

VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 32: 5 August to 11 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	0.42	0.00	1	1		
Green Bank (Burlington Co.)/25	Coastal	3.58	0.32	27 (35)	5 (6)		
Corbin City (Atlantic Co.)/25	Coastal	0.97	0.24	53 (57) ‡	7 (8)		
Dennisville (Cape May Co.)/50	Coastal	6.03	0.04	262	12		
Winslow (Camden Co.)/50	Inland	1.06	2.16	1442	34	3	2.080
Centerton (Salem Co.)/50	Inland	1.45	0.38	171	10	1	5.848
Turkey Swamp (Monmouth Co.)/50	Inland	1.10	0.56	117	11		
Glassboro (Gloucester Co.)/48	Inland	0.39	0.12	116	9		

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

Remarks: Currently for the 2018 season, there are five detections of EEE among submitted mosquito pools, four at resting box sites (3 at Winslow and 1 at Centerton) and the latest from an additional county-placed trap. All are in the enzootic vector, *Culiseta melanura*.

Statewide, 4529 *Cs. melanura* from 286 pools have been tested, with five positive pools detected for an overall *Cs. melanura* MFIR of 1.104. 9066 specimens in 768 pools from 15 other species have also been tested, with no positives detected. Overall MFIR for all species statewide is 0.368.

Traditional Resting Box Sites: 2259 *Cs. melanura* from 92 pools have been tested for EEE (plus three pools totaling 59 to be tested) in 2018. Four positive EEE pools have previously been detected from the Winslow and Centerton resting box site, the last two from Winslow were collected 30 July.

Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD .					
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO2, RB	22	566	1	
Bergen	RB	4	11		
Burlington	CDCL	26	1137		
Cape May	GR, RB	105	281		
Cumberland	BGSCL, RB	10	50		
Morris	CDCL	1	1		
Ocean	CDCL, RB	16	111		
Passaic	RB	1	1		
Salem	CDCL	3	46		
Sussex	ABC	5	60		
Warren	CDCL	1	6		
TOTAL		194	2270		

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

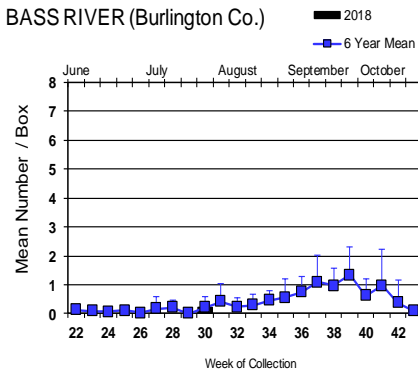
Additional Species: Fifteen additional species were tested for EEE. No positives were detected.

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	1	1		
<i>Aedes canadensis canadensis</i>	1	10		
<i>Aedes cantator</i>	2	2		
<i>Aedes sollicitans</i>	4	8		
<i>Aedes taeniorhynchus</i>	2	46		
<i>Aedes vexans</i>	1	6		
<i>Anopheles bradleyi</i>	16	77		
<i>Anopheles punctipennis</i>	6	21		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	59	1246		
<i>Culex erraticus</i>	28	125		
<i>Culex pipiens</i>	463	6483		
<i>Culex salinarius</i>	147	618		
<i>Culex</i> spp.	32	112		
<i>Culiseta inornata</i>	1	10		
<i>Psorophora ferox</i>	4	300		
State Total	768	9066		

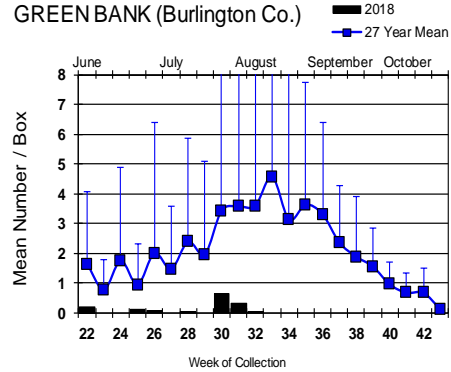
Culiseta melanura Populations

Coastal

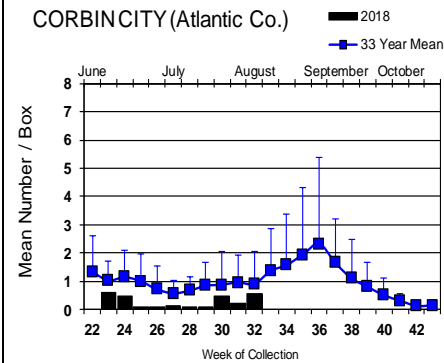
BASS RIVER (Burlington Co.)



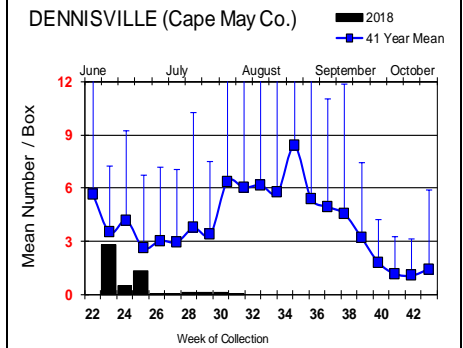
GREEN BANK (Burlington Co.)



CORBINCITY (Atlantic Co.)

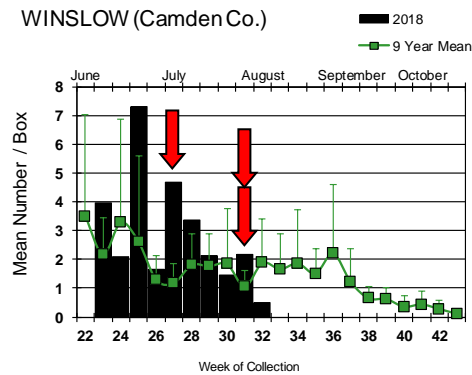


DENNISVILLE (Cape May Co.)

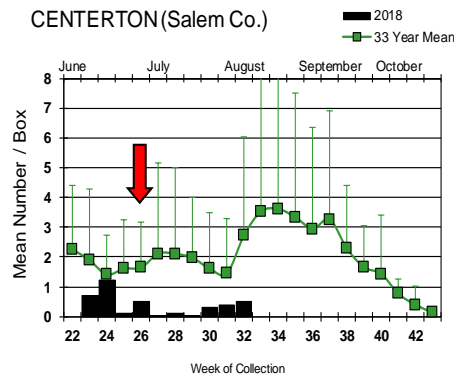


Inland

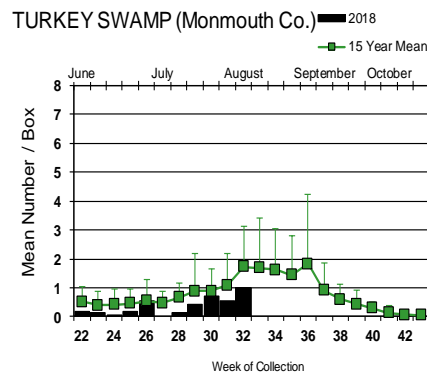
WINSLOW (Camden Co.)



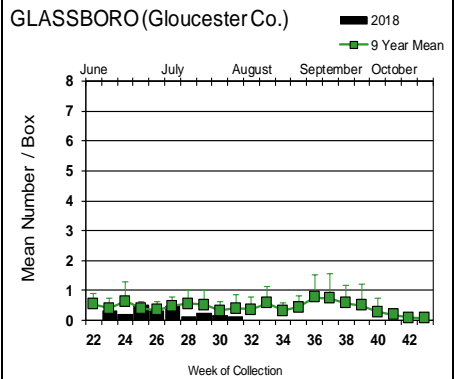
CENTERTON (Salem Co.)





TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



Most sites continue to generally show low population numbers. Turkey Swamp had the most notable increase in numbers this past 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(47/2 mule & donkey)**
- **mosquito pools: FL(2) NJ(2) RI(4)**
- **sentinel: FL(99/6 owl emus & 5 emu flocks)**
- **human: FL(2)**

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					1/4
Alaska					
Arizona		20/21			1
Arkansas					
California	167/232	480/674	11/14		12
Colorado	3	11			3
Connecticut		62/103			
Delaware	2				1
DC	1				
Florida	1	11/13	50/57		1
Georgia		Present			Present
Hawaii					
Idaho		8/10		1	1
Illinois	8/10	803/1301			2/4
Indiana		122/226			1
Iowa		Present			Present
Kansas					Present
Kentucky		Present			Present
Louisiana	7	253			13
Maine					
Maryland	1	8			1/2
Mass.		120/172			
Michigan	28/40	26/47			
Minnesota		Present			4
Mississippi		65			11/17
Missouri	1	3		1	

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana		3		2	
Nebraska		6/15			2/4
Nevada		Present			
New Hampshire		1			
New Jersey		212/330			1
New Mexico					Present
New York		175/220			1
North Carolina					1
North Dakota	8/10	17/34		1	4/18
Ohio		822/1078			2
Oklahoma		10/12			1
Oregon		11/170			
Pennsylvania	23/35	1100/209			1
Rhode Island					
South Carolina					1
South Dakota		7/8			10/27
Tennessee					1
Texas		315/368		1	6/8
Utah		9/26			
Vermont		26/33			
Virginia					1
Washington		21/27			
West Virginia		1			
Wisconsin	19	13/19			
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 10 August 2018

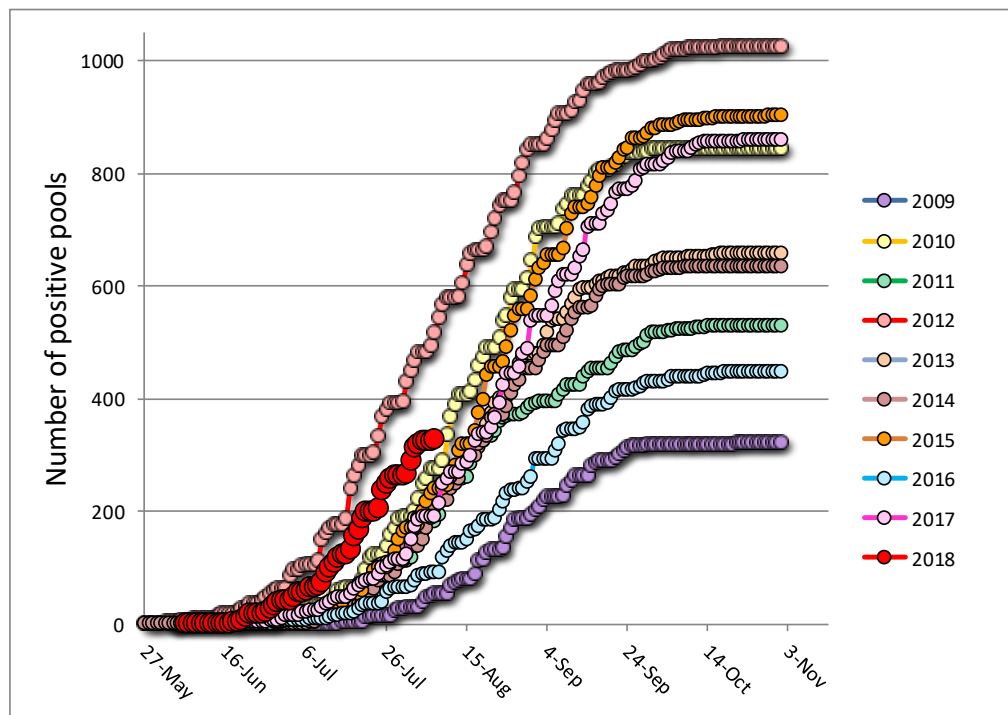
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	1	11		
<i>Aedes albopictus</i>	476	2582	12	4.648
<i>Aedes atropalpus</i>	16	46		
<i>Aedes canadensis canadensis</i>	24	194		
<i>Aedes cantator</i>	7	52		
<i>Aedes excrucians</i>	1	2		
<i>Aedes grossbecki</i>	2	10		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	388	2642	9	3.407
<i>Aedes sollicitans</i>	8	44		
<i>Aedes sticticus</i>	3	37		
<i>Aedes taeniorhynchus</i>	3	47		
<i>Aedes thibaulti</i>	1	10		
<i>Aedes triseriatus</i>	145	404	1	2.475
<i>Aedes trivittatus</i>	5	59		
<i>Aedes vexans</i>	32	417	1	2.398
<i>Anopheles barberi</i>	1	7		
<i>Anopheles bradleyi</i>	21	98		
<i>Anopheles punctipennis</i>	34	114		
<i>Anopheles quadrimaculatus</i>	105	1822		
<i>Coquillettidia perturbans</i>	79	2055	1	0.487
<i>Culex erraticus</i>	43	193	1	5.181
<i>Culex pipiens</i>	512	7465	9	1.206
<i>Culex restuans</i>	363	3456	4	1.157
<i>Culex salinarius</i>	159	931		
<i>Culex</i> spp.	1662	71601	286	3.994
<i>Culex territans</i>	12	56		
<i>Culiseta inornata</i>	1	10		
<i>Culiseta melanura</i>	287	4530	6	1.325
<i>Orthopodomyia signifera</i>	1	2		
<i>Psorophora ciliata</i>	1	6		
<i>Psorophora columbiae</i>	8	25		
<i>Psorophora ferox</i>	31	519		
Grand Total	4433	99448	330	3.318

Remarks: To date, 4433 pools of 99,448 mosquitoes from 32 species have been tested. A total of 330 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. vexans*, *Coquillettidia perturbans*, *Culex erraticus*, and *Culiseta melanura*. The statewide MFIR rate for all mosquitoes is 3.318.

***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 one human cases of WNV have been detected, occurring in Hunterdon County, date of onset currently unknown. 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 near the bottom of the graph represents this year, suggestive of increased activity.

WNV Results by County through 10 August 2018.

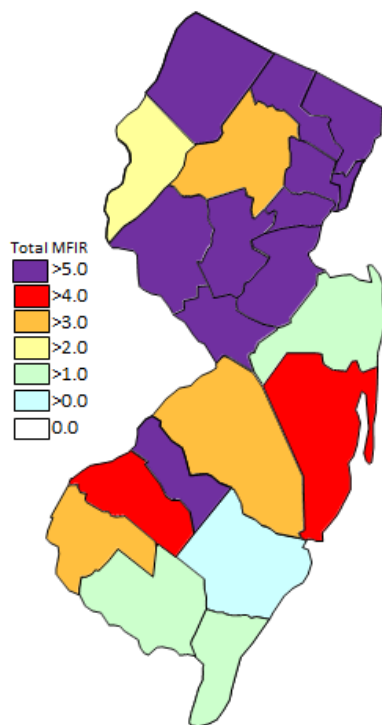
County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		108	2728	5	1.833
	<i>Aedes albopictus</i>	13	149	1	6.711
	<i>Aedes canadensis canadensis</i>	3	54		
	<i>Aedes japonicus</i>	5	48		
	<i>Aedes sollicitans</i>	1	5		
	<i>Aedes sticticus</i>	1	35		
	<i>Aedes taeniorhynchus</i>	2	46		
	<i>Aedes vexans</i>	5	44		
	<i>Anopheles bradleyi</i>	2	15		
	<i>Coquillettidia perturbans</i>	8	257		
	<i>Culex erraticus</i>	4	16		
	<i>Culex pipiens</i>	8	376		
	<i>Culex restuans</i>	1	23		
	<i>Culex salinarius</i>	1	24		
	<i>Culex</i> spp.	14	556	4	7.194
	<i>Culiseta melanura</i>	31	629		
	<i>Psorophora ferox</i>	9	451		

Bergen	141	9884	57	5.767
<i>Aedes albopictus</i>	1	14		
<i>Coquillettidia perturbans</i>	2	34		
<i>Culex</i> spp.	134	9825	57	5.802
<i>Culiseta melanura</i>	4	11		
Burlington	114	4093	16	3.909
<i>Aedes albopictus</i>	7	75		
<i>Aedes canadensis canadensis</i>	1	10		
<i>Aedes japonicus</i>	7	120	1	8.333
<i>Aedes triseriatus</i>	2	7		
<i>Aedes vexans</i>	1	6		
<i>Coquillettidia perturbans</i>	1	52		
<i>Culex erraticus</i>	2	11		
<i>Culex pipiens</i>	1	1		
<i>Culex salinarius</i>	4	95		
<i>Culex</i> spp.	56	2544	12	4.717
<i>Culiseta melanura</i>	32	1172	3	2.560
Camden	114	4176	16	3.831
<i>Aedes albopictus</i>	13	21	2	95.238
<i>Aedes excrucians</i>	1	2		
<i>Aedes japonicus</i>	17	117	1	8.547
<i>Anopheles punctipennis</i>	2	3		
<i>Culex</i> spp.	45	2563	13	5.072
<i>Culiseta melanura</i>	35	1468		
<i>Psorophora ferox</i>	1	2		
Cape May	1689	12142	5	0.412
<i>Aedes albopictus</i>	224	388		
<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>	165	402		
<i>Aedes sollicitans</i>	3	3		
<i>Aedes sticticus</i>	1	1		
<i>Aedes triseriatus</i>	81	163		
<i>Aedes vexans</i>	3	3		
<i>Anopheles bradleyi</i>	16	77		
<i>Anopheles punctipennis</i>	6	8		
<i>Anopheles quadrimaculatus</i>	92	1636		
<i>Coquillettidia perturbans</i>	7	9		
<i>Culex erraticus</i>	10	52		
<i>Culex pipiens</i>	466	6486	5	0.771
<i>Culex restuans</i>	287	1631		
<i>Culex salinarius</i>	141	521		
<i>Culex</i> spp.	27	95		
<i>Culex territans</i>	12	56		
<i>Culiseta melanura</i>	117	543		
<i>Orthopodomyia signifera</i>	1	2		
<i>Psorophora columbiae</i>	1	1		
<i>Psorophora ferox</i>	3	5		
Cumberland	118	1080	4	3.704

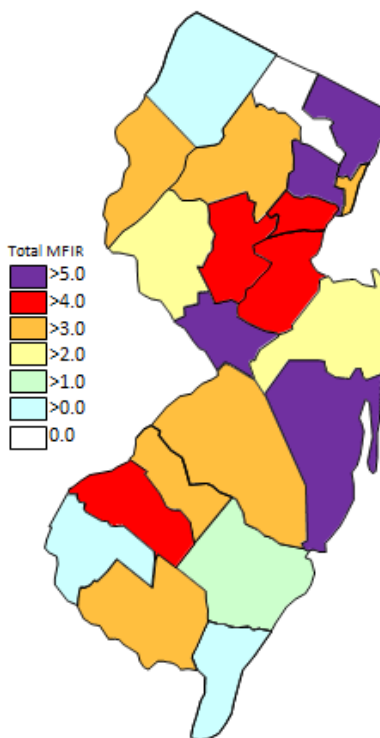
<i>Aedes albopictus</i>	32	354		
<i>Aedes japonicus</i>	8	41		
<i>Aedes sticticus</i>	1	1		
<i>Aedes triseriatus</i>	6	13		
<i>Aedes trivittatus</i>	1	8		
<i>Aedes vexans</i>	9	148		
<i>Anopheles punctipennis</i>	6	34		
<i>Anopheles quadrimaculatus</i>	7	173		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex erraticus</i>	5	37	1	27.027
<i>Culex pipiens</i>	4	39		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	2	2		
<i>Culex</i> spp.	17	153	1	6.536
<i>Culiseta melanura</i>	10	50	2	40.000
<i>Psorophora columbiae</i>	3	9		
<i>Psorophora ferox</i>	5	16		
Essex	68	416	4	9.615
<i>Aedes albopictus</i>	14	22		0.000
<i>Aedes japonicus</i>	9	18	2	111.111
<i>Aedes trivittatus</i>	6	9		
<i>Culex</i> spp.	39	367	2	5.450
Gloucester	139	4851	22	4.535
<i>Aedes albopictus</i>	24	174		
<i>Aedes japonicus</i>	30	481	4	8.316
<i>Aedes triseriatus</i>	8	40		
<i>Anopheles barberi</i>	1	7		
<i>Anopheles punctipennis</i>	1	9		
<i>Culex pipiens</i>	7	187	3	16.043
<i>Culex</i> spp.	59	3837	15	3.909
<i>Culiseta melanura</i>	9	116		
Hudson	94	5113	19	3.716
<i>Culex</i> spp.	94	5113	19	3.716
Hunterdon	165	8030	20	2.491
<i>Culex</i> spp.	165	8030	20	2.491
Mercer	160	3848	28	7.277
<i>Aedes albopictus</i>	22	231	2	8.658
<i>Aedes canadensis canadensis</i>	1	6		
<i>Aedes japonicus</i>	42	202	1	4.950
<i>Aedes triseriatus</i>	2	7		
<i>Aedes vexans</i>	6	101	1	9.901
<i>Culex pipiens</i>	5	59	1	16.949
<i>Culex restuans</i>	33	1042	4	3.839
<i>Culex</i> spp.	49	2200	19	8.636
Middlesex	130	4693	23	4.901
<i>Aedes albopictus</i>	3	36		
<i>Aedes japonicus</i>	1	64		
<i>Anopheles punctipennis</i>	1	1		
<i>Coquillettidia perturbans</i>	1	1		

<i>Culex</i> spp. <i>Culiseta inornata</i>	123 1	4581 10	23	5.021
Monmouth	239	4714	12	2.546
<i>Aedes albopictus</i>	43	612	1	1.634
<i>Aedes canadensis canadensis</i>	10	100		
<i>Aedes cantator</i>	5	50		
<i>Aedes grossbecki</i>	2	10		
<i>Aedes japonicus</i>	13	43		
<i>Aedes sollicitans</i>	4	36		
<i>Aedes taeniorhynchus</i>	1	1		
<i>Aedes triseriatus</i>	6	73		
<i>Aedes trivittatus</i>	4	51		
<i>Aedes vexans</i>	4	14		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles punctipennis</i>	15	56		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	3	4		
<i>Culex erraticus</i>	1	1		
<i>Culex salinarius</i>	7	243		
<i>Culex</i> spp.	99	3267	11	3.367
<i>Culiseta melanura</i>	10	118		
<i>Psorophora ferox</i>	10	33		
Morris	224	8923	34	3.810
<i>Coquillettidia perturbans</i>	6	300		
<i>Culex</i> spp	217	8622	34	3.943
<i>Culiseta melanura</i>	1	1		
Ocean	158	1008	8	7.937
<i>Aedes albopictus</i>	44	275	4	14.545
<i>Aedes japonicus</i>	20	57		
<i>Aedes triseriatus</i>	12	34	1	29.412
<i>Aedes vexans</i>	1	2		
<i>Anopheles punctipennis</i>	1	1		
<i>Anopheles quadrimaculatus</i>	2	5		
<i>Coquillettidia perturbans</i>	18	152	1	6.579
<i>Culex erraticus</i>	3	3		
<i>Culex salinarius</i>	2	3		
<i>Culex</i> spp.	37	363	2	5.510
<i>Culiseta melanura</i>	17	112		
<i>Psorophora ferox</i>	1	1		
Passaic	94	908		
<i>Aedes abserratus</i>	1	11		
<i>Aedes albopictus</i>	4	10		
<i>Aedes japonicus</i>	22	130		
<i>Aedes thibaulti</i>	1	10		
<i>Aedes triseriatus</i>	2	6		
<i>Coquillettidia perturbans</i>	4	34		
<i>Culex erraticus</i>	4	6		
<i>Culex pipiens</i>	11	202		
<i>Culex restuans</i>	9	95		
<i>Culex</i> spp.	35	403		
<i>Culiseta melanura</i>	1	1		

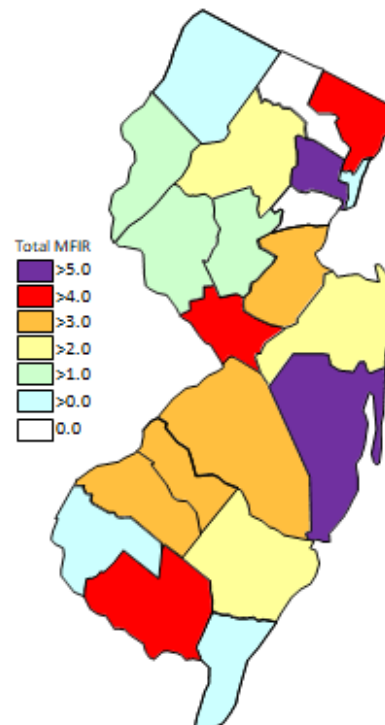
Salem	201	4529	1	0.221
<i>Aedes albopictus</i>	22	45		
<i>Aedes canadensis canadensis</i>	1	1		
<i>Aedes japonicus</i>	21	141		
<i>Aedes triseriatus</i>	15	20		
<i>Aedes vexans</i>	2	79		
<i>Anopheles bradleyi</i>	2	5		
<i>Anopheles punctipennis</i>	2	2		
<i>Anopheles quadrimaculatus</i>	3	7		
<i>Coquillettidia perturbans</i>	17	472		
<i>Culex erraticus</i>	14	67		
<i>Culex pipiens</i>	6	7		
<i>Culex restuans</i>	2	13		
<i>Culex spp.</i>	74	3404		
<i>Culiseta melanura</i>	14	243	1	4.115
<i>Psorophora ciliate</i>	1	6		
<i>Psorophora columbiae</i>	3	6		
<i>Psorophora ferox</i>	2	11		
Somerset	140	5249	25	4.763
<i>Aedes albopictus</i>	1	2		
<i>Aedes canadensis canadensis</i>	1	12		
<i>Aedes japonicus</i>	10	137		
<i>Aedes triseriatus</i>	1	3		
<i>Culex spp.</i>	127	5095	25	4.907
Sussex	139	4094	2	0.489
<i>Aedes albopictus</i>	1	3		
<i>Aedes japonicus</i>	2	56		
<i>Aedes triseriatus</i>	3	27		
<i>Coquillettidia perturbans</i>	9	650		
<i>Culex pipiens</i>	4	108		
<i>Culex restuans</i>	30	651		
<i>Culex salinarius</i>	2	43		
<i>Culex spp.</i>	83	2496	2	0.801
<i>Culiseta melanura</i>	5	60		
Union	11	412	3	7.282
<i>Aedes albopictus</i>	4	117	1	8.547
<i>Culex spp.</i>	7	295	2	6.780
Warren	187	8557	26	3.038
<i>Aedes albopictus</i>	4	54	1	18.519
<i>Aedes japonicus</i>	16	585		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes vexans</i>	1	20		
<i>Coquillettidia perturbans</i>	2	89		
<i>Culex spp.</i>	161	7792	25	3.208
<i>Culiseta melanura</i>	1	6		
<i>Psorophora columbiae</i>	1	9		
Grand Total	4433	99448	330	3.318



Cumulative WNV activity in 2017.



WNV activity to 10 August 2018.



WNV activity last week, 2018

Saint Louis Encephalitis (SLE) to 10 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		
	<i>Culex</i> spp	32	1775		
Cape May		489	6576		
	<i>Culex pipiens</i>	463	6483		
	<i>Culex</i> spp.	26	93		
Grand Total		521	8351		

La Crosse Encephalitis (LAC) to 10 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		
	<i>Aedes albopictus</i>	2	29		
	<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		1	1		
	<i>Aedes triseriatus</i>	1	1		
Sussex		3	27		
	<i>Aedes triseriatus</i>	3	27		
Grand Total		18	190		

Dengue (DENV) to 10 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 4 travel-related human cases in NJ.

County	Species	DENV1		DENV2		DENV3		DENV4		Pos.	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		13	149	13	149	13	149	13	149		
	<i>Aedes albopictus</i>	13	149	13	149	13	149	13	149		
Bergen		1	14	1	14	1	14	1	14		
	<i>Aedes albopictus</i>	1	14	1	14	1	14	1	14		
Middlesex		2	12	2	12	2	12	2	12		
	<i>Aedes albopictus</i>	2	12	2	12	2	12	2	12		
Ocean		24	196	24	196	24	196	24	196		
	<i>Aedes albopictus</i>	24	196	24	196	24	196	24	196		
Sussex		1	3	1	3	1	3	1	3		
	<i>Aedes albopictus</i>	1	3	1	3	1	3	1	3		
Grand Total		41	374	41	374	41	374	41	374		

Chikungunya (CHIK) to 10 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		13	149		
	<i>Aedes albopictus</i>	13	149		
Bergen		1	14		
	<i>Aedes albopictus</i>	1	14		
Middlesex		2	12		
	<i>Aedes albopictus</i>	2	12		
Ocean		24	196		
	<i>Aedes albopictus</i>	24	196		
Sussex		1	3		
	<i>Aedes albopictus</i>	1	3		
Grand Total		41	374		

Zika (ZIKV) to 10 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		13	149		
	<i>Aedes albopictus</i>	13	149		
Bergen		1	14		
	<i>Aedes albopictus</i>	1	14		
Cape May		223	387		
	<i>Aedes albopictus</i>	223	387		
Middlesex		2	12		
	<i>Aedes albopictus</i>	2	12		
Ocean		24	196		
	<i>Aedes albopictus</i>	24	196		
Sussex		1	3		
	<i>Aedes albopictus</i>	1	3		
Grand Total		264	761		