

VECTOR SURVEILLANCE IN NEW JERSEY

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

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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	0.20	0.00	4	2		
Green Bank (Burlington Co.)/25	Coastal	3.47	0.24	31 (37)	6 (7)		
Corbin City (Atlantic Co.)/25	Coastal	0.90	1.20	110	9		
Dennisville (Cape May Co.)/50	Coastal	6.02	0.10	45	8		
Winslow (Camden Co.)/50	Inland	1.52	1.52	315	10	1	3.175
Centerton (Salem Co.)/50	Inland	2.66	0.12	113	7		
Turkey Swamp (Monmouth Co.)/49	Inland	1.68	1.40	278 (348)	12 (14)	2	7.194
Glassboro (Gloucester Co.)/50	Inland	0.20	0.16	132	8	1	7.576

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

Remarks: EEE activity in the state is ramping up and due diligence is needed. Currently in 2019, there are 18 detections of EEE virus: 15 pools of *Culiseta melanura* (four collected at traditional resting box sites, and 11 collected at county trap sites) and three pools in *Aedes albopictus* and *Culex Mix*. The first positive pool was collected on 3 July at Turkey Swamp, Monmouth County. There are three horse cases and no human cases.

Statewide, 5,540 Cs. *melanura* from 379 pools have been tested, with an overall Cs. *melanura* MFIR of 2.708. 97,580 specimens in 4,169 pools from 36 other species have also been tested, with three positive pools detected (*Aedes albopictus* and *Culex Mix* pools). Overall MFIR for all species statewide is 0.175.

Traditional Resting Box Sites: 1,028 Cs. *melanura* from 62 pools have been tested, with four positive pools detected – two at Turkey Swamp, 1 at Glassboro and 1 at Winslow. An additional 76 Cs. *melanura* in two pools are at labs to be tested.

County	Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in <u>BOLD UNDERLINE</u> .				
	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	BGS, CO ₂ , GR, RB	51	1690	3	1.775
Bergen	CO ₂ , RB	4	13		
Burlington	ULVT	25	785	2	2.548
Cape May	GR, RB	112	267		
Cumberland	AGO, RB	13	95		
Gloucester	RB	24	899	3	3.337
Middlesex	RB	8	44		
Monmouth	CO ₂ , Other	13	83	1	12.048
Morris	CO ₂ , RB	16	285		
Ocean	CO₂ , GR, RB	35	238	1	4.202
Salem	CO ₂ , GR, RB	13	45	1	22.222
Sussex	CO ₂	3	68		
TOTAL		317	4512	11	2.438

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, 11 pools of *Cs. melanura* have been found positive – the latest from Atlantic, Gloucester and Monmouth Counties. Previously, Atlantic County collected 24 July and Burlington County collected 30 July. Earlier positive pools were found in Salem County, collected 9 July, and Ocean County collected 10 July.

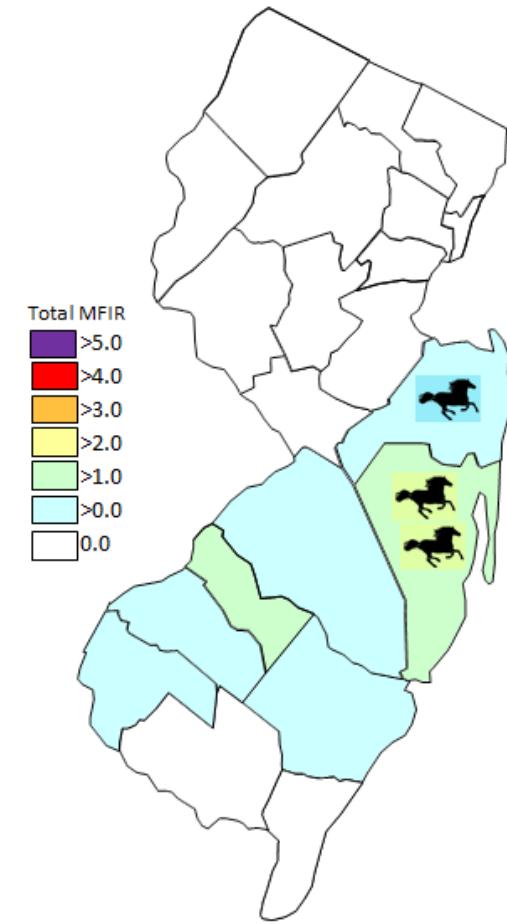
Horses and Humans: A third horse has been reported with EEE. This Monmouth County yearling male has an onset date of 5 Aug, and was euthanized the same day. Vaccinations included an April date. The second horse case reported was a 20 year old gelding in Ocean County with date of onset 26 July, euthanized the same day. Vaccination history is unknown. The first horse case involved 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

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	13	258		
<i>Aedes albopictus</i>	340	2466	1	0.406
<i>Aedes atlanticus</i>	12	125		
<i>Aedes aurifer</i>	3	14		
<i>Aedes canadensis canadensis</i>	96	2058		
<i>Aedes cantator</i>	16	292		
<i>Aedes grossbecki</i>	5	12		
<i>Aedes infirmatus</i>	1	1		
<i>Aedes japonicus</i>	434	3220		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes provocans</i>	2	8		
<i>Aedes sollicitans</i>	10	333		
<i>Aedes sticticus</i>	4	95		
<i>Aedes stimulans</i>	2	10		
<i>Aedes taeniorhynchus</i>	6	214		
<i>Aedes thibaulti</i>	2	27		
<i>Aedes triseriatus</i>	65	194		
<i>Aedes trivittatus</i>	21	308		
<i>Aedes vexans</i>	49	454		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	50	238		
<i>Anopheles crucians</i>	5	79		
<i>Anopheles punctipennis</i>	48	272		
<i>Anopheles quadrimaculatus</i>	86	658		
<i>Coquillettidia perturbans</i>	131	2753		
<i>Culex Mix</i>	1815	77034	2	0.026
<i>Culex erraticus</i>	43	254		
<i>Culex pipiens</i>	334	3391		
<i>Culex restuans</i>	322	989		
<i>Culex salinarius</i>	178	1178		
<i>Culex territans</i>	25	72		
<i>Orthopodomyia signifera</i>	5	5		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	8	59		
<i>Psorophora ferox</i>	29	496		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	5	9		
State Total	4169	97580	3	0.031

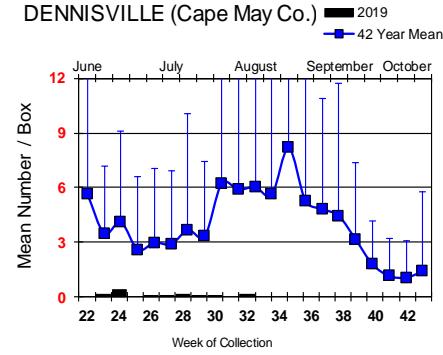
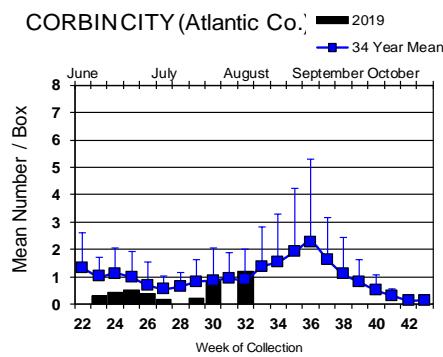
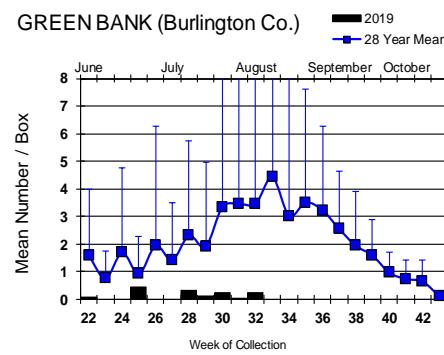
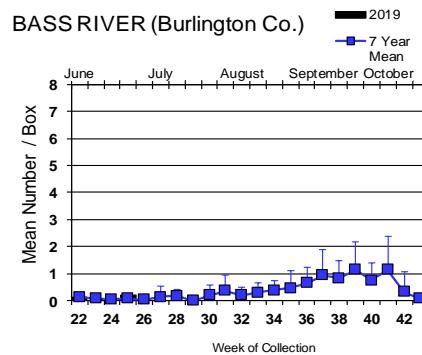
Additional Species: 35 additional species were tested for EEE. Three positive pools have been detected in two species. (One positive pool in *Aedes albopictus*, collected in Ocean County on 9 July was found. On 16 July, a positive pool of *Culex Mix* was detected in Camden County. A second *Culex* pool was detected in Ocean County 31 July. Note: *Culex pipiens* is refractory for EEE virus).

Overall MFIR rates per county:

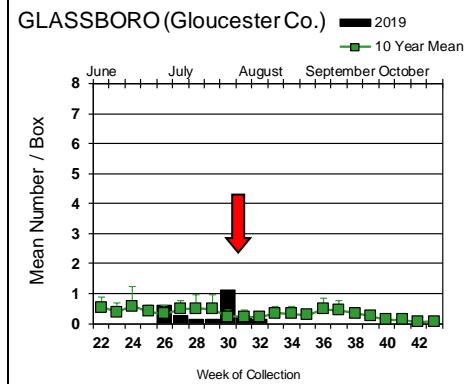
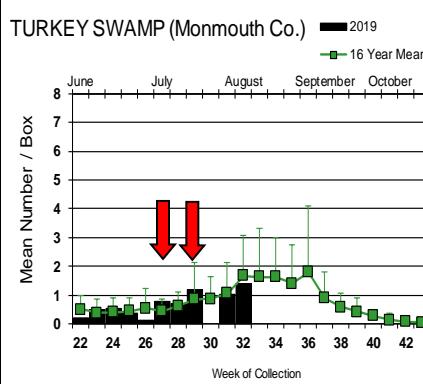
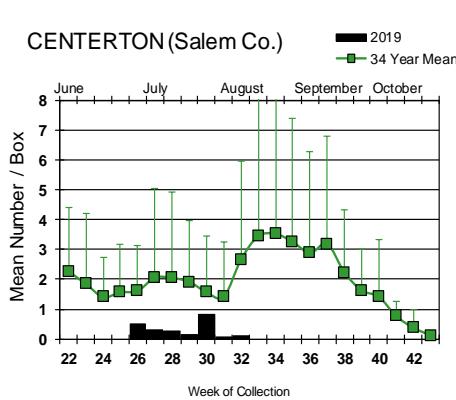
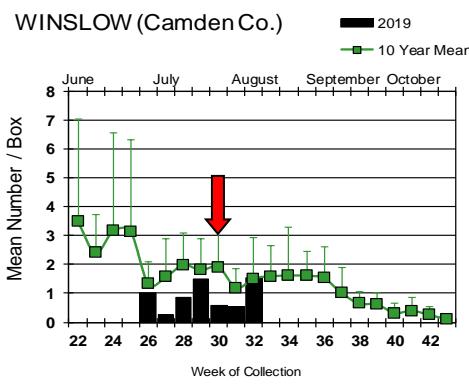


Culiseta melanura Populations

Coastal



Inland



Culiseta melanura populations at a few sites (Corbin City, Winslow, Turkey Swamp) are beginning to increase while others remain well below average historical values. Positive *Cs. melanura* continue to be detected at other non-traditional sites (see table 2 above).

= 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(MI) 7(MS) 1(NC) 3(NJ) 3(SC) 1(WI)
- **mosquito pools:** 1(CT) 227(MA) 1(MD) 18(NJ) 10(NY)
- **sentinel:** 86(+1 emu 1 BAEA, FL) 3(DE)
- **human:** 1(MA)

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	295/305	1	1	96/110
Arkansas					2
California	43/58	1371/1647	3/10	0	4/10
Colorado		7			1
Connecticut		0		0	3
Delaware					
Florida			35/55	1	
Georgia					
Hawaii					
Idaho	0	12/16		1/2	0
Illinois	2	121/171		0	0
Indiana	0	19/38		0	0
Iowa				2	2
Kansas					0
Kentucky					1
Louisiana					
Maine		0			0
Maryland(+DC)					1
Mass.		26/34		0	0
Michigan	2/8	7/12			0
Minnesota					
Mississippi		12		5	3/5
Missouri		0		0	1

	Birds	Mosquito Pools	Sentinels	Horses*	Humans
Montana					
Nebraska	0	13			0 1/4
Nevada					1/4
New Hampshire					
New Jersey		36/36			0 1
New Mexico					0
New York		62/122			0 0
North Carolina					
North Dakota	0	1			0 2/3
Ohio		22/78			0 0
Oklahoma					3
Oregon	0	18	0	1	1
Pennsylvania		47/92			
Rhode Island		0			
South Carolina	1	3			
South Dakota		9			1/3
Tennessee					
Texas		47			
Utah		17/42			
Vermont					
Virginia					1
Washington	0	7/9		0	0
West Virginia					
Wisconsin	0	3/5		0	0
Wyoming	0	4/6		0	2

* 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 9 August 2019

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes abserratus</i>	13	258		
<i>Aedes albopictus</i>	619	3057		
<i>Aedes atlanticus</i>	12	125		
<i>Aedes aurifer</i>	3	14		
<i>Aedes canadensis canadensis</i>	96	2058		
<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>	448	3653	1	0.274
<i>Aedes mitchellae</i>	1	1		
<i>Aedes provocans</i>	2	8		
<i>Aedes sollicitans</i>	10	333		
<i>Aedes sticticus</i>	4	95		
<i>Aedes stimulans</i>	2	10		
<i>Aedes taeniorhynchus</i>	6	214		
<i>Aedes thibaulti</i>	2	27		
<i>Aedes triseriatus</i>	293	1066	1	0.938
<i>Aedes trivittatus</i>	21	308		
<i>Aedes vexans</i>	49	454		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	50	238		
<i>Anopheles crucians</i>	5	79		
<i>Anopheles punctipennis</i>	49	273		
<i>Anopheles quadrimaculatus</i>	86	658		
<i>Coquillettidia perturbans</i>	142	3314		
<i>Culex</i> spp.	1814	76978	53	0.688
<i>Culex erraticus</i>	43	254		
<i>Culex pipiens</i>	335	3392	1	0.295
<i>Culex restuans</i>	326	993		
<i>Culex salinarius</i>	179	1181		
<i>Culex territans</i>	25	72		
<i>Culiseta melanura</i>	379	5540	3	0.542
<i>Orthopodomyia signifera</i>	5	5		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	8	59		
<i>Psorophora ferox</i>	29	496		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	5	9		
Grand Total	5086	105530	60	0.569

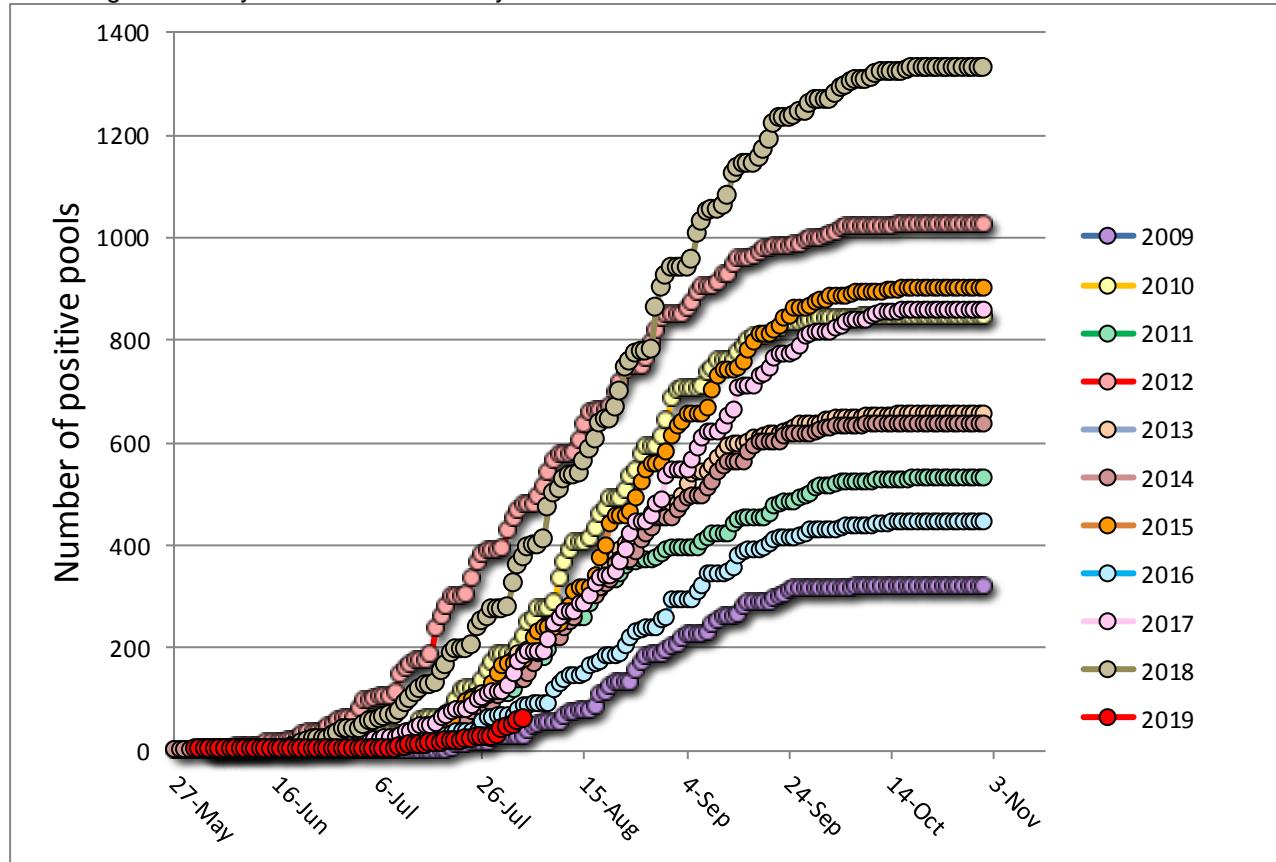
Remarks: To date, 5,086 pools of 105,530 mosquitoes from 37 species have been tested. A total of 60 positive WNV pools have been detected throughout the state beginning with a pool of *Aedes triseriatus*, collected on 31 May, 2019 in Passaic County. This pool was also co-infected with LAC (see table below). 54 (90%) 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 0.375 to 0.569.

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 9 August 2019.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		223	7680	1	0.130
	<i>Aedes albopictus</i>	29	252		
	<i>Aedes cantator</i>	2	112		
	<i>Aedes japonicus</i>	5	71		
	<i>Aedes sollicitans</i>	9	332		
	<i>Aedes taeniorhynchus</i>	5	205		
	<i>Aedes trivittatus</i>	2	57		
	<i>Aedes vexans</i>	7	188		
	<i>Anopheles bradleyi</i>	4	81		
	<i>Anopheles crucians</i>	2	9		
	<i>Anopheles punctipennis</i>	1	45		

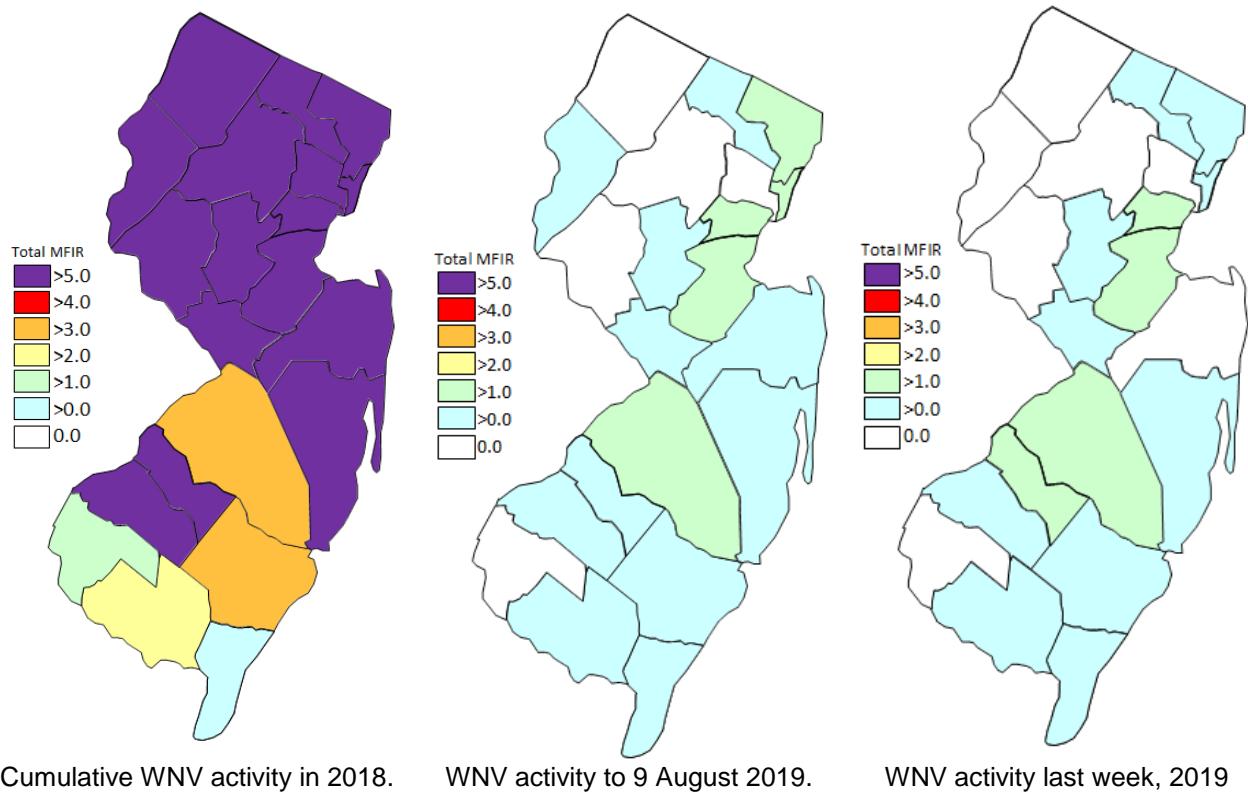
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	20	625		
<i>Culex spp.</i>	67	3595	1	0.278
<i>Culex erraticus</i>	3	3		
<i>Culex pipiens</i>	1	75		
<i>Culex restuans</i>	1	3		
<i>Culex territans</i>	1	1		
<i>Culiseta melanura</i>	60	1800		
<i>Psorophora ferox</i>	3	225		
Bergen	170	9915	11	1.109
<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>Coquillettidia perturbans</i>	3	37		
<i>Culex spp.</i>	125	8939	11	1.231
<i>Culex salinarius</i>	4	216		
<i>Culiseta melanura</i>	4	13		
<i>Psorophora ferox</i>	1	6		
Burlington	192	9182	12	1.307
<i>Aedes albopictus</i>	6	69		
<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>	9	244		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sticticus</i>	1	9		
<i>Aedes taeniorhynchus</i>	1	9		
<i>Aedes triseriatus</i>	5	17		
<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 spp.</i>	96	6519	11	1.687
<i>Culex salinarius</i>	13	515		
<i>Culex territans</i>	1	28		
<i>Culiseta melanura</i>	33	820	1	1.220
<i>Psorophora ferox</i>	1	24		
Camden	47	1026	1	0.975
<i>Aedes albopictus</i>	9	38		
<i>Aedes japonicus</i>	8	28		
<i>Aedes triseriatus</i>	1	4		
<i>Culex spp.</i>	19	641	1	1.560
<i>Culiseta melanura</i>	10	315		
Cape May	1717	6463	1	0.155
<i>Aedes albopictus</i>	299	525		
<i>Aedes canadensis canadensis</i>	11	15		

	<i>Aedes cantator</i>	4	4		
	<i>Aedes japonicus</i>	151	308		
	<i>Aedes triseriatus</i>	151	226		
	<i>Aedes vexans</i>	11	13		
	<i>Anopheles bradleyi</i>	42	119		
	<i>Anopheles crucians</i>	1	1		
	<i>Anopheles punctipennis</i>	6	6		
	<i>Anopheles quadrimaculatus</i>	63	503		
	<i>Coquillettidia perturbans</i>	20	55		
	<i>Culex</i> spp.	20	85		
	<i>Culex erraticus</i>	11	23		
	<i>Culex pipiens</i>	322	3173	1	0.315
	<i>Culex restuans</i>	306	681		
	<i>Culex salinarius</i>	147	358		
	<i>Culex territans</i>	22	42		
	<i>Culiseta melanura</i>	120	312		
	<i>Orthopodomyia signifera</i>	5	5		
	<i>Uranotaenia sapphirina</i>	5	9		
Cumberland	*pools redacted	116	1047	1	0.955
	<i>Aedes albopictus</i>	11	82		
	<i>Aedes canadensis canadensis</i>	2	51		
	<i>Aedes japonicus</i>	2	11		
	<i>Aedes trivittatus</i>	4	8		
	<i>Aedes vexans</i>	18	161		
	<i>Anopheles punctipennis</i>	11	52		
	<i>Anopheles quadrimaculatus*</i>	11	110		
	<i>Coquillettidia perturbans</i>	9	12		
	<i>Culex</i> spp.*	21	274		
	<i>Culex erraticus</i>	5	88		
	<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>	5	60		
Essex		75	337		
	<i>Aedes albopictus</i>	11	18		
	<i>Aedes canadensis canadensis</i>	2	14		
	<i>Aedes grossbecki</i>	5	12		
	<i>Aedes japonicus</i>	11	19		
	<i>Aedes triseriatus</i>	7	13		
	<i>Aedes trivittatus</i>	6	116		
	<i>Aedes vexans</i>	1	1		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Culex</i> spp.	30	142		
Gloucester		204	7881	2	0.254
	<i>Aedes albopictus</i>	32	574		
	<i>Aedes japonicus</i>	20	392		
	<i>Aedes triseriatus</i>	7	39		
	<i>Aedes vexans</i>	1	1		
	<i>Anopheles punctipennis</i>	1	75		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Culex</i> spp.	105	5614	1	0.178

<i>Culex pipiens</i>	3	60		
<i>Culiseta melanura</i>	32	1031	1	0.970
<i>Psorophora columbiae</i>	1	19		
<i>Psorophora ferox</i>	1	75		
Hudson	137	5906	8	1.355
<i>Aedes albopictus</i>	17	220		
<i>Aedes triseriatus</i>	10	18		
<i>Culex</i> spp.	110	5668	8	1.411
Hunterdon	149	6840		
<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.	138	6739		
<i>Psorophora ferox</i>	1	11		
<i>Psorophora howardii</i>	1	1		
Mercer	208	2576	1	0.388
<i>Aedes albopictus</i>	32	221		
<i>Aedes japonicus</i>	57	313	1	3.195
<i>Aedes triseriatus</i>	18	73		
<i>Aedes vexans</i>	1	12		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Culex</i> spp.	99	1955		
Middlesex	143	2240	4	1.786
<i>Aedes albopictus</i>	13	80		
<i>Aedes japonicus</i>	16	194		
<i>Aedes triseriatus</i>	6	25		
<i>Coquillettidia perturbans</i>	2	23		
<i>Culex</i> spp.	98	1874	4	2.134
<i>Culiseta melanura</i>	8	44		
Monmouth	270	4062	2	0.492
<i>Aedes albopictus</i>	38	254		
<i>Aedes atlanticus</i>	3	48		
<i>Aedes canadensis canadensis</i>	20	567		
<i>Aedes cantator</i>	4	30		
<i>Aedes japonicus</i>	11	23		
<i>Aedes sollicitans</i>	1	1		
<i>Aedes triseriatus</i>	19	414		
<i>Aedes trivittatus</i>	2	6		
<i>Aedes vexans</i>	6	37		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles punctipennis</i>	18	61		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	13	50		
<i>Culex</i> spp.	83	2125	2	0.941
<i>Culex erraticus</i>	4	4		
<i>Culex restuans</i>	3	3		
<i>Culex salinarius</i>	4	15		

<i>Culex territans</i>	1	1		
<i>Culiseta melanura</i>	25	361		
<i>Psorophora columbiae</i>	3	23		
<i>Psorophora ferox</i>	10	37		
Morris	221	8470		
<i>Aedes canadensis canadensis</i>	20	829		
<i>Aedes japonicus</i>	17	214		
<i>Aedes triseriatus</i>	4	12		
<i>Coquillettidia perturbans</i>	15	823		
<i>Culex</i> spp.	149	6307		
<i>Culiseta melanura</i>	16	285		
Ocean	198	1676	1	0.597
<i>Aedes albopictus</i>	40	314		
<i>Aedes atlanticus</i>	2	17		
<i>Aedes canadensis canadensis</i>	8	25		
<i>Aedes cantator</i>	3	13	1	76.923
<i>Aedes japonicus</i>	14	43		
<i>Aedes sticticus</i>	1	2		
<i>Aedes triseriatus</i>	4	7		
<i>Aedes trivittatus</i>	1	1		
<i>Aedes vexans</i>	2	4		
<i>Anopheles bradleyi</i>	2	10		
<i>Anopheles punctipennis</i>	4	6		
<i>Coquillettidia perturbans</i>	12	53		
<i>Culex</i> spp.	51	835		
<i>Culex erraticus</i>	4	6		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	8	44		
<i>Culiseta melanura</i>	35	238		
<i>Psorophora columbiae</i>	1	3		
<i>Psorophora ferox</i>	5	54		
Passaic	145	1148	1	0.871
<i>Aedes albopictus</i>	8	29		
<i>Aedes canadensis canadensis</i>	3	13		
<i>Aedes japonicus</i>	40	363		
<i>Aedes triseriatus</i>	19	38	1	26.316
<i>Aedes trivittatus</i>	1	6		
<i>Anopheles quadrimaculatus</i>	1	6		
<i>Coquillettidia perturbans</i>	2	10		
<i>Culex</i> spp.	68	672		
<i>Culex restuans</i>	2	8		
<i>Psorophora ferox</i>	1	3		
Salem	298	3859		
<i>Aedes albopictus</i>	56	166		
<i>Aedes atlanticus</i>	4	11		
<i>Aedes aurifer</i>	2	2		
<i>Aedes japonicus</i>	35	126		
<i>Aedes triseriatus</i>	18	23		
<i>Aedes trivittatus</i>	1	1		
<i>Anopheles punctipennis</i>	7	25		
<i>Anopheles quadrimaculatus</i>	5	23		
<i>Coquillettidia perturbans</i>	23	193		

<i>Culex</i> spp.	93	2980		
<i>Culex erraticus</i>	16	130		
<i>Culex pipiens</i>	8	9		
<i>Culex restuans</i>	6	6		
<i>Culex salinarius</i>	2	4		
<i>Culiseta melanura</i>	20	158		
<i>Psorophora columbiae</i>	1	1		
<i>Psorophora ferox</i>	1	1		
Somerset	127	4054	2	0.493
<i>Aedes albopictus</i>	3	17		
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	12	168		
<i>Aedes triseriatus</i>	2	4		
<i>Aedes trivittatus</i>	2	57		
<i>Culex</i> spp.	107	3805	2	0.526
Sussex	159	5434		
<i>Aedes abserratus</i>	13	258		
<i>Aedes aurifer</i>	1	12		
<i>Aedes canadensis canadensis</i>	17	281		
<i>Aedes japonicus</i>	7	314		
<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.	91	3877		
<i>Culex pipiens</i>	1	75		
<i>Culex restuans</i>	7	291		
<i>Culiseta melanura</i>	3	68		
Union	100	5826	11	1.888
<i>Aedes albopictus</i>	9	124		
<i>Aedes japonicus</i>	2	25		
<i>Aedes triseriatus</i>	1	4		
<i>Coquillettidia perturbans</i>	14	875		
<i>Culex</i> spp.	74	4798	11	2.293
Warren	187	9908	1	0.101
<i>Aedes japonicus</i>	17	374		
<i>Culex</i> spp.	170	9534	1	0.105
Grand Total	5086	105530	60	0.569



Cumulative WNV activity in 2018.

WNV activity to 9 August 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 9 August 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		223	7680		
	<i>Aedes albopictus</i>	29	252		
	<i>Aedes cantator</i>	2	112		
	<i>Aedes japonicus</i>	5	71		
	<i>Aedes sollicitans</i>	9	332		
	<i>Aedes taeniorhynchus</i>	5	205		
	<i>Aedes trivittatus</i>	2	57		
	<i>Aedes vexans</i>	7	188		
	<i>Anopheles bradleyi</i>	4	81		
	<i>Anopheles crucians</i>	2	9		
	<i>Anopheles punctipennis</i>	1	45		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	20	625		
	<i>Culex</i> spp.	67	3595		
	<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>	60	1800		
<i>Psorophora ferox</i>	3	225		
Bergen	162	9689		
<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.	125	8939		
<i>Culex salinarius</i>	4	216		
<i>Culiseta melanura</i>	4	13		
<i>Psorophora ferox</i>	1	6		
Burlington	176	8880		
<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.	96	6519		
<i>Culex salinarius</i>	13	515		
<i>Culex territans</i>	1	28		
<i>Culiseta melanura</i>	33	820		
<i>Psorophora ferox</i>	1	24		
Camden	47	1026		
<i>Aedes albopictus</i>	9	38		
<i>Aedes japonicus</i>	8	28		
<i>Aedes triseriatus</i>	1	4		
<i>Culex</i> spp.	19	641		
<i>Culiseta melanura</i>	10	315		
Cape May	1301	5776		
<i>Aedes albopictus</i>	31	67		
<i>Aedes canadensis canadensis</i>	11	15		
<i>Aedes cantator</i>	4	4		
<i>Aedes japonicus</i>	148	297		
<i>Aedes triseriatus</i>	15	34		
<i>Aedes vexans</i>	11	13		
<i>Anopheles bradleyi</i>	42	119		
<i>Anopheles crucians</i>	1	1		
<i>Anopheles punctipennis</i>	5	5		
<i>Anopheles quadrimaculatus</i>	63	503		

	<i>Coquillettidia perturbans</i>	18	38		
	<i>Culex</i> spp.	20	85		
	<i>Culex erraticus</i>	11	23		
	<i>Culex pipiens</i>	321	3172		
	<i>Culex restuans</i>	302	677		
	<i>Culex salinarius</i>	146	355		
	<i>Culex territans</i>	22	42		
	<i>Culiseta melanura</i>	120	312		
	<i>Orthopodomyia signifera</i>	5	5		
	<i>Uranotaenia sapphirina</i>	5	9		
Cumberland	*Pools redacted	116	1047		
	<i>Aedes albopictus</i>	11	82		
	<i>Aedes canadensis canadensis</i>	2	51		
	<i>Aedes japonicus</i>	2	11		
	<i>Aedes trivittatus</i>	4	8		
	<i>Aedes vexans</i>	18	161		
	<i>Anopheles punctipennis</i>	11	52		
	<i>Anopheles quadrimaculatus*</i>	11	110		
	<i>Coquillettidia perturbans</i>	9	12		
	<i>Culex</i> spp. *	21	274		
	<i>Culex erraticus</i>	5	88		
	<i>Culex salinarius</i>	1	29		
	<i>Culiseta melanura</i>	13	95		
	<i>Psorophora ciliata</i>	1	1		
	<i>Psorophora columbiae</i>	2	13		
	<i>Psorophora ferox</i>	5	60		
Essex		75	337		
	<i>Aedes albopictus</i>	11	18		
	<i>Aedes canadensis canadensis</i>	2	14		
	<i>Aedes grossbecki</i>	5	12		
	<i>Aedes japonicus</i>	11	19		
	<i>Aedes triseriatus</i>	7	13		
	<i>Aedes trivittatus</i>	6	116		
	<i>Aedes vexans</i>	1	1		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Culex</i> spp.	30	142		
Gloucester		204	7881		
	<i>Aedes albopictus</i>	32	574		
	<i>Aedes japonicus</i>	20	392		
	<i>Aedes triseriatus</i>	7	39		
	<i>Aedes vexans</i>	1	1		
	<i>Anopheles punctipennis</i>	1	75		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Culex</i> spp.	105	5614		
	<i>Culex pipiens</i>	3	60		
	<i>Culiseta melanura</i>	32	1031		
	<i>Psorophora columbiae</i>	1	19		
	<i>Psorophora ferox</i>	1	75		
Hudson		129	5892		
	<i>Aedes albopictus</i>	17	220		
	<i>Aedes triseriatus</i>	2	4		

<i>Culex</i> spp.	110	5668		
Hunterdon	146	6822		
<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.	138	6739		
<i>Psorophora ferox</i>	1	11		
<i>Psorophora howardii</i>	1	1		
Mercer	190	2503		
<i>Aedes albopictus</i>	32	221		
<i>Aedes japonicus</i>	57	313		
<i>Aedes vexans</i>	1	12		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Culex</i> spp.	99	1955		
Middlesex	139	2225		
<i>Aedes albopictus</i>	13	80		
<i>Aedes japonicus</i>	16	194		
<i>Aedes triseriatus</i>	2	10		
<i>Coquillettidia perturbans</i>	2	23		
<i>Culex</i> spp.	98	1874		
<i>Culiseta melanura</i>	8	44		
Monmouth	251	3629		
<i>Aedes albopictus</i>	37	233		
<i>Aedes atlanticus</i>	3	48		
<i>Aedes canadensis canadensis</i>	20	567		
<i>Aedes cantator</i>	4	30		
<i>Aedes japonicus</i>	11	23		
<i>Aedes sollicitans</i>	1	1		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes trivittatus</i>	2	6		
<i>Aedes vexans</i>	6	37		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles punctipennis</i>	18	61		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	13	50		
<i>Culex</i> spp.	83	2125		
<i>Culex erraticus</i>	4	4		
<i>Culex restuans</i>	3	3		
<i>Culex salinarius</i>	4	15		
<i>Culex territans</i>	1	1		
<i>Culiseta melanura</i>	25	361		
<i>Psorophora columbiae</i>	3	23		
<i>Psorophora ferox</i>	10	37		
Morris	221	8470		
<i>Aedes canadensis canadensis</i>	20	829		
<i>Aedes japonicus</i>	17	214		
<i>Aedes triseriatus</i>	4	12		

	<i>Coquillettidia perturbans</i>	15	823		
	<i>Culex</i> spp.	149	6307		
	<i>Culiseta melanura</i>	16	285		
Ocean		198	1676		
	<i>Aedes albopictus</i>	40	314		
	<i>Aedes atlanticus</i>	2	17		
	<i>Aedes canadensis canadensis</i>	8	25		
	<i>Aedes cantator</i>	3	13		
	<i>Aedes japonicus</i>	14	43		
	<i>Aedes sticticus</i>	1	2		
	<i>Aedes triseriatus</i>	4	7		
	<i>Aedes trivittatus</i>	1	1		
	<i>Aedes vexans</i>	2	4		
	<i>Anopheles bradleyi</i>	2	10		
	<i>Anopheles punctipennis</i>	4	6		
	<i>Coquillettidia perturbans</i>	12	53		
	<i>Culex</i> spp.	51	835		
	<i>Culex erraticus</i>	4	6		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	8	44		
	<i>Culiseta melanura</i>	35	238		
	<i>Psorophora columbiae</i>	1	3		
	<i>Psorophora ferox</i>	5	54		
Passaic		138	1134		
	<i>Aedes albopictus</i>	6	20		
	<i>Aedes canadensis canadensis</i>	3	13		
	<i>Aedes japonicus</i>	40	363		
	<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.	68	672		
	<i>Culex restuans</i>	2	8		
	<i>Psorophora ferox</i>	1	3		
Salem		282	3838		
	<i>Aedes albopictus</i>	56	166		
	<i>Aedes atlanticus</i>	4	11		
	<i>Aedes aurifer</i>	2	2		
	<i>Aedes japonicus</i>	35	126		
	<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>	23	193		
	<i>Culex</i> spp.	93	2980		
	<i>Culex erraticus</i>	16	130		
	<i>Culex pipiens</i>	8	9		
	<i>Culex restuans</i>	6	6		
	<i>Culex salinarius</i>	2	4		
	<i>Culiseta melanura</i>	20	158		
	<i>Psorophora columbiae</i>	1	1		
	<i>Psorophora ferox</i>	1	1		

Somerset	127	4054		
<i>Aedes albopictus</i>	3	17		
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	12	168		
<i>Aedes triseriatus</i>	2	4		
<i>Aedes trivittatus</i>	2	57		
<i>Culex</i> spp.	107	3805		
Sussex	146	5320		
<i>Aedes abserratus</i>	13	258		
<i>Aedes aurifer</i>	1	12		
<i>Aedes canadensis canadensis</i>	17	281		
<i>Aedes japonicus</i>	6	281		
<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.	91	3877		
<i>Culex pipiens</i>	1	75		
<i>Culex restuans</i>	7	291		
<i>Culiseta melanura</i>	3	68		
Union	90	5278		
<i>Aedes albopictus</i>	9	124		
<i>Aedes japonicus</i>	2	25		
<i>Coquillettidia perturbans</i>	5	331		
<i>Culex</i> spp.	74	4798		
Warren	187	9908		
<i>Aedes japonicus</i>	17	374		
<i>Culex</i> spp.	170	9534		
Grand Total	4548	103065		

La Crosse Encephalitis (LAC) to 9 August 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		16	302		
	<i>Aedes albopictus</i>	5	66		
	<i>Aedes japonicus</i>	6	219		
	<i>Aedes triseriatus</i>	5	17		
Cape May	* species removed	146	213		
	<i>Aedes triseriatus</i>	146	213		
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		18	73		
	<i>Aedes triseriatus</i>	18	73		
Middlesex		4	15		
	<i>Aedes triseriatus</i>	4	15		
Monmouth		19	433		
	<i>Aedes albopictus</i>	1	21		
	<i>Aedes triseriatus</i>	18	412		
Passaic		18	51	1	19.608
	<i>Aedes albopictus</i>	4	16		
	<i>Aedes canadensis canadensis</i>	1	8		
	<i>Aedes triseriatus</i>	12	25	1	40.000
	<i>Coquillettidia perturbans</i>	1	2		
Salem		16	21		
	<i>Aedes triseriatus</i>	16	21		
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>Coquillettidia perturbans</i>	9	544		
Grand Total		289	2228	1	0.449

Dengue (DENV) to 9 August 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		29	252		

	<i>Aedes albopictus</i>	29	252		
Middlesex		10	52		
	<i>Aedes albopictus</i>	10	52		
Grand Total		39	304		

Chikungunya (CHIK) to 9 August 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 4 travel-related human cases in NJ.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		29	252		
	<i>Aedes albopictus</i>	29	252		
Cape May		294	531		
	<i>Aedes albopictus</i>	290	510		
	<i>Aedes triseriatus</i>	2	17		
	<i>Culex pipiens</i>	1	1		
	<i>Culex restuans</i>	1	3		
Middlesex		10	52		
	<i>Aedes albopictus</i>	10	52		
Grand Total		333	835		

Zika (ZIKV) to 9 August 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		29	252		
	<i>Aedes albopictus</i>	29	252		
Cape May		293	530		
	<i>Aedes albopictus</i>	289	509		
	<i>Coquillettidia perturbans</i>	2	17		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	1	3		
Middlesex		10	52		
	<i>Aedes albopictus</i>	10	52		
Grand Total		332	834		

Jamestown Canyon (JC) to 9 August 2019.

New Jersey will begin testing for JC this year. Jamestown Canyon is a native arboviral threat with fever and meningitis or meningoencephalitis consequences. JC 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 JC. *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		223	7680		
	<i>Aedes albopictus</i>	29	252		
	<i>Aedes cantator</i>	2	112		
	<i>Aedes japonicus</i>	5	71		
	<i>Aedes sollicitans</i>	9	332		
	<i>Aedes taeniorhynchus</i>	5	205		
	<i>Aedes trivittatus</i>	2	57		
	<i>Aedes vexans</i>	7	188		
	<i>Anopheles bradleyi</i>	4	81		
	<i>Anopheles crucians</i>	2	9		
	<i>Anopheles punctipennis</i>	1	45		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	20	625		
	<i>Culex</i> spp.	67	3595		
	<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>	60	1800		
	<i>Psorophora ferox</i>	3	225		
Bergen		162	9689	1	0.103
	<i>Aedes albopictus</i>	3	32		
	<i>Aedes canadensis canadensis</i>	4	28		
	<i>Aedes cantator</i>	2	105	1	9.524
	<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.	125	8939		
	<i>Culex salinarius</i>	4	216		
	<i>Culiseta melanura</i>	4	13		
	<i>Psorophora ferox</i>	1	6		
Burlington		176	8880	1	0.113
	<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	1	14.493	
	<i>Anopheles quadrimaculatus</i>	1	10			
	<i>Coquillettidia perturbans</i>	7	481			
	<i>Culex</i> spp.	96	6519			
	<i>Culex salinarius</i>	13	515			
	<i>Culex territans</i>	1	28			
	<i>Culiseta melanura</i>	33	820			
	<i>Psorophora ferox</i>	1	24			
Camden		37	711			
	<i>Aedes albopictus</i>	9	38			
	<i>Aedes japonicus</i>	8	28			
	<i>Aedes triseriatus</i>	1	4			
	<i>Culex</i> spp.	19	641			
Cape May		25	74			
	<i>Aedes triseriatus</i>	21	33			
	<i>Aedes vexans</i>	1	2			
	<i>Anopheles quadrimaculatus</i>	1	1			
	<i>Culex</i> spp.	2	38			
Cumberland *Pools redacted		116	1047			
	<i>Aedes albopictus</i>	11	82			
	<i>Aedes canadensis canadensis</i>	2	51			
	<i>Aedes japonicus</i>	2	11			
	<i>Aedes trivittatus</i>	4	8			
	<i>Aedes vexans</i>	18	161			
	<i>Anopheles punctipennis</i>	11	52			
	<i>Anopheles quadrimaculatus</i> *	11	110			
	<i>Coquillettidia perturbans</i>	9	12			
	<i>Culex</i> spp. *	21	274			
	<i>Culex erraticus</i>	5	88			
	<i>Culex salinarius</i>	1	29			
	<i>Culiseta melanura</i>	13	95			
	<i>Psorophora ciliata</i>	1	1			
	<i>Psorophora columbiae</i>	2	13			
	<i>Psorophora ferox</i>	5	60			
Essex		75	337			
	<i>Aedes albopictus</i>	11	18			
	<i>Aedes canadensis canadensis</i>	2	14			
	<i>Aedes grossbecki</i>	5	12			
	<i>Aedes japonicus</i>	11	19			
	<i>Aedes triseriatus</i>	7	13			
	<i>Aedes trivittatus</i>	6	116			
	<i>Aedes vexans</i>	1	1			
	<i>Anopheles bradleyi</i>	1	1			

<i>Anopheles quadrimaculatus</i>	1	1		
<i>Culex</i> spp.	30	142		
Gloucester	196	7749		
<i>Aedes albopictus</i>	32	574		
<i>Aedes japonicus</i>	20	392		
<i>Aedes triseriatus</i>	7	39		
<i>Aedes vexans</i>	1	1		
<i>Anopheles punctipennis</i>	1	75		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Culex</i> spp.	105	5614		
<i>Culex pipiens</i>	3	60		
<i>Culiseta melanura</i>	24	899		
<i>Psorophora columbiæ</i>	1	19		
<i>Psorophora ferox</i>	1	75		
Hudson	129	5892		
<i>Aedes albopictus</i>	17	220		
<i>Aedes triseriatus</i>	2	4		
<i>Culex</i> spp.	110	5668		
Hunterdon	146	6822		
<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.	138	6739		
<i>Psorophora ferox</i>	1	11		
<i>Psorophora howardii</i>	1	1		
Mercer	190	2503		
<i>Aedes albopictus</i>	32	221		
<i>Aedes japonicus</i>	57	313		
<i>Aedes vexans</i>	1	12		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Culex</i> spp.	99	1955		
Middlesex	139	2225		
<i>Aedes albopictus</i>	13	80		
<i>Aedes japonicus</i>	16	194		
<i>Aedes triseriatus</i>	2	10		
<i>Coquillettidia perturbans</i>	2	23		
<i>Culex</i> spp.	98	1874		
<i>Culiseta melanura</i>	8	44		
Monmouth	251	3629		
<i>Aedes albopictus</i>	37	233		
<i>Aedes atlanticus</i>	3	48		
<i>Aedes canadensis canadensis</i>	20	567		
<i>Aedes cantator</i>	4	30		
<i>Aedes japonicus</i>	11	23		
<i>Aedes sollicitans</i>	1	1		
<i>Aedes triseriatus</i>	1	2		

<i>Aedes trivittatus</i>	2	6		
<i>Aedes vexans</i>	6	37		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles punctipennis</i>	18	61		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	13	50		
<i>Culex</i> spp.	83	2125		
<i>Culex erraticus</i>	4	4		
<i>Culex restuans</i>	3	3		
<i>Culex salinarius</i>	4	15		
<i>Culex territans</i>	1	1		
<i>Culiseta melanura</i>	25	361		
<i>Psorophora columbiae</i>	3	23		
<i>Psorophora ferox</i>	10	37		
Morris	221	8470		
<i>Aedes canadensis canadensis</i>	20	829		
<i>Aedes japonicus</i>	17	214		
<i>Aedes triseriatus</i>	4	12		
<i>Coquillettidia perturbans</i>	15	823		
<i>Culex</i> spp.	149	6307		
<i>Culiseta melanura</i>	16	285		
Ocean	198	1676		
<i>Aedes albopictus</i>	40	314		
<i>Aedes atlanticus</i>	2	17		
<i>Aedes canadensis canadensis</i>	8	25		
<i>Aedes cantator</i>	3	13		
<i>Aedes japonicus</i>	14	43		
<i>Aedes sticticus</i>	1	2		
<i>Aedes triseriatus</i>	4	7		
<i>Aedes trivittatus</i>	1	1		
<i>Aedes vexans</i>	2	4		
<i>Anopheles bradleyi</i>	2	10		
<i>Anopheles punctipennis</i>	4	6		
<i>Coquillettidia perturbans</i>	12	53		
<i>Culex</i> spp.	51	835		
<i>Culex erraticus</i>	4	6		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	8	44		
<i>Culiseta melanura</i>	35	238		
<i>Psorophora columbiae</i>	1	3		
<i>Psorophora ferox</i>	5	54		
Passaic	138	1134		
<i>Aedes albopictus</i>	6	20		
<i>Aedes canadensis canadensis</i>	3	13		
<i>Aedes japonicus</i>	40	363		
<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.	68	672		
<i>Culex restuans</i>	2	8		
<i>Psorophora ferox</i>	1	3		

Salem	275	3725		
<i>Aedes albopictus</i>	56	166		
<i>Aedes atlanticus</i>	4	11		
<i>Aedes aurifer</i>	2	2		
<i>Aedes japonicus</i>	35	126		
<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>	23	193		
<i>Culex</i> spp.	93	2980		
<i>Culex erraticus</i>	16	130		
<i>Culex pipiens</i>	8	9		
<i>Culex restuans</i>	6	6		
<i>Culex salinarius</i>	2	4		
<i>Culiseta melanura</i>	13	45		
<i>Psorophora columbiae</i>	1	1		
<i>Psorophora ferox</i>	1	1		
Somerset	127	4054		
<i>Aedes albopictus</i>	3	17		
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	12	168		
<i>Aedes triseriatus</i>	2	4		
<i>Aedes trivittatus</i>	2	57		
<i>Culex</i> spp.	107	3805		
Sussex	146	5320	1	0.188
<i>Aedes abserratus</i>	13	258	1	3.876
<i>Aedes aurifer</i>	1	12		
<i>Aedes canadensis canadensis</i>	17	281		
<i>Aedes japonicus</i>	6	281		
<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.	91	3877		
<i>Culex pipiens</i>	1	75		
<i>Culex restuans</i>	7	291		
<i>Culiseta melanura</i>	3	68		
Union	90	5278		
<i>Aedes albopictus</i>	9	124		
<i>Aedes japonicus</i>	2	25		
<i>Coquillettidia perturbans</i>	5	331		
<i>Culex</i> spp.	74	4798		
Warren	187	9908		
<i>Aedes japonicus</i>	17	374		
<i>Culex</i> spp.	170	9534		
Grand Total	3247	96803	3	0.031