

VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 38: 16 September to 22 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	0.97	0.00	3	2		
Green Bank (Burlington Co.)/25	Coastal	1.89	3.32	254 [‡] (337) [‡]	13 (15)		
Corbin City (Atlantic Co.)/25	Coastal	1.11	1.00	185 (202) [‡]	14 (15)		
Dennisville (Cape May Co.)/50	Coastal	3.21	0.04	293	17		
Winslow (Camden Co.)/50	Inland	0.65	1.60	2086	49	4	1.918
Centerton (Salem Co.)/50	Inland	2.29	0.26	336	17	2	5.952
Turkey Swamp (Monmouth Co.)/49	Inland	0.59	0.43	383 [‡] (456) [‡]	17 (18)	1	2.611
Glassboro (Gloucester Co.)/50	Inland	0.57	0.10	157	15		

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

Remarks: No new positive EEE pools were detected this past week. Currently for the 2018 season, there are 12 detections of EEE among submitted mosquito pools, seven at resting box sites (4 at Winslow, 2 at Centerton, 1 at Turkey Swamp) and five from county-set traps, the latest from Burlington County. All positive pools are in the enzootic vector, *Culiseta melanura*. Five horses have tested positive for EEE; all were not vaccinated and all were euthanized.

Statewide, 7868 *Cs. melanura* from 459 pools have been tested, with 12 positive pools detected for an overall *Cs. melanura* MFIR of 1.525. 14970 specimens in 1382 pools from 20 other species have also been tested, with no positives detected. Overall MFIR for all species statewide is 0.525.

Traditional Resting Box Sites: 3697 *Cs. melanura* from 143 pools have been tested for EEE (plus four pools totaling 173 to be tested) in 2018. No additional positive pools were detected at the traditional resting box sites this past week. A total of 7 positive pools have been detected at the traditional resting box sites.

Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in UNDERLINED .					
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO2, <u>GR</u> , RB	38	985	1	1.015
Bergen	RB	7	21		
Burlington	<u>CDCL</u>	53	2371	4	1.687
Cape May	GR, RB	156	415		
Cumberland	BGSCL, RB	13	74		
Middlesex	RB	2	21		
Monmouth	OTHER	1	2		
Morris	CDCL	1	1		
Ocean	CDCL, RB	28	153		
Passaic	RB	4	4		
Salem	CDCL	4	49		
Sussex	ABC	8	69		
Warren	CDCL	1	6		
TOTAL		316	4171	5	1.206

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. A total of 5 county-trapped positive pools have been detected, one in Atlantic and four in Burlington County.

Horses and Humans: Five horses have been reported with EEE. The fifth horse is a 12 year old gelding in Gloucester County. Symptom onset was 12 Sep and the unvaccinated horse was euthanized on the 13th Sep. The fourth horse was reported in Ocean County. This gelding of unknown age and unknown vaccination history showed symptoms on the 3rd of September and was euthanized on the 4th. A third EEE horse was reported in Ocean County. This seven year old had an unknown vaccination history, but had apparently been purchased 2 months prior. Date of onset and euthanasia was 4 Sept. The second reported horse with EEE was 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 18 Aug. 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. **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

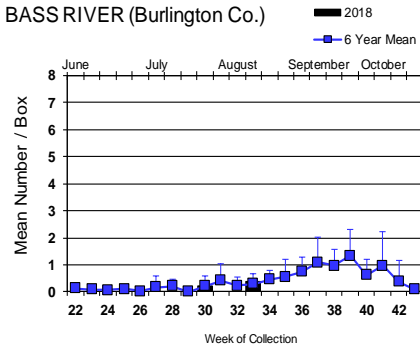
Additional Species: Twenty additional species were tested for EEE. No positives were detected.

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	3	26		
<i>Aedes atlanticus</i>	1	7		
<i>Aedes canadensis canadensis</i>	1	10		
<i>Aedes cantator</i>	2	2		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	1	1		
<i>Aedes sollicitans</i>	10	63		
<i>Aedes taeniorhynchus</i>	3	88		
<i>Aedes triseriatus</i>	1	1		
<i>Aedes vexans</i>	3	32		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	51	356		
<i>Anopheles punctipennis</i>	14	47		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	84	1775		
<i>Culex erraticus</i>	92	850		
<i>Culex pipiens</i>	756	9722		
<i>Culex salinarius</i>	298	1455		
<i>Culex</i> spp.	52	215		
<i>Culiseta inornata</i>	1	10		
<i>Psorophora columbiae</i>	2	7		
<i>Psorophora ferox</i>	4	300		
State Total	1382	14970		

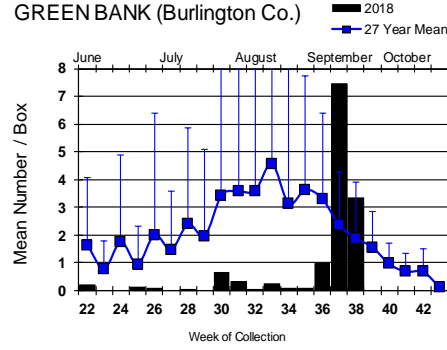
Culiseta melanura Populations

Coastal

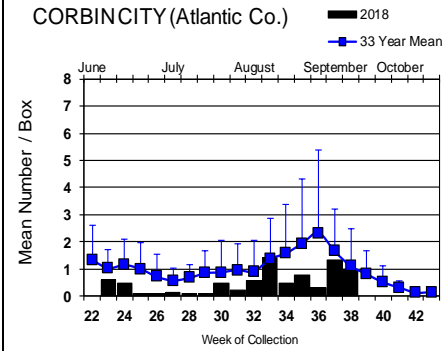
BASS RIVER (Burlington Co.)



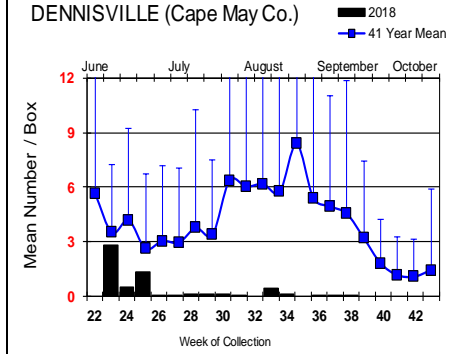
GREEN BANK (Burlington Co.)



CORBINCITY (Atlantic Co.)

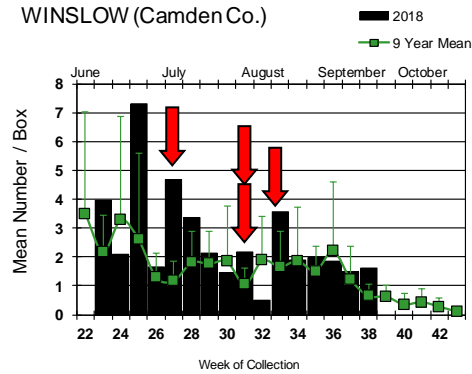


DENNISVILLE (Cape May Co.)

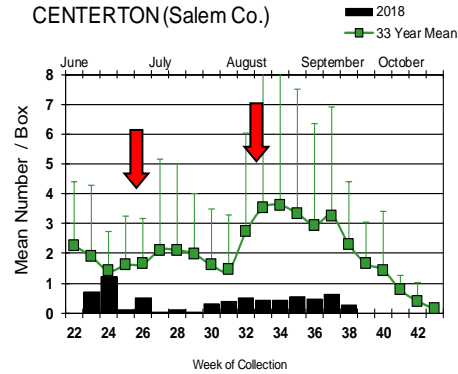


Inland

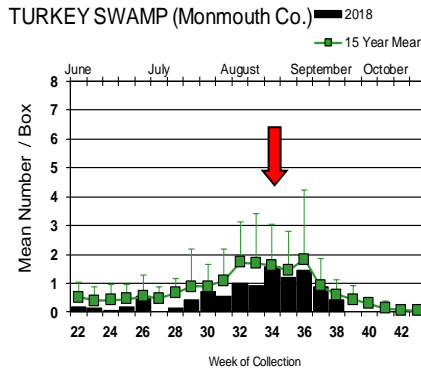
WINSLOW (Camden Co.)



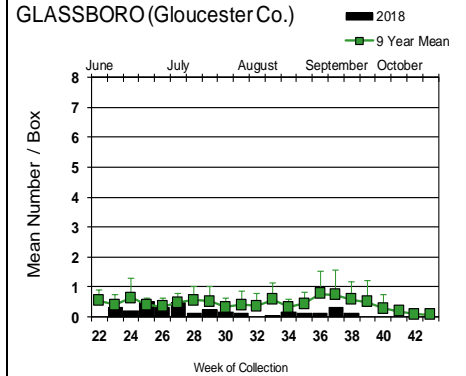
CENTERTON (Salem Co.)





TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



Populations continued to be well above the recent trend at Green Bank. Abundance at Winslow was also above historical averages while other sites were either at or below average.



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

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

- equine: AL(3) FL(51/2 mule & donkey) GA(6) LA(2) NC(7) NJ(5) NY(1) SC(1) VA(2) WI(1) Ontario Canada(10)
- mosquito pools: FL(2) NJ(12) NY(22) LA(1) MA(1) NC(1) RI(4)
- sentinel: FL(141/6 owl emus & 5 emu flocks) DE(6)
- human: FL(3) GA(1)

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					18/21
Alaska					
Arizona		55			7
Arkansas					
California	422/430	1,456/1,606	104/112	6/7	56/79
Colorado	Present	Present			16/47
Connecticut		334/362			
Delaware	27		47	3	5
DC	1	14/21		1	6/10
Florida	1	25	212	2	8
Georgia		Present			7
Hawaii					
Idaho		39		2	9
Illinois	24/30	2,865/2,922		2/7	51/63
Indiana		429/490			4/9
Iowa		70/77		4/6	30/39
Kansas					2/6
Kentucky		Present			1/6
Louisiana	73/86	984/1012		2/4	72/79
Maine		1			2
Maryland(+DC)	1	23/30		3	12/26
Mass.		425/572		1	11/14
Michigan	93/129	144/150			37/54
Minnesota		Present		Present	4/5
Mississippi		108			32/37
Missouri	1	3		3	10/12

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana		9		28/38	22/34
Nebraska	1	109/116			79/150
Nevada		Present			1/2
New Hampshire	4	16			
New Jersey		929/1,075		1	14/25
New Mexico					3
New York		1,066/1,261		2/4	12/24
North Carolina					3
North Dakota	12	88/102		4	108/148
Ohio		2,734/2,923		15/17	16/23
Oklahoma		19traps			2/7
Oregon	1	47			1
Pennsylvania	38	2,140		3	1
Rhode Island		8/10			
South Carolina					2/4
South Dakota		9counties			124/140
Tennessee	1	545/546			6/8
Texas	6	713/776		1/2	45
Utah		154/174			7/8
Vermont		120		1	
Virginia					17/21
Washington		48/49		2	1/2
West Virginia		24			
Wisconsin	44/52	79/83		1/2	2/6
Wyoming	2/3	10/11		6/11	1/3

* 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 21 September 2018

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	1	11		
<i>Aedes albopictus</i>	1149	9735	31	3.184
<i>Aedes atlanticus</i>	6	29		
<i>Aedes atropalpus</i>	22	56		
<i>Aedes canadensis canadensis</i>	28	230		
<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>	602	3676	19	5.169
<i>Aedes sollicitans</i>	18	156		
<i>Aedes sticticus</i>	4	41		
<i>Aedes taeniorhynchus</i>	12	324	1	3.086
<i>Aedes thibaulti</i>	1	10		
<i>Aedes triseriatus</i>	239	625	3	4.800
<i>Aedes trivittatus</i>	16	155	1	6.452
<i>Aedes vexans</i>	108	1785	2	1.120
<i>Anopheles barberi</i>	2	8		
<i>Anopheles bradleyi</i>	58	527		
<i>Anopheles crucians</i>	1	2	1	500.00
<i>Anopheles punctipennis</i>	62	195	1	5.128
<i>Anopheles quadrimaculatus</i>	149	2419	1	0.413
<i>Coquillettidia perturbans</i>	110	2706	3	1.109
<i>Culex erraticus</i>	128	1068	6	5.618
<i>Culex pipiens</i>	837	11480	31	2.700
<i>Culex restuans</i>	504	4085	7	1.714
<i>Culex salinarius</i>	331	3079	2	0.650
<i>Culex</i> spp.	2895	118630	950	8.008
<i>Culex territans</i>	14	63		
<i>Culiseta inornata</i>	1	10		
<i>Culiseta melanura</i>	460	7770	14	1.802
<i>Orthopodomyia signifera</i>	2	3		
<i>Psorophora ciliata</i>	3	62		
<i>Psorophora columbiae</i>	20	115	1	8.696
<i>Psorophora cyanescens</i>	1	14		
<i>Psorophora ferox</i>	39	610		
<i>Psorophora howardii</i>	1	2	1	500.00
<i>Uranotaenia sapphirina</i>	3	13		
Grand Total	7839	169760	1075	6.332

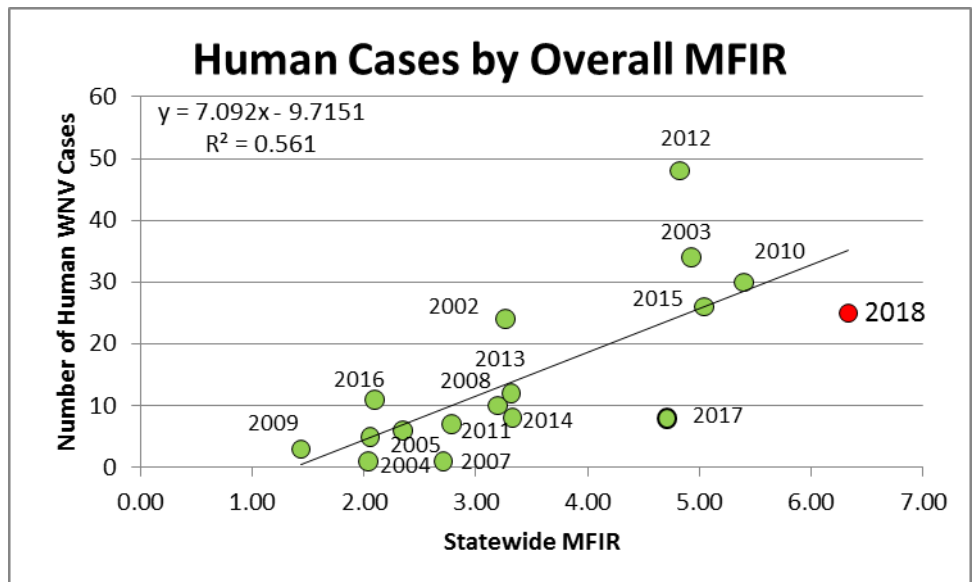
Remarks: To date, 7839 pools of 169,760 mosquitoes from 37 species have been tested. A total of 1075 positive WNV pools have been detected throughout the state. The bulk of new positives continue to be in the enzootic vector(s) *Culex* spp. First positive WNV pool detected has been revised from 7 June 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. Positive non-*Culex* species also include *Aedes albopictus*, *Ae. taeniorhynchus*, *Ae. triseriatus*, *Ae. trivittatus*, *Ae. vexans*, *Anopheles crucians*, *An. punctipennis*, *An. quadrimaculatus*, *Coquillettidia perturbans*, *Culex erraticus*, *Culiseta melanura*, *Psorophora columbiae* and *Ps. howardii*. The statewide MFIR rate for all mosquitoes is 6.332.

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.**

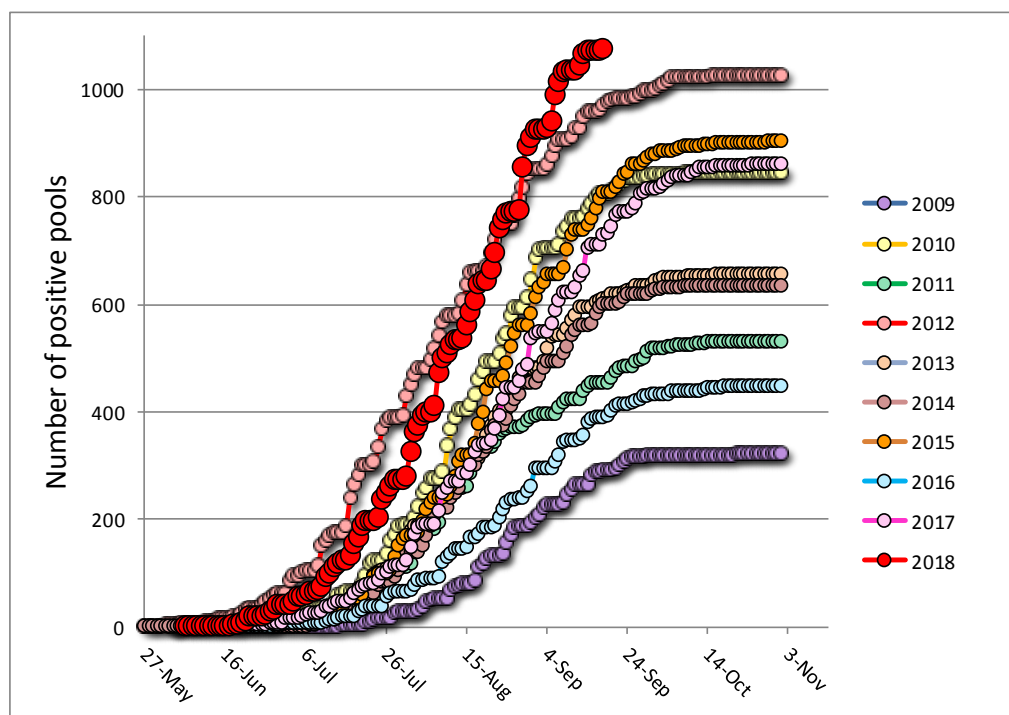
Humans, Horses and Wild Birds:

Currently nineteen human cases of WNV have been detected in the following counties: Bergen 6, Burlington 1, Camden 2, Cape May 1, Essex 1, Hudson 2, Hunterdon 2, Middlesex 2, Monmouth 1, Morris 1, Ocean 1, Passaic 1, Somerset 2, Union 1, and Warren 1. Despite the significant increase in human cases, the relationship between overall MFIR values and human cases (graph to right) suggest we can reasonably expect more cases. This week, the estimate for 2018 rose toward the trend line.



The first WNV horse case has been reported, occurring in Burlington County. The 10 year old mare is currently being treated. 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 currently has surpassed 2012 in activity.

WNV Results by County through 21 September 2018.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		220	5896	23	3.901
	<i>Aedes albopictus</i>	41	879	1	1.138
	<i>Aedes atlanticus</i>	1	13		
	<i>Aedes canadensis canadensis</i>	3	54		
	<i>Aedes japonicus</i>	6	64		
	<i>Aedes sollicitans</i>	3	85		
	<i>Aedes sticticus</i>	1	35		
	<i>Aedes taeniorhynchus</i>	5	271		
	<i>Aedes vexans</i>	12	209	1	4.785
	<i>Anopheles bradleyi</i>	4	165		
	<i>Coquillettidia perturbans</i>	13	320	1	3.125
	<i>Culex erraticus</i>	11	188	1	5.319
	<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.	39	1239	11	8.878
	<i>Culiseta melanura</i>	53	1170	2	1.709
	<i>Psorophora ferox</i>	9	451		
Bergen		244	15533	118	7.597
	<i>Aedes albopictus</i>	20	494		
	<i>Aedes japonicus</i>	5	20	1	50.000
	<i>Coquillettidia perturbans</i>	4	50		
	<i>Culex</i> spp.	207	14946	116	7.761
	<i>Culiseta melanura</i>	7	21		
	<i>Psorophora howardii</i>	1	2	1	500.000
Burlington		211	6797	31	4.561
	<i>Aedes albopictus</i>	15	163		
	<i>Aedes atlanticus</i>	1	7		
	<i>Aedes canadensis canadensis</i>	1	10		
	<i>Aedes infirmatus</i>	1	1		
	<i>Aedes japonicus</i>	12	148	2	13.514
	<i>Aedes taeniorhynchus</i>	1	42		
	<i>Aedes triseriatus</i>	2	7		
	<i>Aedes vexans</i>	3	32		
	<i>Anopheles bradleyi</i>	2	76		
	<i>Coquillettidia perturbans</i>	2	127		
	<i>Culex erraticus</i>	6	141		
	<i>Culex pipiens</i>	2	2		
	<i>Culex salinarius</i>	9	323		
	<i>Culex</i> spp.	88	3292	23	6.987
	<i>Culiseta melanura</i>	65	2420	6	2.479
	<i>Psorophora columbiae</i>	1	6		
Camden		178	6069	35	5.767
	<i>Aedes albopictus</i>	27	83	3	36.145
	<i>Aedes excrucians</i>	1	2		
	<i>Aedes japonicus</i>	26	135	1	7.407
	<i>Aedes triseriatus</i>	1	2		
	<i>Anopheles punctipennis</i>	2	3		

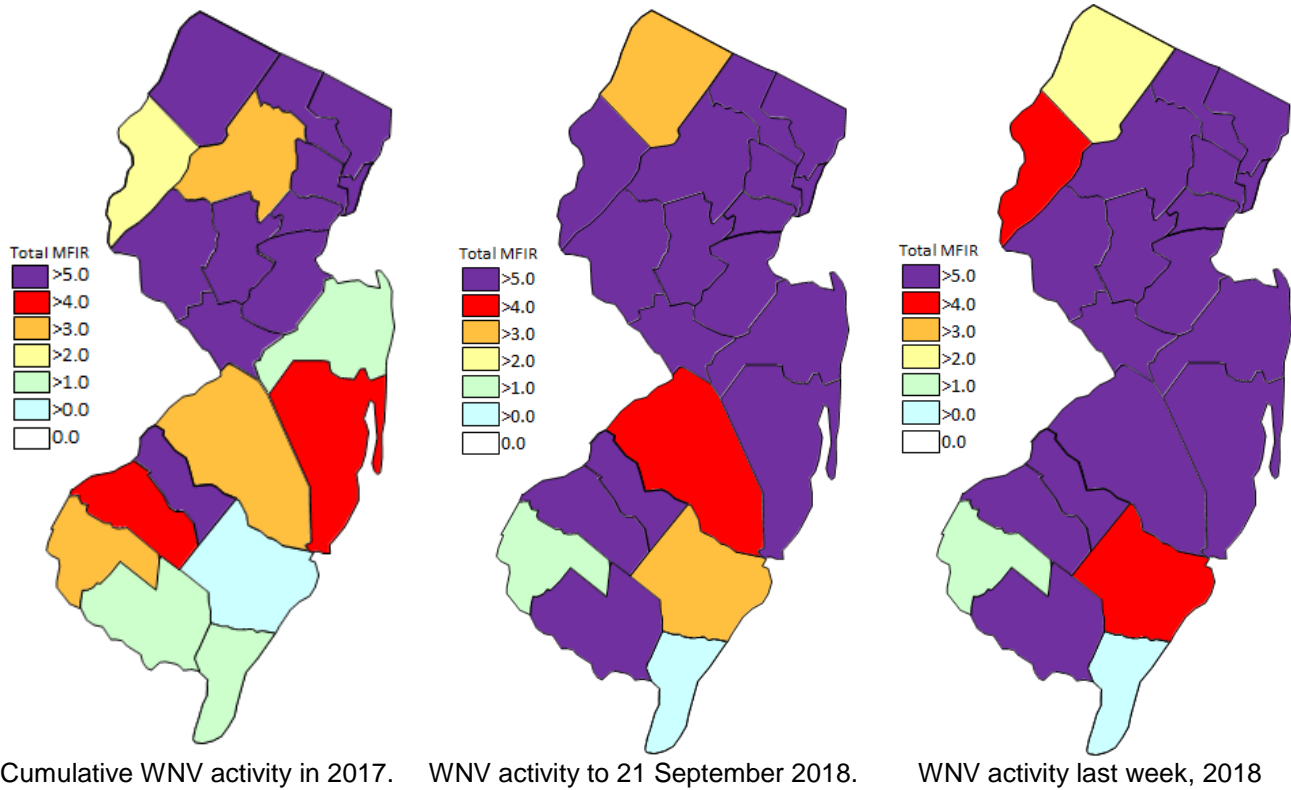
<i>Culex</i> spp.	71	3756	29	7.721
<i>Culiseta melanura</i>	49	2086	2	0.959
<i>Psorophora ferox</i>	1	2		
Cape May	2838	18651	17	0.911
<i>Aedes albopictus</i>	506	1108		
<i>Aedes atlanticus</i>	2	3		
<i>Aedes atropalpus</i>	22	56		
<i>Aedes canadensis canadensis</i>	7	11		
<i>Aedes cantator</i>	2	2		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	223	497		
<i>Aedes sollicitans</i>	7	7		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	2	2		
<i>Aedes triseriatus</i>	121	230		
<i>Aedes vexans</i>	17	33		
<i>Anopheles bradleyi</i>	49	280		
<i>Anopheles punctipennis</i>	7	15		
<i>Anopheles quadrimaculatus</i>	127	2145		
<i>Coquillettidia perturbans</i>	10	33		
<i>Culex erraticus</i>	36	318		
<i>Culex pipiens</i>	756	9722	16	1.646
<i>Culex restuans</i>	416	2129	1	0.470
<i>Culex salinarius</i>	286	1122		
<i>Culex</i> spp.	39	133		
<i>Culex territans</i>	14	63		
<i>Culiseta melanura</i>	173	708		
<i>Orthopodomyia signifera</i>	2	3		
<i>Psorophora columbiae</i>	5	10		
<i>Psorophora ferox</i>	4	6		
<i>Uranotaenia sapphirina</i>	3	13		
Cumberland	195	1977	10	5.058
<i>Aedes albopictus</i>	47	646	3	4.644
<i>Aedes japonicus</i>	12	47		
<i>Aedes sollicitans</i>	1	3		
<i>Aedes sticticus</i>	1	1		
<i>Aedes triseriatus</i>	8	16		
<i>Aedes trivittatus</i>	1	8		
<i>Aedes vexans</i>	19	277		
<i>Anopheles punctipennis</i>	10	43		
<i>Anopheles quadrimaculatus</i>	11	252		
<i>Coquillettidia perturbans</i>	3	3		
<i>Culex erraticus</i>	14	124	2	16.129
<i>Culex pipiens</i>	4	39		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	3	10		
<i>Culex</i> spp.	35	344	3	8.721
<i>Culiseta melanura</i>	13	74	2	27.027
<i>Psorophora columbiae</i>	6	67		
<i>Psorophora ferox</i>	6	22		
Essex	140	760	12	15.789
<i>Aedes albopictus</i>	38	117		
<i>Aedes japonicus</i>	21	36	3	83.333

<i>Aedes trivittatus</i>	14	21	1	47.619
<i>Aedes vexans</i>	2	3		
<i>Anopheles quadrimaculatus</i>	2	2	1	500.000
<i>Culex</i> spp.	63	581	7	12.048
Gloucester	352	10074	81	8.041
<i>Aedes albopictus</i>	80	645	5	7.752
<i>Aedes japonicus</i>	63	775	9	11.613
<i>Aedes triseriatus</i>	13	64		
<i>Aedes vexans</i>	1	24		
<i>Anopheles barberi</i>	1	7		
<i>Anopheles punctipennis</i>	8	32	1	31.250
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex pipiens</i>	21	351	5	14.245
<i>Culex restuans</i>	1	3		
<i>Culex</i> spp.	146	7947	61	7.676
<i>Culiseta melanura</i>	15	157		
<i>Psorophora ferox</i>	1	65		
Hudson	169	8231	59	7.168
<i>Culex</i> spp.	169	8231	59	7.168
Hunterdon	284	13563	108	7.963
<i>Culex</i> spp.	284	13563	108	7.963
Mercer	264	5114	42	8.213
<i>Aedes albopictus</i>	59	734	3	4.087
<i>Aedes canadensis canadensis</i>	1	6		0.000
<i>Aedes japonicus</i>	62	288	1	3.472
<i>Aedes triseriatus</i>	2	7		
<i>Aedes vexans</i>	15	157	1	6.369
<i>Coquillettidia perturbans</i>	1	3	1	333.333
<i>Culex erraticus</i>	1	6		
<i>Culex pipiens</i>	5	59	1	16.949
<i>Culex restuans</i>	37	1100	6	5.455
<i>Culex</i> spp.	81	2754	29	10.530
Middlesex	203	6063	53	8.742
<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.	192	5920	53	8.953
<i>Culiseta inornata</i>	1	10		
Monmouth	426	8743	55	6.291
<i>Aedes albopictus</i>	92	2130	5	2.347
<i>Aedes atlanticus</i>	1	5		
<i>Aedes canadensis canadensis</i>	13	105		
<i>Aedes cantator</i>	5	50		
<i>Aedes grossbecki</i>	2	10		
<i>Aedes japonicus</i>	17	47		
<i>Aedes sollicitans</i>	5	37		
<i>Aedes taeniorhynchus</i>	3	5		

<i>Aedes triseriatus</i>	16	131		
<i>Aedes trivittatus</i>	6	55		
<i>Aedes vexans</i>	16	84		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles punctipennis</i>	1	2	1	500.000
<i>Anopheles crucians</i>	26	87		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	4	5		
<i>Culex erraticus</i>	8	32	2	62.500
<i>Culex salinarius</i>	7	243		
<i>Culex spp.</i>	160	5182	46	8.877
<i>Culiseta melanura</i>	21	460		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	4	17	1	58.824
<i>Psorophora ferox</i>	15	52		
Morris	374	14772	141	9.545
<i>Aedes albopictus</i>	6	39		
<i>Aedes japonicus</i>	7	80		
<i>Coquillettidia perturbans</i>	6	300		
<i>Culex spp</i>	354	14352	141	9.824
<i>Culiseta melanura</i>	1	1		
Ocean	278	2332	26	11.149
<i>Aedes albopictus</i>	82	679	5	7.364
<i>Aedes japonicus</i>	33	86		
<i>Aedes triseriatus</i>	25	65	2	30.769
<i>Aedes vexans</i>	1	2		
<i>Anopheles punctipennis</i>	2	2		
<i>Anopheles quadrimaculatus</i>	3	6		
<i>Coquillettidia perturbans</i>	21	168	1	5.952
<i>Culex erraticus</i>	10	23		
<i>Culex salinarius</i>	2	3		
<i>Culex spp.</i>	70	1144	17	14.860
<i>Culiseta melanura</i>	28	153	1	6.536
<i>Psorophora ferox</i>	1	1		
Passaic	177	1627	13	7.990
<i>Aedes abserratus</i>	1	11		
<i>Aedes albopictus</i>	17	82		
<i>Aedes japonicus</i>	38	260	1	3.846
<i>Aedes thibaulti</i>	1	10		
<i>Aedes triseriatus</i>	4	14		
<i>Aedes vexans</i>	1	34		
<i>Coquillettidia perturbans</i>	5	40		
<i>Culex erraticus</i>	10	17		
<i>Culex pipiens</i>	11	202		
<i>Culex restuans</i>	9	95		
<i>Culex spp.</i>	75	844	12	14.218
<i>Culiseta melanura</i>	4	4		
<i>Psorophora cyanescens</i>	1	14		
Salem	351	7003	9	1.285
<i>Aedes albopictus</i>	67	887		
<i>Aedes atlanticus</i>	1	1		

<i>Aedes canadensis canadensis</i>	1	1		
<i>Aedes japonicus</i>	32	155		
<i>Aedes sollicitans</i>	2	24		
<i>Aedes taeniorhynchus</i>	1	4	1	250.000
<i>Aedes triseriatus</i>	26	34		
<i>Aedes trivittatus</i>	2	3		
<i>Aedes vexans</i>	2	79		
<i>Anopheles bradleyi</i>	2	5		
<i>Anopheles punctipennis</i>	3	3		
<i>Anopheles quadrimaculatus</i>	3	7		
<i>Coquillettidia perturbans</i>	20	550		
<i>Culex erraticus</i>	32	219	1	4.566
<i>Culex pipiens</i>	11	14		
<i>Culex restuans</i>	3	14		
<i>Culex salinarius</i>	11	759	1	1.318
<i>Culex spp.</i>	105	3836	5	1.303
<i>Culiseta melanura</i>	21	385	1	2.597
<i>Psorophora ciliate</i>	1	6		
<i>Psorophora columbiae</i>	3	6		
<i>Psorophora ferox</i>	2	11		
Somerset	229	8181	78	9.534
<i>Aedes albopictus</i>	1	2		
<i>Aedes canadensis canadensis</i>	1	12		
<i>Aedes japonicus</i>	12	150		
<i>Aedes triseriatus</i>	3	5		
<i>Anopheles punctipennis</i>	2	4		
<i>Culex spp.</i>	210	8008	78	9.740
Sussex	251	8075	30	3.715
<i>Aedes albopictus</i>	1	3		
<i>Aedes canadensis canadensis</i>	1	31		
<i>Aedes japonicus</i>	3	126		
<i>Aedes triseriatus</i>	3	27		
<i>Aedes vexans</i>	9	600		
<i>Coquillettidia perturbans</i>	15	1008		
<i>Culex pipiens</i>	10	385	3	7.792
<i>Culex restuans</i>	36	720		
<i>Culex salinarius</i>	12	595	1	1.681
<i>Culex spp.</i>	153	4511	26	5.764
<i>Culiseta melanura</i>	8	69		
Union	136	7567	69	9.119
<i>Aedes albopictus</i>	26	619	5	8.078
<i>Culex spp.</i>	110	6948	64	9.211
Warren	319	12732	65	5.105
<i>Aedes albopictus</i>	19	366	1	2.732
<i>Aedes japonicus</i>	29	698	1	1.433
<i>Aedes sticticus</i>	1	4		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes trivittatus</i>	7	89	1	11.236
<i>Aedes vexans</i>	10	251		
<i>Anopheles punctipennis</i>	1	5		
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Coquillettidia perturbans</i>	2	89		

<i>Culex</i> spp.	244	11099	62	5.586
<i>Culiseta melanura</i>	2	62		
<i>Psorophora ciliata</i>	1	55		
<i>Psorophora columbiae</i>	1	9		
Grand Total	7213	154126	929	6.028



Saint Louis Encephalitis (SLE) to 21 September 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		36	1987		
	<i>Culex</i> spp	36	1987		
Cape May		794	9853		
	<i>Culex pipiens</i>	756	9722		
	<i>Culex</i> spp.	38	131		

Grand Total		830	11840		
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La Crosse Encephalitis (LAC) to 21 September 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		12	197		
	<i>Aedes albopictus</i>	4	73		
	<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		22	237		

Dengue (DENV) to 21 September 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		41	879	41	879	41	879	41	879		
	<i>Aedes albopictus</i>	41	879	41	879	41	879	41	879		
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		49	527	49	527	49	527	49	527		
	<i>Aedes albopictus</i>	49	527	49	527	49	527	49	527		
Sussex		1	3	1	3	1	3	1	3		
	<i>Aedes albopictus</i>	1	3	1	3	1	3	1	3		
Grand Total		101	1455	101	1455	101	1455	101	1455		

Chikungunya (CHIK) to 21 September 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 6 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		41	879		
	<i>Aedes albopictus</i>	41	879		
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		49	527		
	<i>Aedes albopictus</i>	49	527		
Sussex		1	3		
	<i>Aedes albopictus</i>	1	3		
Grand Total		101	1455		

Zika (ZIKV) to 21 September 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		41	879		
	<i>Aedes albopictus</i>	41	879		
Bergen		1	14		
	<i>Aedes albopictus</i>	1	14		
Cape May		492	1069		
	<i>Aedes albopictus</i>	492	1069		
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		49	527		
	<i>Aedes albopictus</i>	49	527		
Sussex		1	3		
	<i>Aedes albopictus</i>	1	3		
Grand Total		593	2524		