedes albopictus</i>	370	783		
<i>Aedes atropalpus</i>	16	46		
<i>Aedes canadensis canadensis</i>	7	11		
<i>Aedes cantator</i>	2	2		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	204	466		
<i>Aedes sollicitans</i>	5	5		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	1	1		
<i>Aedes triseriatus</i>	104	201		
<i>Aedes vexans</i>	11	14		
<i>Anopheles bradleyi</i>	32	216		
<i>Anopheles punctipennis</i>	6	8		
<i>Anopheles quadrimaculatus</i>	115	1991		
<i>Coquillettidia perturbans</i>	8	10		
<i>Culex erraticus</i>	18	160		
<i>Culex pipiens</i>	622	8394	11	1.310
<i>Culex restuans</i>	317	1685		
<i>Culex salinarius</i>	226	828		

<i>Culex</i> spp.	32	107		
<i>Culex territans</i>	14	63		
<i>Culiseta melanura</i>	137	614		
<i>Orthopodomyia signifera</i>	2	3		
<i>Psorophora columbiae</i>	2	2		
<i>Psorophora ferox</i>	4	6		
<i>Uranotaenia sapphirina</i>	2	11		
Cumberland	168	1611	4	2.483
<i>Aedes albopictus</i>	39	503		
<i>Aedes japonicus</i>	11	46		
<i>Aedes sollicitans</i>	1	3		
<i>Aedes sticticus</i>	1	1		
<i>Aedes triseriatus</i>	7	14		
<i>Aedes trivittatus</i>	1	8		
<i>Aedes vexans</i>	15	246		
<i>Anopheles punctipennis</i>	9	41		
<i>Anopheles quadrimaculatus</i>	11	252		
<i>Coquillettidia perturbans</i>	3	3		
<i>Culex erraticus</i>	11	96	1	10.417
<i>Culex pipiens</i>	4	39		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	3	10		
<i>Culex</i> spp.	27	201	1	4.975
<i>Culiseta melanura</i>	12	58	2	34.483
<i>Psorophora columbiae</i>	6	67		
<i>Psorophora ferox</i>	6	22		
Essex	122	573	12	20.942
<i>Aedes albopictus</i>	33	92		
<i>Aedes japonicus</i>	18	29	3	103.448
<i>Aedes trivittatus</i>	12	15	1	66.667
<i>Aedes vexans</i>	2	3		
<i>Anopheles quadrimaculatus</i>	1	1	1	1000.000
<i>Culex</i> spp.	56	433	7	16.166
Gloucester	276	8144	57	6.999
<i>Aedes albopictus</i>	64	429	4	9.324
<i>Aedes japonicus</i>	57	713	8	11.220
<i>Aedes triseriatus</i>	11	61		
<i>Anopheles barberi</i>	1	7		
<i>Anopheles punctipennis</i>	5	28	1	35.714
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Culex pipiens</i>	15	291	4	13.746
<i>Culex</i> spp.	110	6482	40	6.171
<i>Culiseta melanura</i>	12	130		
Hudson	130	6493	41	6.314
<i>Culex</i> spp.	130	6493	41	6.314
Hunterdon	244	11563	71	6.140
<i>Culex</i> spp.	244	11563	71	6.140
Mercer	210	4437	39	8.790
<i>Aedes albopictus</i>	36	343	3	8.746

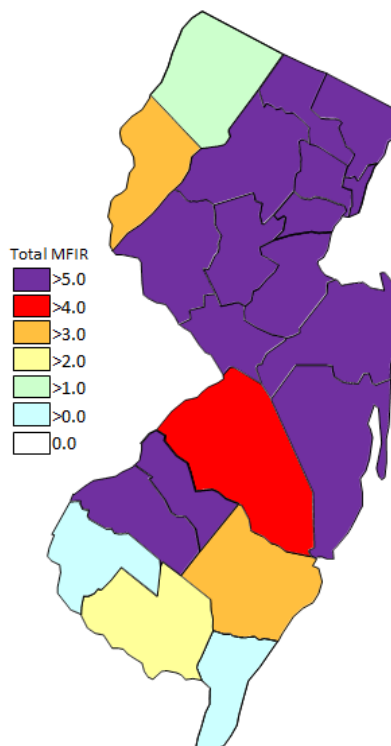
<i>Aedes canadensis canadensis</i>	1	6		
<i>Aedes japonicus</i>	53	262	1	3.817
<i>Aedes triseriatus</i>	2	7		
<i>Aedes vexans</i>	12	121	1	8.264
<i>Culex pipiens</i>	5	59	1	16.949
<i>Culex restuans</i>	37	1100	6	5.455
<i>Culex</i> spp.	64	2539	27	10.634
Middlesex	174	4983	38	7.626
<i>Aedes albopictus</i>	5	59		
<i>Aedes japonicus</i>	1	64		
<i>Anopheles punctipennis</i>	1	1		
<i>Coquillettidia perturbans</i>	3	9		
<i>Culex</i> spp.	163	4840	38	7.851
<i>Culiseta inornata</i>	1	10		
Monmouth	358	7435	43	5.783
<i>Aedes albopictus</i>	77	1668	4	2.398
<i>Aedes canadensis canadensis</i>	12	102		
<i>Aedes cantator</i>	5	50		
<i>Aedes grossbecki</i>	2	10		
<i>Aedes japonicus</i>	16	46		
<i>Aedes sollicitans</i>	5	37		
<i>Aedes taeniorhynchus</i>	2	3		
<i>Aedes triseriatus</i>	11	82		
<i>Aedes trivittatus</i>	6	55		
<i>Aedes vexans</i>	11	50		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles punctipennis</i>	22	78		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	3	4		
<i>Culex erraticus</i>	4	6	1	166.667
<i>Culex salinarius</i>	7	243		
<i>Culex</i> spp.	141	4630	37	7.991
<i>Culiseta melanura</i>	17	323		
<i>Psorophora columbiae</i>	2	10	1	100.000
<i>Psorophora ferox</i>	12	35		
Morris	299	11601	90	7.758
<i>Aedes albopictus</i>	5	34		
<i>Coquillettidia perturbans</i>	6	300		
<i>Culex</i> spp	287	11266	90	7.989
<i>Culiseta melanura</i>	1	1		
Ocean	199	1476	13	8.808
<i>Aedes albopictus</i>	59	459	4	8.715
<i>Aedes japonicus</i>	23	64		
<i>Aedes triseriatus</i>	18	46	1	21.739
<i>Aedes vexans</i>	1	2		
<i>Anopheles punctipennis</i>	1	1		
<i>Anopheles quadrimaculatus</i>	2	5		
<i>Coquillettidia perturbans</i>	20	166	1	6.024
<i>Culex erraticus</i>	5	6		
<i>Culex salinarius</i>	2	3		
<i>Culex</i> spp.	47	597	7	11.725

<i>Culiseta melanura</i>	20	126		
<i>Psorophora ferox</i>	1	1		
Passaic	156	1311	7	5.339
<i>Aedes abserratus</i>	1	11		
<i>Aedes albopictus</i>	16	76		
<i>Aedes japonicus</i>	35	234		
<i>Aedes thibaulti</i>	1	10		
<i>Aedes triseriatus</i>	3	10		
<i>Coquillettidia perturbans</i>	5	40		
<i>Culex erraticus</i>	8	13		
<i>Culex pipiens</i>	11	202		
<i>Culex restuans</i>	9	95		
<i>Culex</i> spp.	62	602	7	11.628
<i>Culiseta melanura</i>	4	4		
<i>Psorophora cyanescens</i>	1	14		
Salem	272	5874	5	0.851
<i>Aedes albopictus</i>	38	188		
<i>Aedes atlanticus</i>	1	1		
<i>Aedes canadensis canadensis</i>	1	1		
<i>Aedes japonicus</i>	25	146		
<i>Aedes sollicitans</i>	2	24		
<i>Aedes taeniorhynchus</i>	1	4	1	250.000
<i>Aedes triseriatus</i>	20	27		
<i>Aedes trivittatus</i>	2	3		
<i>Aedes vexans</i>	2	79		
<i>Anopheles bradleyi</i>	2	5		
<i>Anopheles punctipennis</i>	2	2		
<i>Anopheles quadrimaculatus</i>	3	7		
<i>Coquillettidia perturbans</i>	19	549		
<i>Culex erraticus</i>	22	151		
<i>Culex pipiens</i>	8	10		
<i>Culex restuans</i>	2	13		
<i>Culex salinarius</i>	11	759	1	1.318
<i>Culex</i> spp.	87	3566	2	0.561
<i>Culiseta melanura</i>	18	316	1	3.165
<i>Psorophora ciliate</i>	1	6		
<i>Psorophora columbiae</i>	3	6		
<i>Psorophora ferox</i>	2	11		
Somerset	184	6321	47	7.436
<i>Aedes albopictus</i>	1	2		
<i>Aedes canadensis canadensis</i>	1	12		
<i>Aedes japonicus</i>	11	142		
<i>Aedes triseriatus</i>	1	3		
<i>Anopheles punctipennis</i>	2	4		
<i>Culex</i> spp.	168	6158	47	7.632
Sussex	196	6086	7	1.150
<i>Aedes albopictus</i>	1	3		
<i>Aedes canadensis canadensis</i>	1	31		
<i>Aedes japonicus</i>	2	56		
<i>Aedes triseriatus</i>	3	27		
<i>Aedes vexans</i>	7	451		
<i>Coquillettidia perturbans</i>	14	976		

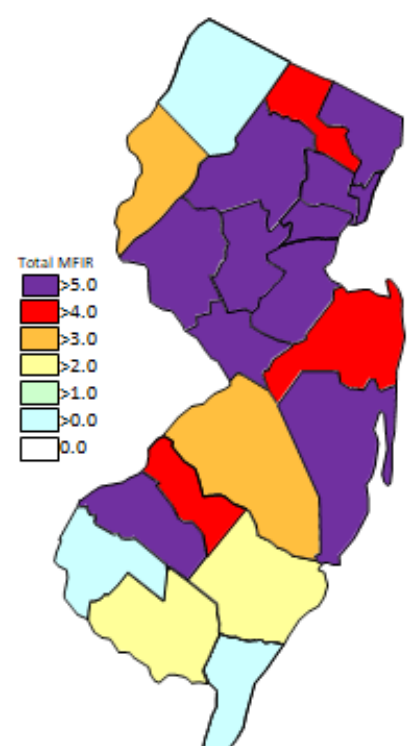
<i>Culex pipiens</i>	6	151		
<i>Culex restuans</i>	33	690		
<i>Culex salinarius</i>	9	419	1	2.387
<i>Culex</i> spp.	112	3213	6	1.867
<i>Culiseta melanura</i>	8	69		
Union	68	3592	45	12.528
<i>Aedes albopictus</i>	11	324	4	12.346
<i>Culex</i> spp	57	3268	41	12.546
Warren	243	9781	33	3.374
<i>Aedes albopictus</i>	11	208	1	4.808
<i>Aedes japonicus</i>	24	645	1	1.550
<i>Aedes triseriatus</i>	1	2		
<i>Aedes trivittatus</i>	5	63	1	15.873
<i>Aedes vexans</i>	8	202		
<i>Coquillettidia perturbans</i>	2	89		
<i>Culex</i> spp.	188	8446	30	3.552
<i>Culiseta melanura</i>	2	62		
<i>Psorophora ciliata</i>	1	55		
<i>Psorophora columbiae</i>	1	9		
Grand Total	6251	135550	730	5.385



Cumulative WNV activity in 2017.



WNV activity to 31 August 2018.



WNV activity last week, 2018

Saint Louis Encephalitis (SLE) to 31 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		34	1876		
	<i>Culex</i> spp	34	1876		
Cape May		653	8499		
	<i>Culex pipiens</i>	622	8394		
	<i>Culex</i> spp.	31	105		
Grand Total		687	10375		

La Crosse Encephalitis (LAC) to 31 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	Pools	Mosquitoes	Positives	MFIR
Burlington		11	167		
	<i>Aedes albopictus</i>	3	43		
	<i>Aedes japonicus</i>	6	117		
	<i>Aedes triseriatus</i>	2	7		
Ocean		4	9		
	<i>Aedes albopictus</i>	2	3		
	<i>Aedes japonicus</i>	1	1		
	<i>Aedes triseriatus</i>	1	5		
Salem		3	4		
	<i>Aedes triseriatus</i>	3	4		
Sussex		3	27		
	<i>Aedes triseriatus</i>	3	27		
Grand Total		21	207		

Dengue (DENV) to 31 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 6 travel-related human cases in NJ.

County	Species	DENV1		DENV2		DENV3		DENV4		Pos.	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		33	809	33	809	33	809	33	809		
	<i>Aedes albopictus</i>	33	809	33	809	33	809	33	809		
Bergen		1	14	1	14	1	14	1	14		
	<i>Aedes albopictus</i>	1	14	1	14	1	14	1	14		
Gloucester		7	20	7	20	7	20	7	20		
	<i>Aedes albopictus</i>	5	18	5	18	5	18	5	18		
	<i>Aedes japonicus</i>	2	2	2	2	2	2	2	2		
Middlesex		2	12	2	12	2	12	2	12		
	<i>Aedes albopictus</i>	2	12	2	12	2	12	2	12		
Ocean		34	336	34	336	34	336	34	336		
	<i>Aedes albopictus</i>	34	336	34	336	34	336	34	336		
Sussex		1	3	1	3	1	3	1	3		
	<i>Aedes albopictus</i>	1	3	1	3	1	3	1	3		
Grand Total		78	1194	78	1194	78	1194	78	1194		

Chikungunya (CHIK) to 31 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		33	809		
	<i>Aedes albopictus</i>	33	809		
Bergen		1	14		
	<i>Aedes albopictus</i>	1	14		
Gloucester		7	20		
	<i>Aedes albopictus</i>	5	18		
	<i>Aedes japonicus</i>	2	2		

Middlesex		2	12		
	<i>Aedes albopictus</i>	2	12		
Ocean		34	336		
	<i>Aedes albopictus</i>	34	336		
Sussex		1	3		
	<i>Aedes albopictus</i>	1	3		
Grand Total		78	1194		

Zika (ZIKV) to 31 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 7 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		33	809		
	<i>Aedes albopictus</i>	33	809		
Bergen		1	14		
	<i>Aedes albopictus</i>	1	14		
Cape May		366	773		
	<i>Aedes albopictus</i>	366	773		
Gloucester		7	20		
	<i>Aedes albopictus</i>	5	18		
	<i>Aedes japonicus</i>	2	2		
Middlesex		2	12		
	<i>Aedes albopictus</i>	2	12		
Ocean		34	336		
	<i>Aedes albopictus</i>	34	336		
Sussex		1	3		
	<i>Aedes albopictus</i>	1	3		
Grand Total		444	1967		