

VECTOR SURVEILLANCE IN NEW JERSEY

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

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 Data download 5:14 pm 26 July



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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	0.36	0.00	4	2		
Green Bank (Burlington Co.)/25	Coastal	3.34	0.24	24 (30)	4 (5)		
Corbin City (Atlantic Co.)/25	Coastal	0.87	0.88	58 (80)	7 (8)		
Dennisville (Cape May Co.)/50	Coastal	6.21	0.02	40	7		
Winslow (Camden Co.)/50	Inland	1.92	0.60	212	7		
Centerton (Salem Co.)/50	Inland	1.57	0.84	104	5		
Turkey Swamp (Monmouth Co.)/50	Inland	0.87	1.20	161 (228)	9 (11)	2	12.422
Glassboro (Gloucester Co.)/50	Inland	0.24	1.12	113	6	1	8.850

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

Remarks: Currently in 2019, there is seven detections of EEE virus: five pools of *Culiseta melanura* (three collected at traditional resting box sites, and two collected at county trap sites) and one pool each in *Aedes albopictus* and *Culex Mix*. The first positive pool was collected on 3 July at Turkey Swamp, Monmouth County. There is one horse case and no human cases.

Statewide, 3,320 *Cs. melanura* from 284 pools have been tested, with an overall *Cs. melanura* MFIR of 1.506. 75,754 specimens in 3,318 pools from 35 other species have also been tested, with two positive pools detected (*Aedes albopictus* and *Culex Mix* pools). Overall MFIR for all species statewide is 0.089.

Traditional Resting Box Sites: 783 *Cs. melanura* from 49 pools have been tested, with three positive pools detected – two at Turkey Swamp and 1 at Glassboro. An additional 88 *Cs. melanura* in three pools are at labs to be tested.

Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD UNDERLINED .					
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	BGS, CO ₂ , GR, RB	34	836		
Bergen	CO ₂ , RB	3	10		
Burlington	ULVT	18	369		
Cape May	GR, RB	90	226		
Cumberland	AGO, RB	13	95		
Gloucester	RB	14	413		
Middlesex	RB	7	39		
Monmouth	CO ₂ , Other	6	52		
Morris	CO ₂ , RB	13	222		
Ocean	CO₂, GR, RB	26	195	1	5.128
Salem	CO ₂ , GR, RB	9	15	1	66.667
Sussex	CO ₂	2	65		
TOTAL		235	2537	2	0.788

Additional County-set *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. Last year, half of the EEE detection came from such trappings. In 2019, two pools of *Cs. melanura* have been found positive – In Salem County, collected 9 July, and Ocean County collected 10 July.

Horses and Humans: The first horse case of EEE has been reported. A 12-year-old mare in Ocean County, with onset date of 23 July, was euthanized the same day. This horse was about 11-14 miles from two active sites. There appears to be an incomplete vaccination history, with the first dose of EEE vaccine administered in April, but no follow up vaccination 4-6 weeks later was reported. Over the past ten years, first onset dates for horses have been in August or October except for 2012, where an onset date was 22 July. Last year five horses were reported with EEE. All had either an incomplete 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

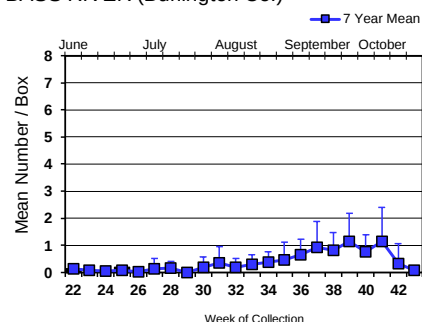
Additional Species: 35 additional species were tested for EEE. One positive pool in *Aedes albopictus*, collected in Ocean County on 9 July was found. On 16 July, a positive pool of *Culex* Mix was detected in Camden County. (Note: *Culex pipiens* is refractory for EEE virus).

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	13	258		
<i>Aedes albopictus</i>	271	1761	1	0.568
<i>Aedes atlanticus</i>	8	66		
<i>Aedes aurifer</i>	3	14		
<i>Aedes canadensis canadensis</i>	89	1848		
<i>Aedes cantator</i>	16	292		
<i>Aedes grossbecki</i>	5	12		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	355	2549		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes provocans</i>	2	8		
<i>Aedes sollicitans</i>	6	246		
<i>Aedes sticticus</i>	3	93		
<i>Aedes stimulans</i>	2	10		
<i>Aedes taeniorhynchus</i>	4	174		
<i>Aedes thibaulti</i>	2	27		
<i>Aedes triseriatus</i>	58	182		
<i>Aedes trivittatus</i>	17	248		
<i>Aedes vexans</i>	41	361		
<i>Anopheles bradleyi</i>	37	157		
<i>Anopheles crucians</i>	3	75		
<i>Anopheles punctipennis</i>	42	258		
<i>Anopheles quadrimaculatus</i>	66	560		
<i>Coquillettidia perturbans</i>	110	2536		
<i>Culex</i> Mix	1428	59171	1	0.017
<i>Culex erraticus</i>	30	142		
<i>Culex pipiens</i>	233	2450		
<i>Culex restuans</i>	260	798		
<i>Culex salinarius</i>	158	1060		
<i>Culex territans</i>	20	39		
<i>Orthopodomyia signifera</i>	4	4		
<i>Psorophora ciliate</i>	1	1		
<i>Psorophora columbiae</i>	5	34		
<i>Psorophora ferox</i>	21	313		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	2	4		
State Total	3318	75754	2	0.026

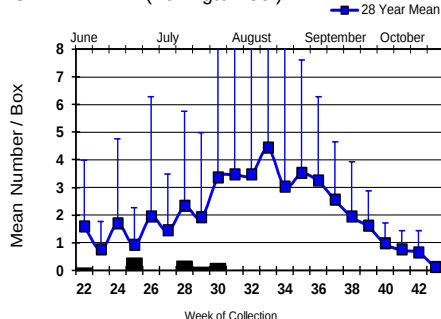
Culiseta melanura Populations

Coastal

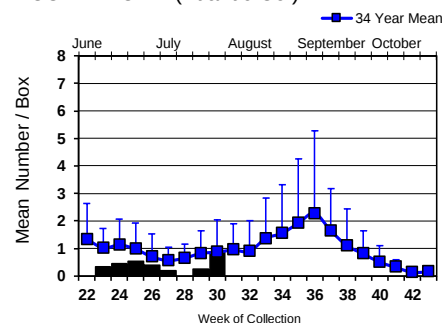
BASS RIVER (Burlington Co.)



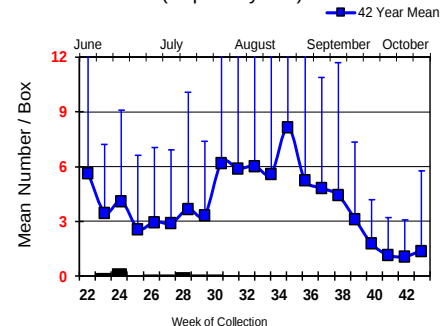
GREEN BANK (Burlington Co.)



CORBIN CITY (Atlantic Co.)

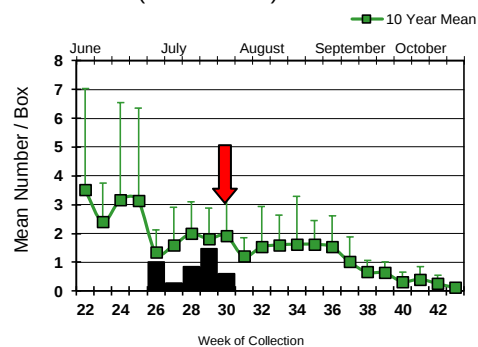


DENNISVILLE (Cape May Co.)

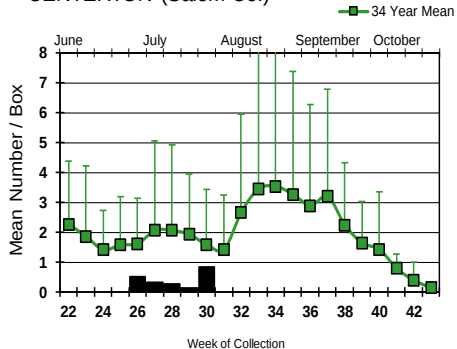


Inland

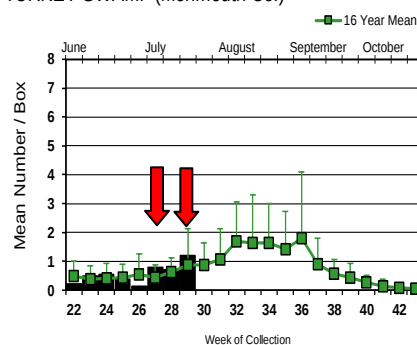
WINSLOW (Camden Co.)



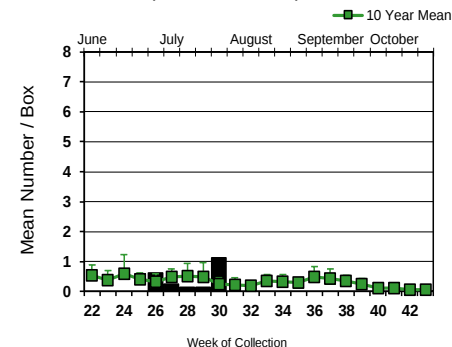
CENTERTON (Salem Co.)



TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



Culiseta melanura populations at most traditional resting box sites continue to be well below historical values, although there are indications of population abundance increases at Corbin City, Centerton, and Glassboro. During week 27, a positive EEE pool from *Cs. melanura* was detected in Turkey Swamp, with a second positive pool detected two weeks later. Positive *Cs. melanura* have been found at other non-traditional sites. It should be noted that *Cs. melanura* collected in light traps suggest that population abundances are higher than is indicated by resting box numbers.

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

EEE in US (2019 cumulative cases): (Black or Red = previous + new reported cases occurring)

- **equine:** 25 (FL) 1 (GA) 1 (NJ) 1 (SC)
- **mosquito pools:** 7 (NJ) 2 (NY) 29 (MA)
- **sentinel:** 77 (+1 emu 1 BAEA, FL)
- **human:**

West Nile Virus Positive Organisms in US, 2019

West Nile in US (2019 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	0
Alaska					
Arizona	0	295	1	1	59/80
Arkansas					1/2
California	28/30	802/1094	0	0	2
Colorado					1
Connecticut		0		0	0
Delaware					
Florida			21/27	1	
Georgia					
Hawaii					
Idaho	0	5/10		0	1
Illinois	2	95/109		0	0
Indiana	0	5/9		0	0
Iowa				2	2
Kansas					0
Kentucky					1
Louisiana					
Maine					
Maryland(+DC)					1
Mass.		1/10		0	0
Michigan	1	3			0
Minnesota					
Mississippi		10/12		5	3
Missouri		0		0	1

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					
Nebraska	0	0		0	1
Nevada					1
New Hampshire					
New Jersey		9/17		0	1
New Mexico					0
New York		7/13		0	0
North Carolina					
North Dakota	0	0		0	1
Ohio		14/22		0	0
Oklahoma					3
Oregon	0	7/16	0	1	0
Pennsylvania		13/21			
Rhode Island		0			
South Carolina					
South Dakota		0			1
Tennessee					
Texas		39/43			
Utah		3/7			
Vermont					
Virginia					1
Washington	0	3		0	0
West Virginia					
Wisconsin	0	3		0	0
Wyoming	0	1		0	1

* 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 27 July 2019

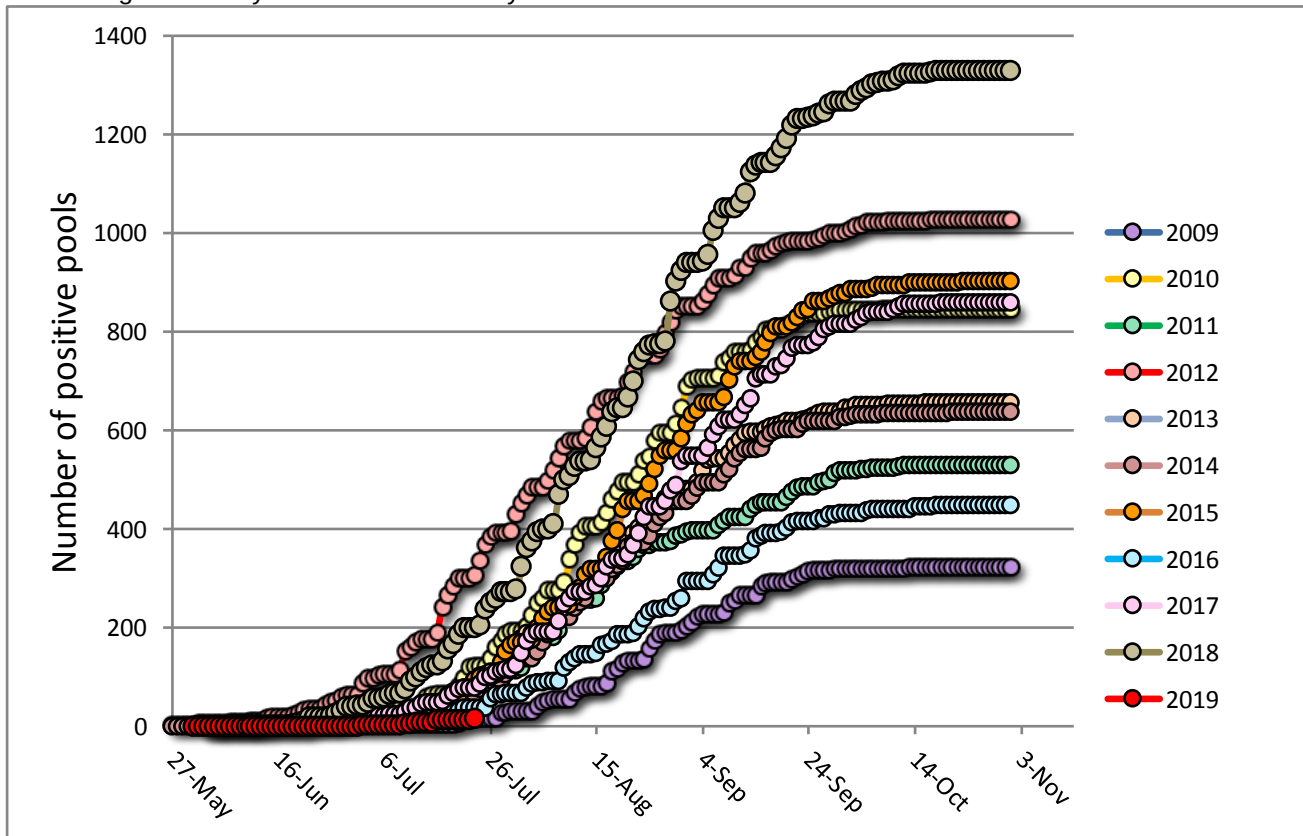
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	13	258		
<i>Aedes albopictus</i>	454	2156		
<i>Aedes atlanticus</i>	8	66		
<i>Aedes aurifer</i>	3	14		
<i>Aedes canadensis canadensis</i>	89	1848		
<i>Aedes cantator</i>	16	292	1	3.425
<i>Aedes grossbecki</i>	5	12		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	367	2928	1	0.342
<i>Aedes mitchellae</i>	1	1		
<i>Aedes provocans</i>	2	8		
<i>Aedes sollicitans</i>	6	246		
<i>Aedes sticticus</i>	3	93		
<i>Aedes stimulans</i>	2	10		
<i>Aedes taeniorhynchus</i>	4	174		
<i>Aedes thibaulti</i>	2	27		
<i>Aedes triseriatus</i>	250	817	1	1.224
<i>Aedes trivittatus</i>	17	248		
<i>Aedes vexans</i>	41	361		
<i>Anopheles bradleyi</i>	37	157		
<i>Anopheles crucians</i>	3	75		
<i>Anopheles punctipennis</i>	43	259		
<i>Anopheles quadrimaculatus</i>	66	560		
<i>Coquillettidia perturbans</i>	121	3097		
<i>Culex</i> spp.	1428	59171	12	0.203
<i>Culex erraticus</i>	30	142		
<i>Culex pipiens</i>	234	2451	1	0.408
<i>Culex restuans</i>	264	802		
<i>Culex salinarius</i>	159	1063		
<i>Culex territans</i>	20	39		
<i>Culiseta melanura</i>	284	3320	1	0.301
<i>Orthopodomyia signifera</i>	4	4		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	5	34		
<i>Psorophora ferox</i>	21	313		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	2	4		
Grand Total	4007	81053	17	0.210

Remarks: To date, 4,007 pools of 81,053 mosquitoes from 36 species have been tested. A total of 17 positive WNV pools have been detected throughout the state beginning with a pool of *Aedes triseriatus*, collected on 31 May, 2019 in Passaic County. This pool was also co-infected with LAC (see table below). Thirteen of the positives are in *Culex* species pools. Also positive are *Aedes cantator*, *Ae. japonicus*, and *Culiseta melanura*. Last year was a year of significant activity, with over 1300 positive pools detected. Currently, the statewide MFIR rate for all mosquitoes increased from 0.131 to 0.210.

Humans, Horses and Wild Birds: There has been one human case of West Nile virus from Hunterdon County reported, with an onset date of 21 June. This represents the earliest typical case reported in New Jersey. (A few years ago, there was one case reported in May from a long-term hospitalized patient making date of infection difficult to determine.) For more information, see NJ arboviral reports from the Department of Health: <https://www.nj.gov/health/cd/statistics/arboviral-stats/> . Last year we have over 60 cases reported, the highest to date.

Currently, there are no reported horse cases for WNV. Last year only one WNV horse case has been reported, occurring in Burlington County. This seemed rather unusual, given all the other indicators of high virus activity. 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 10 years, inclusive of the most active (2018) and least active (2009) years. The red series represents this year, starting with the first positive pool.

WNV Results by County through 27 July 2019.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		171	5431	1	0.184
	<i>Aedes albopictus</i>	24	204		
	<i>Aedes cantator</i>	2	112		
	<i>Aedes japonicus</i>	5	71		
	<i>Aedes sollicitans</i>	5	245		
	<i>Aedes taeniorhynchus</i>	3	165		
	<i>Aedes vexans</i>	6	113		
	<i>Anopheles bradleyi</i>	3	38		
	<i>Anopheles crucians</i>	1	6		
	<i>Anopheles punctipennis</i>	1	45		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	17	490		
	<i>Culex</i> spp.	54	2815	1	0.355
	<i>Culex erraticus</i>	3	3		
	<i>Culex pipiens</i>	1	75		

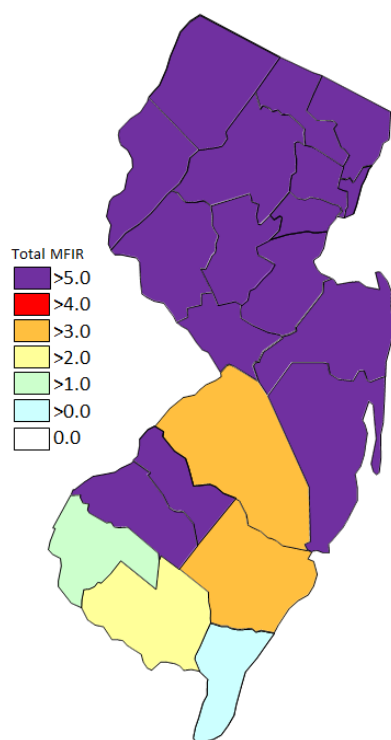
<i>Culex restuans</i>	1	3		
<i>Culex territans</i>	1	1		
<i>Culiseta melanura</i>	41	894		
<i>Psorophora ferox</i>	2	150		
Bergen	131	7062		
<i>Aedes albopictus</i>	5	68		
<i>Aedes canadensis canadensis</i>	4	28		
<i>Aedes cantator</i>	2	105		
<i>Aedes japonicus</i>	14	423		
<i>Aedes thibaulti</i>	2	27		
<i>Aedes triseriatus</i>	5	47		
<i>Aedes trivittatus</i>	1	6		
<i>Coquilleltidia perturbans</i>	3	37		
<i>Culex</i> spp.	88	6164		
<i>Culex salinarius</i>	3	141		
<i>Culiseta melanura</i>	3	10		
<i>Psorophora ferox</i>	1	6		
Burlington	168	7975	7	0.878
<i>Aedes albopictus</i>	5	57		
<i>Aedes atlanticus</i>	3	49		
<i>Aedes canadensis canadensis</i>	8	232		
<i>Aedes cantator</i>	1	28		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	7	190		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sticticus</i>	1	9		
<i>Aedes taeniorhynchus</i>	1	9		
<i>Aedes triseriatus</i>	4	15		
<i>Aedes vexans</i>	1	30		
<i>Anopheles bradleyi</i>	1	27		
<i>Anopheles crucians</i>	2	69		
<i>Anopheles quadrimaculatus</i>	1	10		
<i>Coquilleltidia perturbans</i>	7	481		
<i>Culex</i> spp.	86	5831	7	1.200
<i>Culex salinarius</i>	13	515		
<i>Culiseta melanura</i>	24	397		
<i>Psorophora ferox</i>	1	24		
Camden	27	655		
<i>Aedes albopictus</i>	3	8		
<i>Aedes japonicus</i>	7	26		
<i>Culex</i> spp.	10	409		
<i>Culiseta melanura</i>	7	212		
Cape May	1318	4888	1	0.205
<i>Aedes albopictus</i>	205	362		
<i>Aedes canadensis canadensis</i>	11	15		
<i>Aedes cantator</i>	4	4		
<i>Aedes japonicus</i>	121	243		
<i>Aedes triseriatus</i>	128	195		
<i>Aedes vexans</i>	8	8		
<i>Anopheles bradleyi</i>	32	91		
<i>Anopheles punctipennis</i>	5	5		
<i>Anopheles quadrimaculatus</i>	44	406		

	<i>Coquillettidia perturbans</i>	18	53		
	<i>Culex</i> spp.	12	36		
	<i>Culex erraticus</i>	9	16		
	<i>Culex pipiens</i>	223	2235	1	0.447
	<i>Culex restuans</i>	247	577		
	<i>Culex salinarius</i>	129	330		
	<i>Culex territans</i>	19	38		
	<i>Culiseta melanura</i>	97	266		
	<i>Orthopodomyia signifera</i>	4	4		
	<i>Uranotaenia sapphirina</i>	2	4		
Cumberland		102	936	1	1.068
	<i>Aedes albopictus</i>	7	38		
	<i>Aedes canadensis canadensis</i>	2	51		
	<i>Aedes japonicus</i>	1	10		
	<i>Aedes trivittatus</i>	3	7		
	<i>Aedes vexans</i>	17	153		
	<i>Anopheles punctipennis</i>	9	46		
	<i>Anopheles quadrimaculatus</i>	11	110		
	<i>Coquillettidia perturbans</i>	7	10		
	<i>Culex</i> spp.	20	278		
	<i>Culex erraticus</i>	4	77		
	<i>Culex salinarius</i>	1	29		
	<i>Culiseta melanura</i>	13	95	1	10.526
	<i>Psorophora ciliata</i>	1	1		
	<i>Psorophora columbiae</i>	2	13		
	<i>Psorophora ferox</i>	4	18		
Essex		60	281		
	<i>Aedes albopictus</i>	6	11		
	<i>Aedes canadensis canadensis</i>	2	14		
	<i>Aedes grossbecki</i>	5	12		
	<i>Aedes japonicus</i>	9	14		
	<i>Aedes triseriatus</i>	5	11		
	<i>Aedes trivittatus</i>	6	116		
	<i>Aedes vexans</i>	1	1		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Culex</i> spp.	25	101		
Gloucester		165	6465	1	0.155
	<i>Aedes albopictus</i>	23	410		
	<i>Aedes japonicus</i>	18	387		
	<i>Aedes triseriatus</i>	5	37		
	<i>Anopheles punctipennis</i>	1	75		
	<i>Culex</i> spp.	94	4895	1	
	<i>Culex pipiens</i>	3	60		
	<i>Culiseta melanura</i>	20	526		
	<i>Psorophora ferox</i>	1	75		
Hudson		105	4673	2	0.428
	<i>Aedes albopictus</i>	15	199		
	<i>Aedes triseriatus</i>	10	18		
	<i>Culex</i> spp.	80	4456	2	0.449
Hunterdon		109	4984		

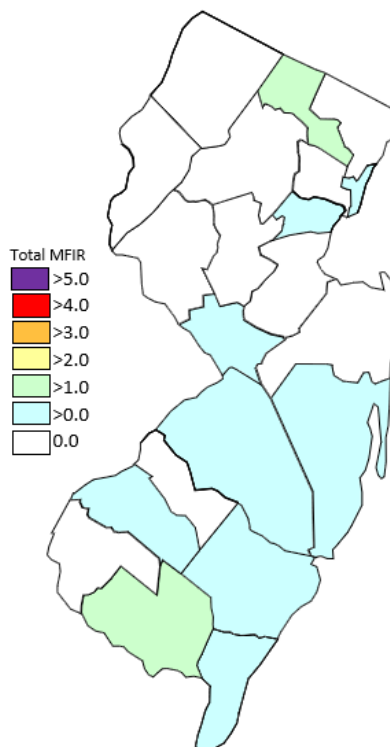
	<i>Aedes albopictus</i>	1	6		
	<i>Aedes triseriatus</i>	4	21		
	<i>Aedes trivittatus</i>	1	50		
	<i>Aedes vexans</i>	1	7		
	<i>Anopheles punctipennis</i>	1	3		
	<i>Coquillettidia perturbans</i>	1	2		
	<i>Culex</i> spp.	98	4883		
	<i>Psorophora ferox</i>	1	11		
	<i>Psorophora howardii</i>	1	1		
Mercer		163	2162	1	0.463
	<i>Aedes albopictus</i>	24	186	1	4.484
	<i>Aedes japonicus</i>	43	223		
	<i>Aedes triseriatus</i>	14	54		
	<i>Aedes vexans</i>	1	12		
	<i>Anopheles quadrimaculatus</i>	1	2		
	<i>Culex</i> spp.	80	1685		
Middlesex		115	1158		
	<i>Aedes albopictus</i>	11	59		
	<i>Aedes japonicus</i>	12	145		
	<i>Aedes triseriatus</i>	6	25		
	<i>Coquillettidia perturbans</i>	2	23		
	<i>Culex</i> spp.	77	867		
	<i>Culiseta melanura</i>	7	39		
Monmouth		216	2927		
	<i>Aedes albopictus</i>	34	182		
	<i>Aedes atlanticus</i>	2	13		
	<i>Aedes canadensis canadensis</i>	18	513		
	<i>Aedes cantator</i>	4	30		
	<i>Aedes japonicus</i>	9	18		
	<i>Aedes sollicitans</i>	1	1		
	<i>Aedes triseriatus</i>	13	231		
	<i>Aedes trivittatus</i>	1	4		
	<i>Aedes vexans</i>	6	37		
	<i>Anopheles punctipennis</i>	16	56		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	9	31		
	<i>Culex</i> spp.	64	1467		
	<i>Culex erraticus</i>	4	4		
	<i>Culex restuans</i>	3	3		
	<i>Culex salinarius</i>	4	15		
	<i>Culiseta melanura</i>	17	280		
	<i>Psorophora columbiae</i>	2	20		
	<i>Psorophora ferox</i>	8	21		
Morris		185	6979		
	<i>Aedes canadensis canadensis</i>	17	686		
	<i>Aedes japonicus</i>	14	137		
	<i>Aedes triseriatus</i>	3	9		
	<i>Coquillettidia perturbans</i>	15	823		
	<i>Culex</i> spp.	123	5102		
	<i>Culiseta melanura</i>	13	222		

Ocean	148	1230	1	0.813
<i>Aedes albopictus</i>	31	161	1	76.923
<i>Aedes canadensis canadensis</i>	7	21		
<i>Aedes cantator</i>	3	13		
<i>Aedes japonicus</i>	11	33		
<i>Aedes triseriatus</i>	3	6		
<i>Aedes trivittatus</i>	1	1		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles punctipennis</i>	3	4		
<i>Coquillettidia perturbans</i>	8	34		
<i>Culex</i> spp.	42	722		
<i>Culex erraticus</i>	3	5		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	7	29		
<i>Culiseta melanura</i>	26	195		
<i>Psorophora ferox</i>	1	4		
Passaic	126	929	1	1.076
<i>Aedes albopictus</i>	6	22	1	26.316
<i>Aedes canadensis canadensis</i>	3	13		
<i>Aedes japonicus</i>	31	277		
<i>Aedes triseriatus</i>	19	38		
<i>Aedes trivittatus</i>	1	6		
<i>Anopheles quadrimaculatus</i>	1	6		
<i>Coquillettidia perturbans</i>	2	10		
<i>Culex</i> spp.	60	546		
<i>Culex restuans</i>	2	8		
<i>Psorophora ferox</i>	1	3		
Salem	244	2834		
<i>Aedes albopictus</i>	51	159		
<i>Aedes atlanticus</i>	3	4		
<i>Aedes aurifer</i>	2	2		
<i>Aedes japonicus</i>	33	122		
<i>Aedes triseriatus</i>	16	21		
<i>Aedes trivittatus</i>	1	1		
<i>Anopheles punctipennis</i>	7	25		
<i>Anopheles quadrimaculatus</i>	5	23		
<i>Coquillettidia perturbans</i>	17	153		
<i>Culex</i> spp.	72	2150		
<i>Culex erraticus</i>	7	37		
<i>Culex pipiens</i>	6	6		
<i>Culex restuans</i>	6	6		
<i>Culex salinarius</i>	2	4		
<i>Culiseta melanura</i>	14	119		
<i>Psorophora columbiae</i>	1	1		
<i>Psorophora ferox</i>	1	1		
Somerset	98	3156		
<i>Aedes albopictus</i>	2	13		
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	11	163		
<i>Aedes triseriatus</i>	2	4		
<i>Aedes trivittatus</i>	2	57		
<i>Culex</i> spp.	80	2916		

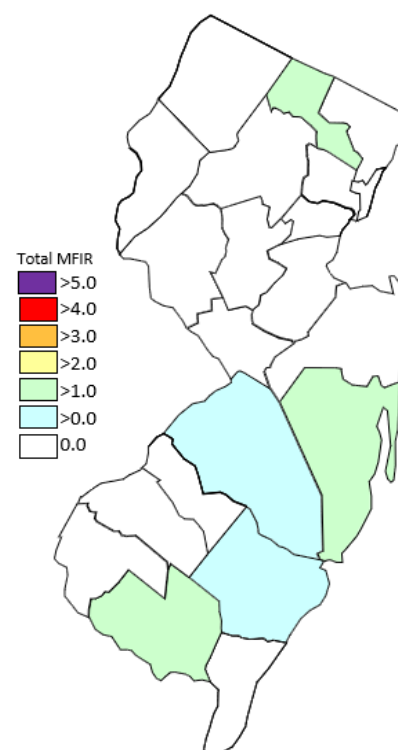
Sussex	139	4719		
<i>Aedes abserratus</i>	13	258		
<i>Aedes aurifer</i>	1	12		
<i>Aedes canadensis canadensis</i>	16	272		
<i>Aedes japonicus</i>	3	94		
<i>Aedes provocans</i>	2	8		
<i>Aedes sticticus</i>	2	84		
<i>Aedes stimulans</i>	2	10		
<i>Aedes triseriatus</i>	12	81		
<i>Coquillettidia perturbans</i>	1	75		
<i>Culex</i> spp.	80	3481		
<i>Culex pipiens</i>	1	75		
<i>Culex restuans</i>	4	204		
<i>Culiseta melanura</i>	2	65		
Union	70	4236	1	0.236
<i>Aedes albopictus</i>	1	11		
<i>Aedes japonicus</i>	2	25		
<i>Aedes triseriatus</i>	1	4		
<i>Coquillettidia perturbans</i>	14	875		
<i>Culex</i> spp.	52	3321	1	0.301
Warren	147	7373		
<i>Aedes japonicus</i>	16	327		
<i>Culex</i> spp.	131	7046		
Grand Total	4007	81053	17	0.210



Cumulative WNV activity in 2018.



WNV activity to 27 July 2019.



WNV activity last week, 2019

Beginning in 2019, viruses are tested as a panel, and so there may be results for species not normally associated with that virus. We have also begun testing for Jamestown Canyon virus.

Saint Louis Encephalitis (SLE) to 27 July 2019.

New Jersey will be primarily testing for SLE as part of a panel of arboviruses. SLE has had previous activity in New Jersey, most notably in 1964 and 1975, the latter outbreak 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 2019. No human cases have been reported.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		171	5431		
	<i>Aedes albopictus</i>	24	204		
	<i>Aedes cantator</i>	2	112		
	<i>Aedes japonicus</i>	5	71		
	<i>Aedes sollicitans</i>	5	245		
	<i>Aedes taeniorhynchus</i>	3	165		
	<i>Aedes vexans</i>	6	113		
	<i>Anopheles bradleyi</i>	3	38		
	<i>Anopheles crucians</i>	1	6		
	<i>Anopheles punctipennis</i>	1	45		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	17	490		
	<i>Culex</i> spp.	54	2815		
	<i>Culex erraticus</i>	3	3		
	<i>Culex pipiens</i>	1	75		
	<i>Culex restuans</i>	1	3		
	<i>Culex territans</i>	1	1		
	<i>Culiseta melanura</i>	41	894		
	<i>Psorophora ferox</i>	2	150		
Bergen		123	6836		
	<i>Aedes albopictus</i>	3	32		
	<i>Aedes canadensis canadensis</i>	4	28		
	<i>Aedes cantator</i>	2	105		
	<i>Aedes japonicus</i>	10	253		
	<i>Aedes thibaulti</i>	2	27		
	<i>Aedes triseriatus</i>	3	27		
	<i>Aedes trivittatus</i>	1	6		
	<i>Coquillettidia perturbans</i>	3	37		
	<i>Culex</i> spp.	88	6164		
	<i>Culex salinarius</i>	3	141		
	<i>Culiseta melanura</i>	3	10		
	<i>Psorophora ferox</i>	1	6		
Burlington		156	7741		
	<i>Aedes albopictus</i>	1	3		
	<i>Aedes atlanticus</i>	3	49		
	<i>Aedes canadensis canadensis</i>	8	232		
	<i>Aedes cantator</i>	1	28		
	<i>Aedes infirmatus</i>	1	1		
	<i>Aedes japonicus</i>	3	25		
	<i>Aedes mitchellae</i>	1	1		
	<i>Aedes sticticus</i>	1	9		
	<i>Aedes taeniorhynchus</i>	1	9		

<i>Aedes vexans</i>	1	30		
<i>Anopheles bradleyi</i>	1	27		
<i>Anopheles crucians</i>	2	69		
<i>Anopheles quadrimaculatus</i>	1	10		
<i>Coquillettidia perturbans</i>	7	481		
<i>Culex</i> spp.	86	5831		
<i>Culex salinarius</i>	13	515		
<i>Culiseta melanura</i>	24	397		
<i>Psorophora ferox</i>	1	24		
Camden	27	655		
<i>Aedes albopictus</i>	3	8		
<i>Aedes japonicus</i>	7	26		
<i>Culex</i> spp.	10	409		
<i>Culiseta melanura</i>	7	212		
Cape May	1019	4395		
<i>Aedes albopictus</i>	31	67		
<i>Aedes canadensis canadensis</i>	11	15		
<i>Aedes cantator</i>	4	4		
<i>Aedes japonicus</i>	118	232		
<i>Aedes triseriatus</i>	15	34		
<i>Aedes vexans</i>	8	8		
<i>Anopheles bradleyi</i>	32	91		
<i>Anopheles punctipennis</i>	4	4		
<i>Anopheles quadrimaculatus</i>	44	406		
<i>Coquillettidia perturbans</i>	16	36		
<i>Culex</i> spp.	12	36		
<i>Culex erraticus</i>	9	16		
<i>Culex pipiens</i>	222	2234		
<i>Culex restuans</i>	243	573		
<i>Culex salinarius</i>	128	327		
<i>Culex territans</i>	19	38		
<i>Culiseta melanura</i>	97	266		
<i>Orthopodomyia signifera</i>	4	4		
<i>Uranotaenia sapphirina</i>	2	4		
Cumberland	102	936		
<i>Aedes albopictus</i>	7	38		
<i>Aedes canadensis canadensis</i>	2	51		
<i>Aedes japonicus</i>	1	10		
<i>Aedes trivittatus</i>	3	7		
<i>Aedes vexans</i>	17	153		
<i>Anopheles punctipennis</i>	9	46		
<i>Anopheles quadrimaculatus</i>	11	110		
<i>Coquillettidia perturbans</i>	7	10		
<i>Culex</i> spp.	20	278		
<i>Culex erraticus</i>	4	77		
<i>Culex salinarius</i>	1	29		
<i>Culiseta melanura</i>	13	95		
<i>Psorophora ciliate</i>	1	1		
<i>Psorophora columbiae</i>	2	13		
<i>Psorophora ferox</i>	4	18		
Essex	60	281		
<i>Aedes albopictus</i>	6	11		

<i>Aedes canadensis canadensis</i>	2	14		
<i>Aedes grossbecki</i>	5	12		
<i>Aedes japonicus</i>	9	14		
<i>Aedes triseriatus</i>	5	11		
<i>Aedes trivittatus</i>	6	116		
<i>Aedes vexans</i>	1	1		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Culex</i> spp.	25	101		
Gloucester	165	6465		
<i>Aedes albopictus</i>	23	410		
<i>Aedes japonicus</i>	18	387		
<i>Aedes triseriatus</i>	5	37		
<i>Anopheles punctipennis</i>	1	75		
<i>Culex</i> spp.	94	4895		
<i>Culex pipiens</i>	3	60		
<i>Culiseta melanura</i>	20	526		
<i>Psorophora ferox</i>	1	75		
Hudson	97	4659		
<i>Aedes albopictus</i>	15	199		
<i>Aedes triseriatus</i>	2	4		
<i>Culex</i> spp.	80	4456		
Hunterdon	106	4966		
<i>Aedes albopictus</i>	1	6		
<i>Aedes triseriatus</i>	1	3		
<i>Aedes trivittatus</i>	1	50		
<i>Aedes vexans</i>	1	7		
<i>Anopheles punctipennis</i>	1	3		
<i>Coquillettidia perturbans</i>	1	2		
<i>Culex</i> spp.	98	4883		
<i>Psorophora ferox</i>	1	11		
<i>Psorophora howardii</i>	1	1		
Mercer	149	2108		
<i>Aedes albopictus</i>	24	186		
<i>Aedes japonicus</i>	43	223		
<i>Aedes vexans</i>	1	12		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Culex</i> spp.	80	1685		
Middlesex	111	1143		
<i>Aedes albopictus</i>	11	59		
<i>Aedes japonicus</i>	12	145		
<i>Aedes triseriatus</i>	2	10		
<i>Coquillettidia perturbans</i>	2	23		
<i>Culex</i> spp.	77	867		
<i>Culiseta melanura</i>	7	39		
Monmouth	204	2698		
<i>Aedes albopictus</i>	34	182		
<i>Aedes atlanticus</i>	2	13		
<i>Aedes canadensis canadensis</i>	18	513		
<i>Aedes cantator</i>	4	30		

<i>Aedes japonicus</i>	9	18		
<i>Aedes sollicitans</i>	1	1		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes trivittatus</i>	1	4		
<i>Aedes vexans</i>	6	37		
<i>Anopheles punctipennis</i>	16	56		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	9	31		
<i>Culex</i> spp.	64	1467		
<i>Culex erraticus</i>	4	4		
<i>Culex restuans</i>	3	3		
<i>Culex salinarius</i>	4	15		
<i>Culiseta melanura</i>	17	280		
<i>Psorophora columbiae</i>	2	20		
<i>Psorophora ferox</i>	8	21		
Morris	185	6979		
<i>Aedes canadensis canadensis</i>	17	686		
<i>Aedes japonicus</i>	14	137		
<i>Aedes triseriatus</i>	3	9		
<i>Coquillettidia perturbans</i>	15	823		
<i>Culex</i> spp.	123	5102		
<i>Culiseta melanura</i>	13	222		
Ocean	148	1230		
<i>Aedes albopictus</i>	31	161		
<i>Aedes canadensis canadensis</i>	7	21		
<i>Aedes cantator</i>	3	13		
<i>Aedes japonicus</i>	11	33		
<i>Aedes triseriatus</i>	3	6		
<i>Aedes trivittatus</i>	1	1		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles punctipennis</i>	3	4		
<i>Coquillettidia perturbans</i>	8	34		
<i>Culex</i> spp.	42	722		
<i>Culex erraticus</i>	3	5		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	7	29		
<i>Culiseta melanura</i>	26	195		
<i>Psorophora ferox</i>	1	4		
Passaic	119	915		
<i>Aedes albopictus</i>	4	13		
<i>Aedes canadensis canadensis</i>	3	13		
<i>Aedes japonicus</i>	31	277		
<i>Aedes triseriatus</i>	14	33		
<i>Aedes trivittatus</i>	1	6		
<i>Aedes quadrimaculatus</i>	1	6		
<i>Coquillettidia perturbans</i>	2	10		
<i>Culex</i> spp.	60	546		
<i>Culex restuans</i>	2	8		
<i>Psorophora ferox</i>	1	3		
Salem	230	2815		
<i>Aedes albopictus</i>	51	159		
<i>Aedes atlanticus</i>	3	4		

	<i>Aedes aurifer</i>	2	2		
	<i>Aedes japonicus</i>	33	122		
	<i>Aedes triseriatus</i>	2	2		
	<i>Aedes trivittatus</i>	1	1		
	<i>Anopheles punctipennis</i>	7	25		
	<i>Anopheles quadrimaculatus</i>	5	23		
	<i>Coquillettidia perturbans</i>	17	153		
	<i>Culex</i> spp.	72	2150		
	<i>Culex erraticus</i>	7	37		
	<i>Culex pipiens</i>	6	6		
	<i>Culex restuans</i>	6	6		
	<i>Culex salinarius</i>	2	4		
	<i>Culiseta melanura</i>	14	119		
	<i>Psorophora columbiae</i>	1	1		
	<i>Psorophora ferox</i>	1	1		
Somerset		98	3156		
	<i>Aedes albopictus</i>	2	13		
	<i>Aedes canadensis canadensis</i>	1	3		
	<i>Aedes japonicus</i>	11	163		
	<i>Aedes triseriatus</i>	2	4		
	<i>Aedes trivittatus</i>	2	57		
	<i>Culex</i> spp.	80	2916		
Sussex		126	4605		
	<i>Aedes abserratus</i>	13	258		
	<i>Aedes aurifer</i>	1	12		
	<i>Aedes canadensis canadensis</i>	16	272		
	<i>Aedes japonicus</i>	2	61		
	<i>Aedes provocans</i>	2	8		
	<i>Aedes sticticus</i>	2	84		
	<i>Aedes stimulans</i>	2	10		
	<i>Coquillettidia perturbans</i>	1	75		
	<i>Culex</i> spp.	80	3481		
	<i>Culex pipiens</i>	1	75		
	<i>Culex restuans</i>	4	204		
	<i>Culiseta melanura</i>	2	65		
Union		60	3688		
	<i>Aedes albopictus</i>	1	11		
	<i>Aedes japonicus</i>	2	25		
	<i>Coquillettidia perturbans</i>	5	331		
	<i>Culex</i> spp.	52	3321		
Warren		147	7373		
	<i>Aedes japonicus</i>	16	327		
	<i>Culex</i> spp.	131	7046		
Grand Total		3603	79075		

La Crosse Encephalitis (LAC) to 27 July 2019.

New Jersey will be testing for LAC as part of a panel. New Jersey has had 3 cases of this encephalitic disease since 1964. 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).

One pool of *Aedes triseriatus* has been detected infected with LAC, collected 31 May in Passaic County. This pool was also reported co-infected with WNV. No human cases have been reported.

County	Species	Pools	Mosquitoes	Positives	MFIR
Bergen		17	423		
	<i>Aedes albopictus</i>	3	54		
	<i>Aedes canadensis canadensis</i>	1	3		
	<i>Aedes japonicus</i>	9	327		
	<i>Aedes triseriatus</i>	4	39		
Burlington		12	234		
	<i>Aedes albopictus</i>	4	54		
	<i>Aedes japonicus</i>	4	165		
	<i>Aedes triseriatus</i>	4	15		
Cape May	* species removed	123	182		
	<i>Aedes triseriatus</i>	123	182		
Essex		1	3		
	<i>Aedes triseriatus</i>	1	3		
Hudson		8	14		
	<i>Aedes triseriatus</i>	8	14		
Hunterdon		3	18		
	<i>Aedes triseriatus</i>	3	18		
Mercer		14	54		
	<i>Aedes triseriatus</i>	14	54		
Middlesex		4	15		
	<i>Aedes triseriatus</i>	4	15		
Monmouth		12	229		
	<i>Aedes triseriatus</i>	12	229		
Passaic		16	44	1	22.727
	<i>Aedes albopictus</i>	2	9		
	<i>Aedes canadensis canadensis</i>	1	8		
	<i>Aedes triseriatus</i>	12	25	1	40.000
	<i>Coquillettia perturbans</i>	1	2		
Salem		14	19		
	<i>Aedes triseriatus</i>	14	19		
Sussex		13	114		
	<i>Aedes japonicus</i>	1	33		
	<i>Aedes triseriatus</i>	12	81		
Union		10	548		
	<i>Aedes triseriatus</i>	1	4		
	<i>Coquillettia perturbans</i>	9	544		
Grand Total		247	1897	1	0.527

Dengue (DENV) to 27 July 2019.

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.

Negative pools are reported without reference to the 4 serotypes. Positive pools will refer to the serotypes.

No pools of Dengue have been found positive in 2019. There are currently 12 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		24	204		
	<i>Aedes albopictus</i>	24	204		
Middlesex		6	27		
	<i>Aedes albopictus</i>	6	27		
Grand Total		30	231		

Chikungunya (CHIK) to 27 July 2019.

Mosquitoes will be tested for CHIK as part of a panel. 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 found positive in 2019. There are currently 3 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		24	204		
	<i>Aedes albopictus</i>	24	204		
Cape May		200	368		
	<i>Aedes albopictus</i>	196	347		
	<i>Aedes triseriatus</i>	2	17		
	<i>Culex pipiens</i>	1	1		
	<i>Culex restuans</i>	1	3		
Middlesex		6	27		
	<i>Aedes albopictus</i>	6	27		
Grand Total		230	599		

Zika (ZIKV) to 27 July 2019.

Mosquitoes will be tested for ZIKV as part of a panel. 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 of ZIKV have tested positive in 2019. There are currently 4 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		24	204		
	<i>Aedes albopictus</i>	24	204		
Cape May		199	367		
	<i>Aedes albopictus</i>	195	346		
	<i>Aedes triseriatus</i>	2	17		
	<i>Culex pipiens</i>	1	1		
	<i>Culex restuans</i>	1	3		
Middlesex		6	27		
	<i>Aedes albopictus</i>	6	27		
Grand Total		229	598		

Jamestown Canyon (JCV) to 27 July 2019.

New Jersey will begin testing for JCV this year. Jamestown Canyon is a native arboviral threat with fever and meningitis or meningoencephalitis consequences. JCV is an orthobunyavirus with a number of potential mosquito vectors, including *Aedes*, *Coquillettidia*, and *Culex* species.

Three pools of positive mosquitoes have been detected. One pool of *Aedes abserratus* in Sussex County (collected 5 June), one pool of *Aedes cantator* collected in Bergen County (collected 22 June) and one pool of *Anopheles crucians* in Burlington County (collected 2 July) have been found positive in 2019. *Ae. abserratus* is a deer-feeding species that has been found positive in Connecticut and implicated as a potential vector (Theodore G. Andreadis, John F. Anderson, Philip M. Armstrong, and Andrew J. Main. Vector-Borne and Zoonotic Diseases. Apr 2008. <http://doi.org/10.1089/vbz.2007.0169>). *Ae. cantator* tends to feed on human-associated species and likely plays little if any role in the transmission of JCV. *An. crucians* obtains bloodmeals from a few birds, but mostly small to medium-sized mammals (Edman, J. D. 1971. Host-feeding patterns of Florida mosquitoes. I. *Aedes*, *Anopheles*, *Coquillettidia*, *Mansonia*, and *Psorophora*. J. Med. Entomol. 8: 687-95.) There are currently 0 human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		171	5431		
	<i>Aedes albopictus</i>	24	204		
	<i>Aedes cantator</i>	2	112		
	<i>Aedes japonicus</i>	5	71		
	<i>Aedes sollicitans</i>	5	245		
	<i>Aedes taeniorhynchus</i>	3	165		
	<i>Aedes vexans</i>	6	113		
	<i>Anopheles bradleyi</i>	3	38		
	<i>Anopheles crucians</i>	1	6		
	<i>Anopheles punctipennis</i>	1	45		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	17	490		
	<i>Culex</i> spp.	54	2815		
	<i>Culex erraticus</i>	3	3		
	<i>Culex pipiens</i>	1	75		
	<i>Culex restuans</i>	1	3		
	<i>Culex territans</i>	1	1		
	<i>Culiseta melanura</i>	41	894		
	<i>Psorophora ferox</i>	2	150		
Bergen		123	6836	1	0.146
	<i>Aedes albopictus</i>	3	32		

<i>Aedes canadensis canadensis</i>	4	28	1	9.524
<i>Aedes cantator</i>	2	105		
<i>Aedes japonicus</i>	10	253		
<i>Aedes thibaulti</i>	2	27		
<i>Aedes triseriatus</i>	3	27		
<i>Aedes trivittatus</i>	1	6		
<i>Coquillettidia perturbans</i>	3	37		
<i>Culex</i> spp.	88	6164		
<i>Culex salinarius</i>	3	141		
<i>Culiseta melanura</i>	3	10		
<i>Psorophora ferox</i>	1	6		
Burlington	156	7741	1	0.129
<i>Aedes albopictus</i>	1	3	1	14.493
<i>Aedes atlanticus</i>	3	49		
<i>Aedes canadensis canadensis</i>	8	232		
<i>Aedes cantator</i>	1	28		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	3	25		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sticticus</i>	1	9		
<i>Aedes taeniorhynchus</i>	1	9		
<i>Aedes vexans</i>	1	30		
<i>Anopheles bradleyi</i>	1	27		
<i>Anopheles crucians</i>	2	69		
<i>Coquillettidia perturbans</i>	1	10		
<i>Culex</i> spp.	7	481		
<i>Culex salinarius</i>	86	5831		
<i>Culiseta melanura</i>	13	515		
<i>Psorophora ferox</i>	24	397		
Camden	20	443		
<i>Aedes albopictus</i>	3	8		
<i>Aedes japonicus</i>	7	26		
<i>Culex</i> spp.	10	409		
Cape May	21	33		
<i>Aedes triseriatus</i>	21	33		
Cumberland	102	936		
<i>Aedes albopictus</i>	7	38		
<i>Aedes canadensis canadensis</i>	2	51		
<i>Aedes japonicus</i>	1	10		
<i>Aedes trivittatus</i>	3	7		
<i>Aedes vexans</i>	17	153		
<i>Anopheles punctipennis</i>	9	46		
<i>Anopheles quadrimaculatus</i>	11	110		
<i>Coquillettidia perturbans</i>	7	10		
<i>Culex</i> spp.	20	278		
<i>Culex erraticus</i>	4	77		
<i>Culex salinarius</i>	1	29		
<i>Culiseta melanura</i>	13	95		
<i>Psorophora ciliate</i>	1	1		
<i>Psorophora columbiae</i>	2	13		
<i>Psorophora ferox</i>	4	18		

Essex	60	281		
<i>Aedes albopictus</i>	6	11		
<i>Aedes canadensis canadensis</i>	2	14		
<i>Aedes grossbecki</i>	5	12		
<i>Aedes japonicus</i>	9	14		
<i>Aedes triseriatus</i>	5	11		
<i>Aedes trivittatus</i>	6	116		
<i>Aedes vexans</i>	1	1		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Culex</i> spp.	25	101		
Gloucester	159	6352		
<i>Aedes albopictus</i>	23	410		
<i>Aedes japonicus</i>	18	387		
<i>Aedes triseriatus</i>	5	37		
<i>Anopheles punctipennis</i>	1	75		
<i>Culex</i> spp.	94	4895		
<i>Culex pipiens</i>	3	60		
<i>Culiseta melanura</i>	14	413		
<i>Psorophora ferox</i>	1	75		
Hudson	97	4659		
<i>Aedes albopictus</i>	15	199		
<i>Aedes triseriatus</i>	2	4		
<i>Culex</i> spp.	80	4456		
Hunterdon	106	4966		
<i>Aedes albopictus</i>	1	6		
<i>Aedes triseriatus</i>	1	3		
<i>Aedes trivittatus</i>	1	50		
<i>Aedes vexans</i>	1	7		
<i>Anopheles punctipennis</i>	1	3		
<i>Coquillettidia perturbans</i>	1	2		
<i>Culex</i> spp.	98	4883		
<i>Psorophora ferox</i>	1	11		
<i>Psorophora howardii</i>	1	1		
Mercer	149	2108		
<i>Aedes albopictus</i>	24	186		
<i>Aedes japonicus</i>	43	223		
<i>Aedes vexans</i>	1	12		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Culex</i> spp.	80	1685		
Middlesex	111	1143		
<i>Aedes albopictus</i>	11	59		
<i>Aedes japonicus</i>	12	145		
<i>Aedes triseriatus</i>	2	10		
<i>Coquillettidia perturbans</i>	2	23		
<i>Culex</i> spp.	77	867		
<i>Culiseta melanura</i>	7	39		
Monmouth	204	2698		
<i>Aedes albopictus</i>	34	182		
<i>Aedes atlanticus</i>	2	13		

<i>Aedes canadensis canadensis</i>	18	513		
<i>Aedes cantator</i>	4	30		
<i>Aedes japonicus</i>	9	18		
<i>Aedes sollicitans</i>	1	1		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes trivittatus</i>	1	4		
<i>Aedes vexans</i>	6	37		
<i>Anopheles punctipennis</i>	16	56		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	9	31		
<i>Culex</i> spp.	64	1467		
<i>Culex erraticus</i>	4	4		
<i>Culex restuans</i>	3	3		
<i>Culex salinarius</i>	4	15		
<i>Culiseta melanura</i>	17	280		
<i>Psorophora columbiae</i>	2	20		
<i>Psorophora ferox</i>	8	21		
Morris	185	6979		
<i>Aedes canadensis canadensis</i>	17	686		
<i>Aedes japonicus</i>	14	137		
<i>Aedes triseriatus</i>	3	9		
<i>Coquillettidia perturbans</i>	15	823		
<i>Culex</i> spp.	123	5102		
<i>Culiseta melanura</i>	13	222		
Ocean	148	1230		
<i>Aedes albopictus</i>	31	161		
<i>Aedes canadensis canadensis</i>	7	21		
<i>Aedes cantator</i>	3	13		
<i>Aedes japonicus</i>	11	33		
<i>Aedes triseriatus</i>	3	6		
<i>Aedes trivittatus</i>	1	1		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles punctipennis</i>	3	4		
<i>Coquillettidia perturbans</i>	8	34		
<i>Culex</i> spp.	42	722		
<i>Culex erraticus</i>	3	5		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	7	29		
<i>Culiseta melanura</i>	26	195		
<i>Psorophora ferox</i>	1	4		
Passaic	119	915		
<i>Aedes albopictus</i>	4	13		
<i>Aedes canadensis canadensis</i>	3	13		
<i>Aedes japonicus</i>	31	277		
<i>Aedes triseriatus</i>	14	33		
<i>Aedes trivittatus</i>	1	6		
<i>Anopheles quadrimaculatus</i>	1	6		
<i>Coquillettidia perturbans</i>	2	10		
<i>Culex</i> spp.	60	546		
<i>Culex restuans</i>	2	8		
<i>Psorophora ferox</i>	1	3		
Salem	225	2711		

	<i>Aedes albopictus</i>	51	159		
	<i>Aedes atlanticus</i>	3	4		
	<i>Aedes aurifer</i>	2	2		
	<i>Aedes japonicus</i>	33	122		
	<i>Aedes triseriatus</i>	2	2		
	<i>Aedes trivittatus</i>	1	1		
	<i>Anopheles punctipennis</i>	7	25		
	<i>Anopheles quadrimaculatus</i>	5	23		
	<i>Coquillettidia perturbans</i>	17	153		
	<i>Culex</i> spp.	72	2150		
	<i>Culex erraticus</i>	7	37		
	<i>Culex pipiens</i>	6	6		
	<i>Culex restuans</i>	6	6		
	<i>Culex salinarius</i>	2	4		
	<i>Culiseta melanura</i>	9	15		
	<i>Psorophora columbiae</i>	1	1		
	<i>Psorophora ferox</i>	1	1		
Somerset		98	3156		
	<i>Aedes albopictus</i>	2	13		
	<i>Aedes canadensis canadensis</i>	1	3		
	<i>Aedes japonicus</i>	11	163		
	<i>Aedes triseriatus</i>	2	4		
	<i>Aedes trivittatus</i>	2	57		
	<i>Culex</i> spp.	80	2916		
Sussex	*Species change	126	4605	1	0.217
	<i>Aedes abserratus</i>	13	258	1	3.876
	<i>Aedes aurifer</i>	1	12		
	<i>Aedes canadensis canadensis</i>	16	272		
	<i>Aedes japonicus</i>	2	61		
	<i>Aedes provocans</i>	2	8		
	<i>Aedes sticticus</i>	2	84		
	<i>Aedes stimulans</i>	2	10		
	<i>Coquillettidia perturbans</i> *	1	75		
	<i>Culex</i> spp.	80	3481		
	<i>Culex pipiens</i>	1	75		
	<i>Culex restuans</i>	4	204		
	<i>Culiseta melanura</i>	2	65		
Union		60	3688		
	<i>Aedes albopictus</i>	1	11		
	<i>Aedes japonicus</i>	2	25		
	<i>Coquillettidia perturbans</i>	5	331		
	<i>Culex</i> spp.	52	3321		
Warren		147	7373		
	<i>Aedes japonicus</i>	16	327		
	<i>Culex</i> spp.	131	7046		
Grand Total		2587	74284	3	0.040