VECTOR SURVEILLANCE IN NEW JERSEY

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

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CDC WEEK 36: 2 September to 8 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**	0.75	0.00	3	2		
Green Bank (Burlington Co.)/25	**Coastal**	3.31	0.96	44 (68)	10 (11)		
Corbin City (Atlantic Co.)/25	**Coastal**	2.33	0.32	140‡ (148)	12 (13)		
Dennisville (Cape May Co.)/50	**Coastal**	4.95	0.02	290	15		
Winslow (Camden Co.)/50	**Inland**	2.20	1.84	1931	45	4	2.071
Centerton (Salem Co.)/50	**Inland**	2.95	0.48	291	15	2	6.873
Turkey Swamp (Monmouth Co.)/50	**Inland**	1.83	1.44	319 (391)	14 (16)	1	3.135
Glassboro (Gloucester Co.)/50	**Inland**	0.76	0.12	136	13		

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

Remarks: Currently for the 2018 season, there are 11 detections of EEE among submitted mosquito pools, seven at resting box sites (4 at Winslow, 2 at Centerton, 1 at Turkey Swamp) and four from county-set traps, the latest from Atlantic County. All positive pools are in the enzootic vector, *Culiseta melanura.* Three horses have tested positive for EEE; all were not vaccinated and all were euthanized.

Statewide, 6487 *Cs. melanura* from 398 pools have been tested, with 11 positive pools detected for an overall *Cs. melanura* MFIR of 1.696. 13423 specimens in 1188 pools from 17 other species have also been tested, with no positives detected. Overall MFIR for all species statewide is 0.552.

Traditional Resting Box Sites: 3154 *Cs. melanura* from 125 pools have been tested for EEE (plus three pools totaling 104 to be tested) in 2018. No additional positive pools were detected at the traditional resting box sites this past week. A total of 10 positive pools have been detected this season.

	Additional *Cs. melanura* trapped by counties *traps with positives indicated in **BOLD.**				
County	**Trap types***	**Pools**	**Mosquitoes**	**Positives**	**MFIR**
Atlantic	CO2, RB	32	777	1	1.287
Bergen	RB	7	21		
Burlington	CDCL	42	1816	3	1.652
Cape May	GR, RB	136	357		
Cumberland	BGSCL, RB	13	74		
Middlesex	RB	2	21		
Monmouth	OTHER	1	2		
Morris	CDCL	1	1		
Ocean	CDCL, RB	22	136		
Passaic	RB	4	4		
Salem	CDCL	4	49		
Sussex	ABC	8	69		
Warren	CDCL	1	6		
TOTAL		**273**	**3333**	**4**	**1.200**

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. One new positive pool was detected in Atlantic County, collected 28 August. Three total positive pools have previously been detected, all in Burlington, all caught with a CDC trap and all at different locations. Burlington positive pools were caught on the 6th and 14th of August.

Horses and Humans: A third horse has been reported with EEE 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.

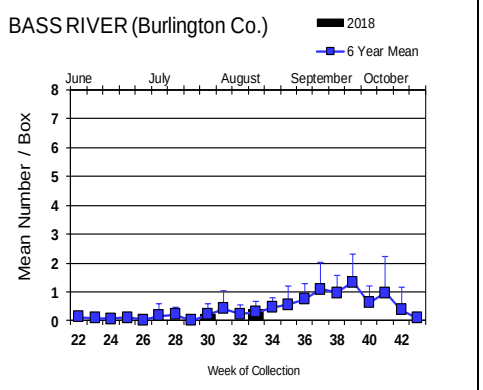
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

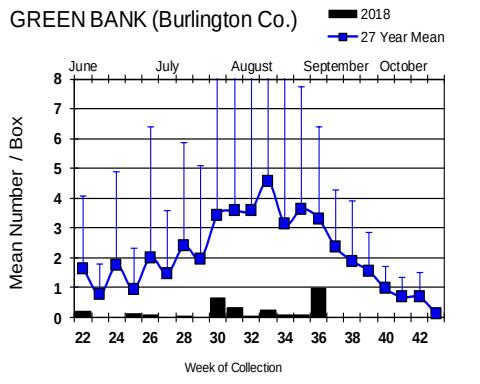
Additional Species: Seventeen additional species were tested for EEE. No positives were detected.

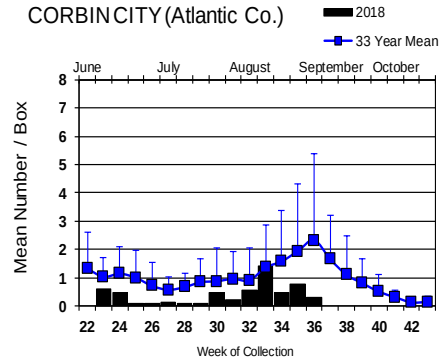
Species other than *Cs. melanura*	Pools	Mosquitoes	Positives	MFIR
Aedes albopictus	4	18		
Aedes canadensis canadensis	1	10		
Aedes cantator	2	2		
Aedes infirmatus	1	1		
Aedes sollicitans	9	35		
Aedes taeniorhynchus	3	88		
Aedes vexans	1	6		
Anopheles barberi	1	1		
Anopheles bradleyi	42	323		
Anopheles punctipennis	11	40		
Anopheles quadrimaculatus	1	1		
Coquillettidia perturbans	80	1758		
Culex erraticus	64	557		
Culex pipiens	665	8874		
Culex salinarius	256	1244		
Culex spp.	42	155		
Culiseta inornata	1	10		
Psorophora ferox	4	300		
State Total	**1188**	**13423**		

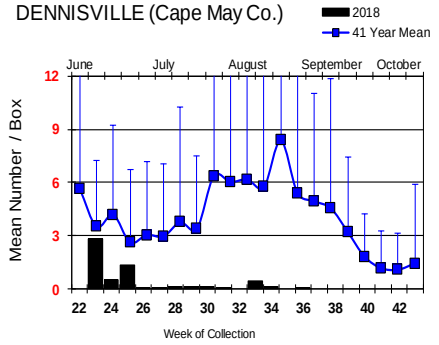
Culiseta melanura Populations

Coastal

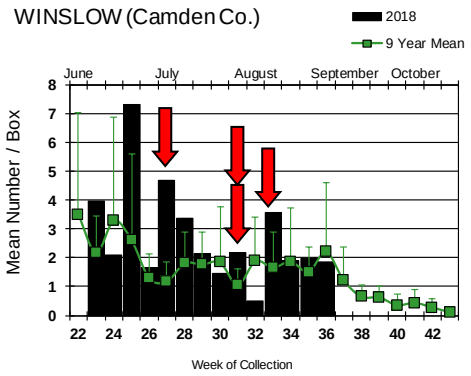


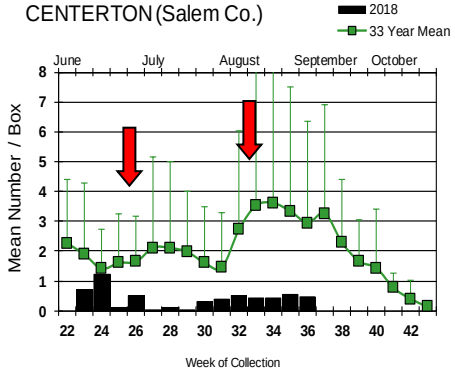


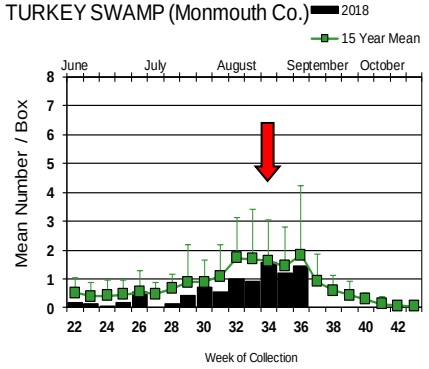


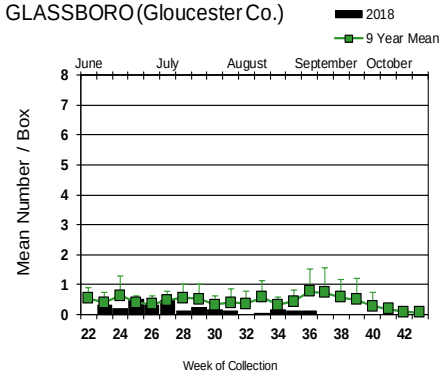


Inland









No additional positive pools were detected at the traditional resting box sites 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: AL(3) FL(51/2 mule & donkey) GA(6) NC(6) NJ(3) NY(1) SC(1) VA(2) WI(1) Ontario Canada(10)**
- **mosquito pools: FL(2) NJ(11) NY(16) RI(4)**
- **sentinel: FL(140/6 owl emus & 5 emu flocks) DE(3)**
- **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					7/13
Alaska					
Arizona		55			5/7
Arkansas					
California	363/397	1,296/1,456	76/84	6	31/42
Colorado	Present	Present			6/16
Connecticut		227/279			
Delaware	15		28		2
DC	1	14			6
Florida	1	20/22	165/188	1	6/7
Georgia		Present			4/7
Hawaii					
Idaho		39		2	2/4
Illinois	18/22	2,516/2,699		1/2	22/34
Indiana		378/429			4
Iowa		45		3/4	13/18
Kansas					2
Kentucky		Present			1
Louisiana	67	829/948		2	53/60
Maine		1			1/2
Maryland(+DC)	1	23			12
Mass.		363/499		1/2	4/9
Michigan	69/83	109/141			16/31
Minnesota		Present		Present	4
Mississippi		92/108			30/31
Missouri	1	3		2/3	2/7

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana		8/9		17/28	19/22
Nebraska	1	47/67			36/57
Nevada		Present			1
New Hampshire	4	12/13			
New Jersey		730/848			6/9
New Mexico					
New York		897/1,048		1/2	7/11
North Carolina					1/3
North Dakota	12	71/88		3/4	74/86
Ohio		2,333/2,592		3/8	8/14
Oklahoma		15traps			1/2
Oregon	1	28/47			1
Pennsylvania	38	2,140		3	1
Rhode Island		8			
South Carolina					2
South Dakota		9counties			77/101
Tennessee		514			3/6
Texas		612/680		1	22/32
Utah		108/138			4/6
Vermont		84/94			
Virginia					3/17
Washington		44		1	
West Virginia		18/24			
Wisconsin	36/42	64/78		1	1
Wyoming		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 7 September 2018

Species	Pools	Mosquitoes	Positives	MFIR
Aedes abserratus	1	11		
Aedes albopictus	913	6969	27	3.874
Aedes atlanticus	1	1		
Aedes atropalpus	19	52		
Aedes canadensis canadensis	27	227		
Aedes cantator	7	52		
Aedes excrucians	1	2		
Aedes grossbecki	2	10		
Aedes infirmatus	2	2		
Aedes japonicus	540	3355	17	5.067
Aedes sollicitans	17	128		
Aedes sticticus	3	37		
Aedes taeniorhynchus	8	171	1	5.848
Aedes thibaulti	1	10		
Aedes triseriatus	207	530	3	5.660
Aedes trivittatus	15	145	1	6.897
Aedes vexans	88	1479	2	1.352
Anopheles barberi	2	8		
Anopheles bradleyi	47	344		
Anopheles punctipennis	52	169	1	5.917
Anopheles quadrimaculatus	139	2343	1	0.427
Coquillettidia perturbans	103	2686	2	0.745
Culex erraticus	88	700	4	5.714
Culex pipiens	735	10359	26	2.510
Culex restuans	434	3743	6	1.603
Culex salinarius	288	2793	2	0.716
Culex spp.	2479	101612	744	7.322
Culex territans	14	63		
Culiseta inornata	1	10		
Culiseta melanura	399	6524	9	1.380
Orthopodomyia signifera	2	3		
Psorophora ciliata	2	61		
Psorophora columbiae	17	102	1	9.804
Psorophora cyanescens	1	14		
Psorophora ferox	36	593		
Psorophora howardii	1	2	1	500.000
Uranotaenia sapphirina	2	11		
Grand Total	**6695**	**145325**	**848**	**5.835**

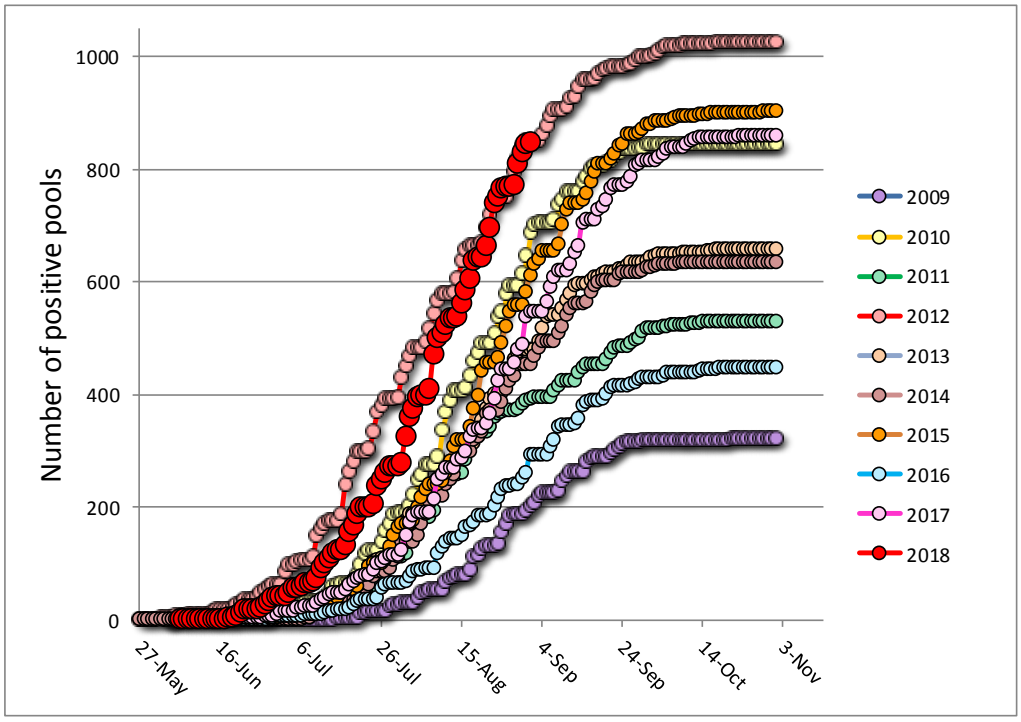
Remarks: To date, 6695 pools of 145,325 mosquitoes from 36 species have been tested. A total of 848 positive WNV pools have been detected throughout the state. The bulk of new positives continue to be in the enzootic vector(s) *Culex* spp. First positive WNV pool detected has been revised from 7 June 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 include *Aedes albopictus, Ae. taeniorhynchus, Ae. triseriatus, Ae. trivittatus, Ae. vexans, Anopheles punctipennis, An. quadrimaculatus, Coquillettidia perturbans, Culex erraticus, Culiseta melanura, Psorophora columbiae* and *Ps. howardii*. The statewide MFIR rate for all mosquitoes is 5.835.

***NOTE* - A*dditional* 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 nine human cases of WNV have been detected; the latest three detected in Bergen, Cape May, and Hunterdon counties, in addition to the six previous cases in Bergen, 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 very high activity, appearing to surpass 2012.

WNV Results by County through 7 September 2018.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**183**	**4883**	**22**	**4.505**
	Aedes albopictus	34	814	1	1.229
	Aedes canadensis canadensis	3	54		
	Aedes japonicus	6	64		
	Aedes sollicitans	2	57		
	Aedes sticticus	1	35		
	Aedes taeniorhynchus	3	121		
	Aedes vexans	11	134	1	7.463
	Anopheles bradleyi	2	15		
	Coquillettidia perturbans	11	306	1	3.268
	Culex erraticus	8	91	1	10.989
	Culex pipiens	17	706	6	8.499

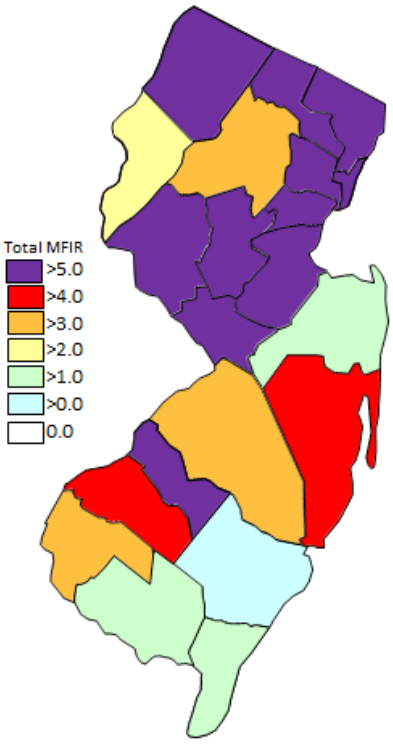
	Culex restuans	1	23		
	Culex salinarius	1	24		
	Culex spp.	30	1071	10	9.337
	Culiseta melanura	44	917	2	2.181
	Psorophora ferox	9	451		
Bergen		**212**	**13749**	**103**	**7.491**
	Aedes albopictus	10	191		
	Aedes japonicus	5	20	1	50.000
	Coquillettidia perturbans	4	50		
	Culex spp.	185	13465	101	7.501
	Culiseta melanura	7	21		
	Psorophora howardii	1	2	1	500.000
Burlington		**177**	**5756**	**25**	**4.343**
	Aedes albopictus	14	159		
	Aedes canadensis canadensis	1	10		
	Aedes infirmatus	1	1		
	Aedes japonicus	9	138	1	7.246
	Aedes taeniorhynchus	1	42		
	Aedes triseriatus	2	7		
	Aedes vexans	1	6		
	Anopheles bradleyi	2	76		
	Coquillettidia perturbans	2	127		
	Culex erraticus	4	75		
	Culex pipiens	1	1		
	Culex salinarius	7	207		
	Culex spp.	79	3044	20	6.570
	Culiseta melanura	53	1863	4	2.147
Camden		**159**	**5237**	**29**	**5.538**
	Aedes albopictus	24	74	3	40.541
	Aedes excrucians	1	2		
	Aedes japonicus	24	129	1	7.752
	Aedes triseriatus	1	2		
	Anopheles punctipennis	2	3		
	Culex spp.	61	3094	25	8.080
	Culiseta melanura	45	1931		
	Psorophora ferox	1	2		
Cape May		**2451**	**16848**	**14**	**0.831**
	Aedes albopictus	413	895		
	Aedes atropalpus	19	52		
	Aedes canadensis canadensis	7	11		
	Aedes cantator	2	2		
	Aedes infirmatus	1	1		
	Aedes japonicus	210	475		
	Aedes sollicitans	7	7		
	Aedes sticticus	1	1		
	Aedes taeniorhynchus	1	1		
	Aedes triseriatus	110	212		
	Aedes vexans	13	27		
	Anopheles bradleyi	40	247		
	Anopheles punctipennis	6	8		
	Anopheles quadrimaculatus	120	2074		
	Coquillettidia perturbans	9	32		

	Culex erraticus	21	252		
	Culex pipiens	665	8874	14	1.578
	Culex restuans	349	1801		
	Culex salinarius	246	1027		
	Culex spp.	33	109		
	Culex territans	14	63		
	Culiseta melanura	151	647		
	Orthopodomyia signifera	2	3		
	Psorophora columbiae	5	10		
	Psorophora ferox	4	6		
	Uranotaenia sapphirina	2	11		
Cumberland		**183**	**1833**	**9**	**4.910**
	Aedes albopictus	44	629	2	3.180
	Aedes japonicus	12	47		
	Aedes sollicitans	1	3		
	Aedes sticticus	1	1		
	Aedes triseriatus	8	16		
	Aedes trivittatus	1	8		
	Aedes vexans	17	262		
	Anopheles punctipennis	9	41		
	Anopheles quadrimaculatus	11	252		
	Coquillettidia perturbans	3	3		
	Culex erraticus	12	99	2	20.202
	Culex pipiens	4	39		
	Culex restuans	1	1		
	Culex salinarius	3	10		
	Culex spp.	31	259	3	11.583
	Culiseta melanura	13	74	2	27.027
	Psorophora columbiae	6	67		
	Psorophora ferox	6	22		
Essex		**122**	**573**	**12**	**20.942**
	Aedes albopictus	33	92		
	Aedes japonicus	18	29	3	103.448
	Aedes trivittatus	12	15	1	66.667
	Aedes vexans	2	3		
	Anopheles quadrimaculatus	1	1	1	1000.000
	Culex spp.	56	433	7	16.166
Gloucester		**312**	**9184**	**72**	**7.840**
	Aedes albopictus	71	589	5	8.489
	Aedes japonicus	59	752	9	11.968
	Aedes triseriatus	11	61		
	Aedes vexans	1	24		
	Anopheles barberi	1	7		
	Anopheles punctipennis	6	30	1	33.333
	Anopheles quadrimaculatus	1	3		
	Culex pipiens	18	317	5	15.773
	Culex spp.	130	7200	52	7.222
	Culiseta melanura	13	136		
	Psorophora ferox	1	65		
Hudson		**145**	**7235**	**49**	**6.773**
	Culex spp.	145	7235	49	6.773

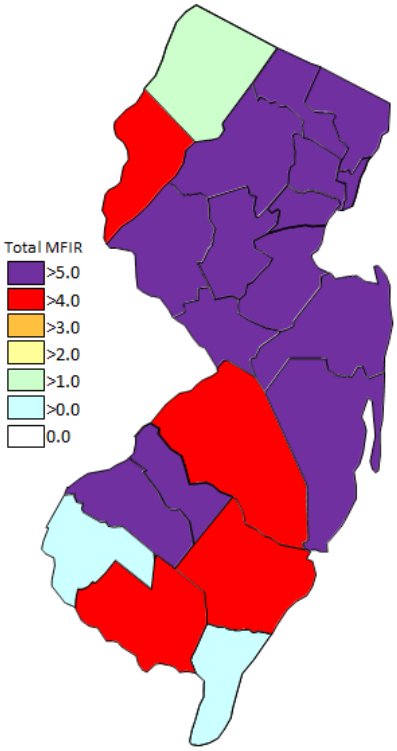
Hunterdon		**264**	**12563**	**89**	**7.084**
	Culex spp.	264	12563	89	7.084
Mercer		**211**	**4440**	**39**	**8.784**
	Aedes albopictus	36	343	3	8.746
	Aedes canadensis canadensis	1	6		
	Aedes japonicus	53	262	1	3.817
	Aedes triseriatus	2	7		
	Aedes vexans	12	121	1	8.264
	Coquillettidia perturbans	1	3		
	Culex pipiens	5	59	1	16.949
	Culex restuans	37	1100	6	5.455
	Culex spp.	64	2539	27	10.634
Middlesex		**191**	**5661**	**48**	**8.479**
	Aedes albopictus	5	59		
	Aedes japonicus	1	64		
	Anopheles punctipennis	1	1		
	Coquillettidia perturbans	3	9		
	Culex spp.	180	5518	48	8.699
	Culiseta inornata	1	10		
Monmouth		**358**	**7435**	**43**	**5.783**
	Aedes albopictus	77	1668	4	2.398
	Aedes canadensis canadensis	12	102		
	Aedes cantator	5	50		
	Aedes grossbecki	2	10		
	Aedes japonicus	16	46		
	Aedes sollicitans	5	37		
	Aedes taeniorhynchus	2	3		
	Aedes triseriatus	11	82		
	Aedes trivittatus	6	55		
	Aedes vexans	11	50		
	Anopheles barberi	1	1		
	Anopheles bradleyi	1	1		
	Anopheles punctipennis	22	78		
	Anopheles quadrimaculatus	1	1		
	Coquillettidia perturbans	3	4		
	Culex erraticus	4	6	1	166.667
	Culex salinarius	7	243		
	Culex spp.	141	4630	37	7.991
	Culiseta melanura	17	323		
	Psorophora columbiae	2	10	1	100.000
	Psorophora ferox	12	35		
Morris		**324**	**12684**	**110**	**8.672**
	Aedes albopictus	6	39		
	Aedes japonicus	3	34		
	Coquillettidia perturbans	6	300		
	Culex spp	308	12310	110	8.936
	Culiseta melanura	1	1		
Ocean		**226**	**1735**	**17**	**9.798**
	Aedes albopictus	67	567	4	7.055
	Aedes japonicus	27	72		

	Aedes triseriatus	21	58	2	34.483
	Aedes vexans	1	2		
	Anopheles punctipennis	2	2		
	Anopheles quadrimaculatus	2	5		
	Coquillettidia perturbans	20	166	1	6.024
	Culex erraticus	7	9		
	Culex salinarius	2	3		
	Culex spp.	54	714	10	14.006
	Culiseta melanura	22	136		
	Psorophora ferox	1	1		
Passaic		**158**	**1315**	**7**	**5.323**
	Aedes abserratus	1	11		
	Aedes albopictus	16	76		
	Aedes japonicus	35	234		
	Aedes thibaulti	1	10		
	Aedes triseriatus	3	10		
	Coquillettidia perturbans	5	40		
	Culex erraticus	10	17		
	Culex pipiens	11	202		
	Culex restuans	9	95		
	Culex spp.	62	602	7	11.628
	Culiseta melanura	4	4		
	Psorophora cyanescens	1	14		
Salem		**273**	**5898**	**5**	**0.848**
	Aedes albopictus	38	188		
	Aedes atlanticus	1	1		
	Aedes canadensis canadensis	1	1		
	Aedes japonicus	25	146		
	Aedes sollicitans	2	24		
	Aedes taeniorhynchus	1	4	1	250.000
	Aedes triseriatus	20	27		
	Aedes trivittatus	2	3		
	Aedes vexans	2	79		
	Anopheles bradleyi	2	5		
	Anopheles punctipennis	2	2		
	Anopheles quadrimaculatus	3	7		
	Coquillettidia perturbans	19	549		
	Culex erraticus	22	151		
	Culex pipiens	8	10		
	Culex restuans	2	13		
	Culex salinarius	11	759	1	1.318
	Culex spp.	87	3566	2	0.561
	Culiseta melanura	19	340	1	2.941
	Psorophora ciliate	1	6		
	Psorophora columbiae	3	6		
	Psorophora ferox	2	11		
Somerset		**199**	**6985**	**58**	**8.304**
	Aedes albopictus	1	2		
	Aedes canadensis canadensis	1	12		
	Aedes japonicus	11	142		
	Aedes triseriatus	2	4		
	Anopheles punctipennis	2	4		
	Culex spp.	182	6821	58	8.503

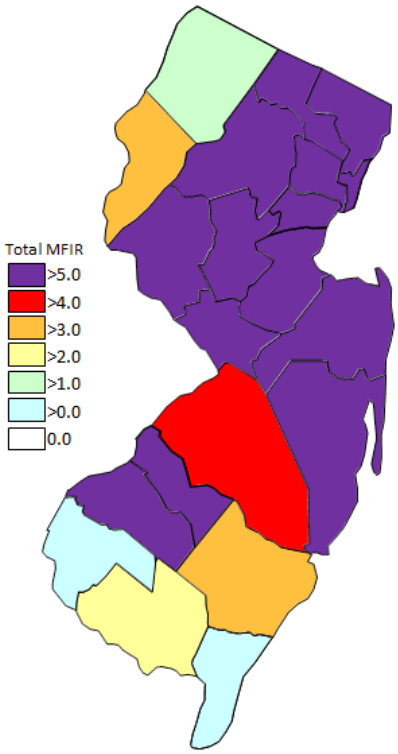
Sussex		**211**	**6494**	**7**	**1.078**
	Aedes albopictus	1	3		
	Aedes canadensis canadensis	1	31		
	Aedes japonicus	2	56		
	Aedes triseriatus	3	27		
	Aedes vexans	8	525		
	Coquillettidia perturbans	15	1008		
	Culex pipiens	6	151		
	Culex restuans	35	710		
	Culex salinarius	11	520	1	1.923
	Culex spp.	121	3394	6	1.768
	Culiseta melanura	8	69		
Union		**68**	**3592**	**45**	**12.528**
	Aedes albopictus	11	324	4	12.346
	Culex spp	57	3268	41	12.546
Warren		**267**	**11221**	**45**	**4.010**
	Aedes albopictus	12	257	1	3.891
	Aedes japonicus	24	645	1	1.550
	Aedes triseriatus	1	2		
	Aedes trivittatus	6	79	1	12.658
	Aedes vexans	9	246		
	Coquillettidia perturbans	2	89		
	Culex spp.	209	9777	42	4.296
	Culiseta melanura	2	62		
	Psorophora ciliata	1	55		
	Psorophora columbiae	1	9		
Grand Total		**6694**	**145321**	**848**	**5.835**



Cumulative WNV activity in 2017.



WNV activity to 7 September 2018.



WNV activity last week, 2018

Saint Louis Encephalitis (SLE) to 7 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		**34**	**1876**		
	Culex spp	34	1876		
Cape May		**697**	**8981**		
	Culex pipiens	665	8874		
	Culex spp.	32	107		
Grand Total		**731**	**10857**		

La Crosse Encephalitis (LAC) to 7 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			Positives	MFIR
Burlington		**12**	**197**		
	Aedes albopictus	4	73		
	Aedes japonicus	6	117		
	Aedes triseriatus	2	7		
Ocean		**4**	**9**		
	Aedes albopictus	2	3		
	Aedes japonicus	1	1		
	Aedes triseriatus	1	5		
Salem		**3**	**4**		
	Aedes triseriatus	3	4		
Sussex		**3**	**27**		
	Aedes triseriatus	3	27		
Grand Total		**22**	**237**		

Dengue (DENV) to 7 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		**34**	**814**	**34**	**814**	**34**	**814**	**34**	**814**		
	Aedes albopictus	34	814	34	814	34	814	34	814		
Bergen		**1**	**14**	**1**	**14**	**1**	**14**	**1**	**14**		
	Aedes albopictus	1	14	1	14	1	14	1	14		
Gloucester		**7**	**20**	**7**	**20**	**7**	**20**	**7**	**20**		
	Aedes albopictus	5	18	5	18	5	18	5	18		
	Aedes japonicus	2	2	2	2	2	2	2	2		
Middlesex		**2**	**12**	**2**	**12**	**2**	**12**	**2**	**12**		
	Aedes albopictus	2	12	2	12	2	12	2	12		
Ocean		**39**	**431**	**39**	**431**	**39**	**431**	**39**	**431**		
	Aedes albopictus	39	431	39	431	39	431	39	431		

Sussex		**1**	**3**	**1**	**3**	**1**	**3**	**1**	**3**		
	Aedes albopictus	1	3	1	3	1	3	1	3		
Grand Total		**84**	**1294**	**84**	**1294**	**84**	**1294**	**84**	**1294**		

Chikungunya (CHIK) to 7 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 5 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**34**	**814**		
	Aedes albopictus	34	814		
Bergen		**1**	**14**		
	Aedes albopictus	1	14		
Gloucester		**7**	**20**		
	Aedes albopictus	5	18		
	Aedes japonicus	2	2		
Middlesex		**2**	**12**		
	Aedes albopictus	2	12		
Ocean		**39**	**431**		
	Aedes albopictus	39	431		
Sussex		**1**	**3**		
	Aedes albopictus	1	3		
Grand Total		**84**	**1294**		

Zika (ZIKV) to 7 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		**34**	**814**		
	Aedes albopictus	34	814		
Bergen		**1**	**14**		
	Aedes albopictus	1	14		
Cape May		**396**	**850**		
	Aedes albopictus	396	850		
Gloucester		**7**	**20**		
	Aedes albopictus	5	18		

	Aedes japonicus	2	2		
Middlesex		**2**	**12**		
	Aedes albopictus	2	12		
Ocean		**39**	**431**		
	Aedes albopictus	39	431		
Sussex		**1**	**3**		
	Aedes albopictus	1	3		
Grand Total		**480**	**2144**		