

VECTOR SURVEILLANCE IN NEW JERSEY

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

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 CDC WEEK 33: 14 August to 20 August, 2016



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Culiseta melanura and Eastern Equine Encephalitis

SITE/Boxes	Inland or Coastal	Historic Population Mean	Current Weekly Mean	Total Tested* (Collected)	Total Pools Tested* (Submitted)	EEE Isolation Pools	MFIR
Bass River (Burlington Co.)/5	Coastal	0.42	0.00	2	2		
Green Bank (Burlington Co.)/25	Coastal	1.37	0.04	58 (59)	7 (8)		
Corbin City (Atlantic Co.)/25	Coastal	4.81	1.64	123 (164)	13 (14)		
Dennisville (Cape May Co.)/50	Coastal	6.03	0.00	60	10		
Winslow (Camden Co.)/50	Inland	1.92	0.64	701	19		
Centerton (Salem Co.)/50	Inland	3.71	0.44	224	12		
Turkey Swamp (Monmouth Co.)/50	Inland	1.85	0.30	36 (53)	11 (13)	1	27.78
Glassboro (Gloucester Co.)/50	Inland	0.66	0.22	91	12		

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

Remarks: No new positive EEE pools were detected in NJ. Total positive EEE pools detected remain at 5, with 3 pools of *Cs. melanura* and 2 pools of *Culex pipiens*.

Traditional Resting Box Sites: 1295 *Cs. melanura* from 86 pools have been tested for EEE, with 4 pools of 59 *Cs. melanura* to be tested. One positive pool from Turkey Swamp, collected 3 Aug was previously detected. Statewide, 3446 *Cs. melanura* have been tested, with three positive pools detected (one traditional, two county sites), for an overall *Cs. melanura* MFIR of 0.87. 13,245 specimens from 13 other species have also been tested, with two reported positives *Culex pipiens* pools. Overall MFIR for all species statewide is 0.30

		Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD .			
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO ₂ , RB	20	267		
Burlington	CO ₂	39	1030		
Cape May	CDC, CO ₂ , GR, RB	95	244		
Cumberland	CDC, RB	9	52		
Middlesex	RB	34	532	2	3.76
Ocean	CO ₂ , GR, RB	10	26		
TOTAL		207	2151	2	0.93

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas, using a variety of traps. Two positive pools were detected in Middlesex, the first on 25 July.

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes cantator</i>	25	52		
<i>Aedes sollicitans</i>	17	696		
<i>Aedes taeniorhynchus</i>	4	195		
<i>Anopheles bradleyi</i>	56	269		
<i>Anopheles crucians</i>	2	40		
<i>Anopheles punctipennis</i>	10	21		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	79	1354		
<i>Culex erraticus</i>	28	225		
<i>Culex pipiens</i>	584	7866	2	0.254
<i>Culex restuans</i>	1	3		
<i>Culex salinarius</i>	237	2401		
<i>Culex</i> sp.	40	110		
<i>Culex territans</i>	1	12		
State Total	1085	13245	2	0.151

Additional Species: Thirteen additional species were tested for EEE. First positive pools were detected in *Culex pipiens*, an ornithophilic species, in Cape May, collected on 6 July.

(NOTE: *Aedes albopictus*, previously reported in this table was assigned to EEE in error.)

Horses and Humans: No positive horse or humans have been reported. Last year one positive horse was reported.

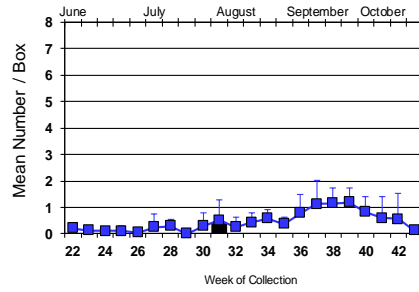
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see:

http://www.aaep.org/vaccination_guidelines.htm

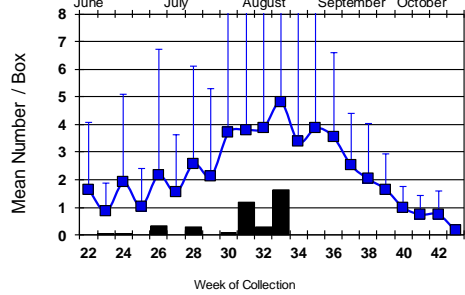
Culiseta melanura Population Graphs

Coastal

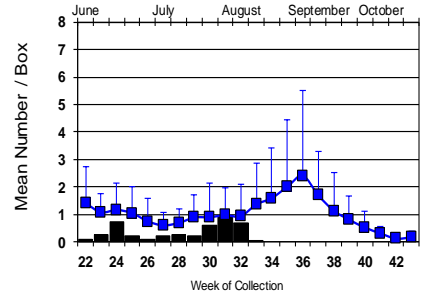
BASS RIVER (Burlington Co.) 2016
 3 Year Mean



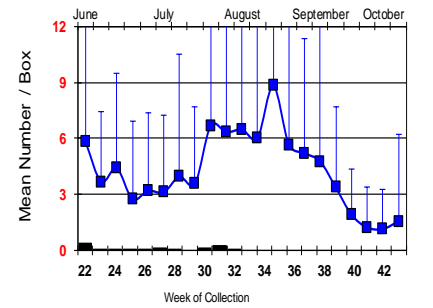
GREEN BANK (Burlington Co.) 2016
 25 Year Mean



CORBINCITY (Atlantic Co.) 2016
 31 Year Mean

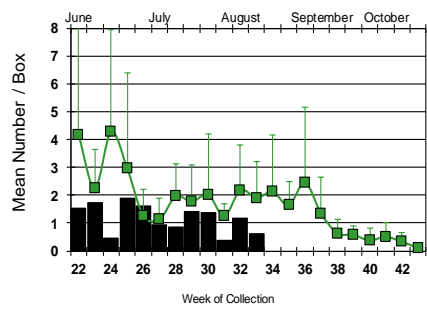


DENNISVILLE (Cape May Co.) 2016
 39 Year Mean

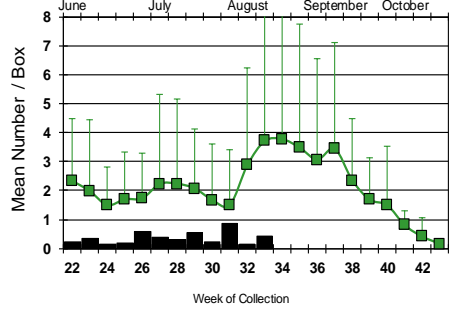


Inland

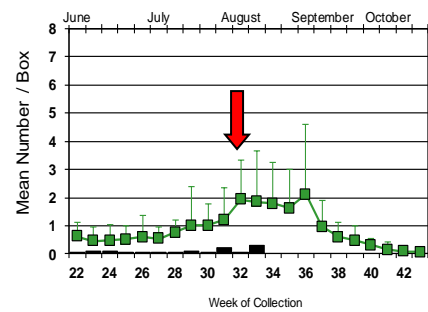
WINSLOW (Camden Co.) 2016
 7 Year Mean



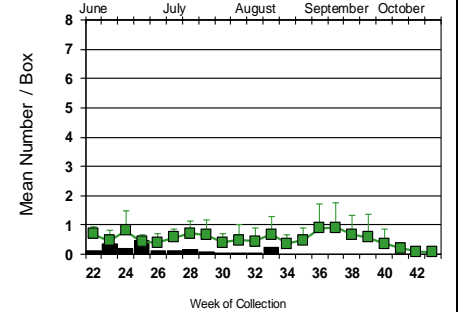
CENTERTON (Salem Co.) 2016
 31 Year Mean



TURKEY SWAMP (Monmouth Co.) 2016
 13 Year Mean



GLASSBORO (Gloucester Co.) 2016
 7 Year Mean



Population numbers of *Culiseta melanura* continue to appear low at most resting box sites.

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

EEE in US (2016 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: AL(2) FL(19) GA(5) LA(5) MS(3) NC(1) SC(14) TN(1) TX(1) VA(6)
- mosquito pools: NJ(5) MA(2) RI(1)
- sentinel: FL(60) GA(2) TX(21)
- human:

West Nile Virus Positive Organisms in US, 2016

West Nile in US (2016 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					4
Alaska					
Arizona	1	39/61	0	0	29/34
Arkansas				0	1
California	910/1007	2221/2562	135/161	5/8	22/46
Colorado	1/10	28/103		1	13/17
Connecticut		17/42			0
Delaware					
DC					
Florida		2	57	1	
Georgia		0			0
Hawaii					
Idaho	0	21		3	1
Illinois	8/15	928/1389		0	4/5
Indiana	0	41/86		0	1
Iowa		1/2		1	2
Kansas	1	0		1	2/6
Kentucky				0	
Louisiana					0
Maine		0			0
Maryland		1			
Mass.		61/90		0	1
Michigan	13	4		1	1/2
Minnesota		6		7	2
Mississippi		22			11/9
Missouri		8		1	0

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					
Nebraska	2	37/47		1	14/16
Nevada				2	1
New Hampshire		0		0	0
New Jersey		102/135		0	1/2
New Mexico					1
New York		136/195		1	0
North Carolina					
North Dakota	6	15		1/2	19/21
Ohio		8		0	1/4
Oklahoma		7		1/2	4
Oregon	1/2	14/18	0	0	0
Pennsylvania	4/5	360/534			1/2
Rhode Island		1			
South Carolina					
South Dakota		68/118			43/53
Tennessee					1/2
Texas	1	903/1017		4/9	37/48
Utah		71/92			2
Vermont		1/2			1/2
Virginia					
Washington	1	62/68		1	2
West Virginia					
Wisconsin	11/14	1/6		1	1
Wyoming	1	23			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 Testing through 20 August 2016

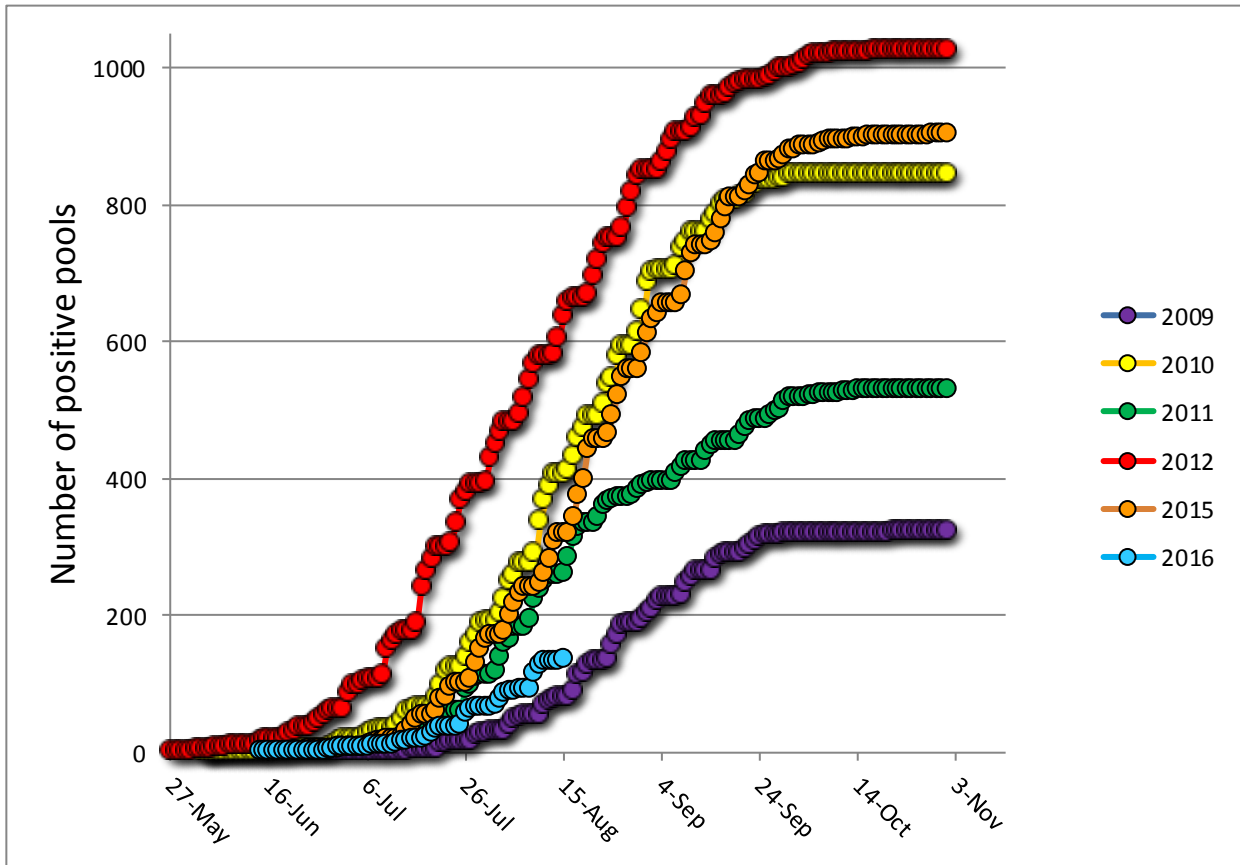
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	899	6714	2	0.298
<i>Aedes atlanticus</i>	5	7		
<i>Aedes atropalpus</i>	19	62		
<i>Aedes canadensis canadensis</i>	32	630		
<i>Aedes cantator</i>	36	246		
<i>Aedes grossbecki</i>	1	1		
<i>Aedes japonicus</i>	392	2144	2	0.933
<i>Aedes sollicitans</i>	22	811		
<i>Aedes sticticus</i>	1	6		
<i>Aedes taeniorhynchus</i>	17	508		
<i>Aedes triseriatus</i>	166	336		
<i>Aedes trivittatus</i>	2	34		
<i>Aedes vexans</i>	49	571		
<i>Anopheles atropos</i>	1	1		
<i>Anopheles barberi</i>	2	2		
<i>Anopheles bradleyi</i>	65	495		
<i>Anopheles crucians</i>	4	46		
<i>Anopheles punctipennis</i>	44	154		
<i>Anopheles quadrimaculatus</i>	98	916		
<i>Coquillettidia perturbans</i>	97	2278		
<i>Culex erraticus</i>	45	409		
<i>Culex pipiens</i>	798	19299	12	0.622
<i>Culex restuans</i>	652	7414	2	0.270
<i>Culex salinarius</i>	243	2546		
<i>Culex</i> spp.	1983	78091	117	1.498
<i>Culex territans</i>	28	282		
<i>Culiseta melanura</i>	292	3372		
<i>Orthopodomyia signifera</i>	3	3		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	10	62		
<i>Psorophora ferox</i>	12	92		
<i>Uranotaenia sapphirina</i>	1	3		
Grand Total	6020	127536	135	1.059

Remarks: To date, 6,020 pools of 127,536 mosquitoes from 31 species have been tested, with 135 positive pools detected. All new positives were detected in *Culex pipiens* or *Culex* Mix pools. First non-*Culex* detection occurred in *Aedes albopictus*, collected in Hudson County on 19 July. The first positive pool of *Culex* Mix was collected on 14 June in Monmouth County.

Humans, Horses and Wild Birds: Two human cases have been detected; one most recently from Monmouth County, with an onset date of 2 Aug. Currently, case count is Camden (1) and Monmouth (1). The human case from Camden County had an onset date of early July. Last year 26 humans and one horse were positive. Onset in 2015 for humans began in early August and the onset for the horse case began in September. For further information, see <http://www.state.nj.us/health/cd/westnile/techinfo.shtml>.

Birds are no longer routinely tested in New Jersey.

The graph below shows cumulative positive pools for several years, with 2012 as the most active year and 2009 as the least active year. A slight increase in activity from the previous week has occurred, with numbers trending between low (2009) and moderate (2011) activity.



WNV Results by County through 20 August 2016

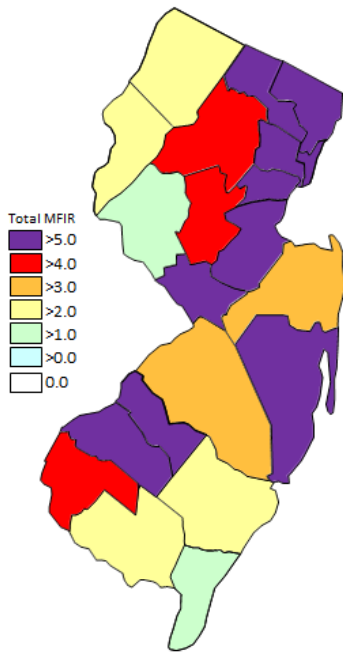
County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		157	4657	5	1.074
	<i>Aedes albopictus</i>	21	249		
	<i>Aedes japonicus</i>	3	15		
	<i>Aedes sollicitans</i>	9	585		
	<i>Aedes sticticus</i>	1	6		
	<i>Aedes taeniorhynchus</i>	5	277		
	<i>Aedes vexans</i>	6	203		
	<i>Anopheles bradleyi</i>	4	97		
	<i>Anopheles quadrimaculatus</i>	1	4		
	<i>Coquillettidia perturbans</i>	18	357		
	<i>Culex erraticus</i>	5	51		
	<i>Culex pipiens</i>	17	943	5	5.302
	<i>Culex restuans</i>	3	52		
	<i>Culex salinarius</i>	4	123		
	<i>Culex</i> spp.	24	1258		
	<i>Culiseta melanura</i>	33	390		
	<i>Psorophora ferox</i>	3	47		
Bergen		155	9907	27	2.725
	<i>Aedes albopictus</i>	25	197		
	<i>Aedes japonicus</i>	3	185		
	<i>Culex</i> spp.	127	9525	27	2.835

Burlington	144	5055	4	0.791
<i>Aedes albopictus</i>	6	86		
<i>Aedes atropalpus</i>	3	18		
<i>Aedes japonicus</i>	8	174		
<i>Aedes taeniorhynchus</i>	4	195		
<i>Aedes triseriatus</i>	7	20		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	1	6		
<i>Anopheles crucians</i>	2	40		
<i>Coquillettidia perturbans</i>	2	129		
<i>Culex erraticus</i>	2	25		
<i>Culex salinarius</i>	12	437		
<i>Culex</i> spp.	60	2962	4	1.350
<i>Culex territans</i>	1	12		
<i>Culiseta melanura</i>	35	950		
Camden	154	3877	3	0.774
<i>Aedes albopictus</i>	20	81		
<i>Aedes japonicus</i>	22	80		
<i>Culex</i> spp.	93	3015	3	0.995
<i>Culiseta melanura</i>	19	701		
Cape May	2268	16184		
<i>Aedes albopictus</i>	215	359		
<i>Aedes atlanticus</i>	4	5		
<i>Aedes atropalpus</i>	16	44		
<i>Aedes canadensis canadensis</i>	13	249		
<i>Aedes cantator</i>	25	52		
<i>Aedes japonicus</i>	187	375		
<i>Aedes sollicitans</i>	2	4		
<i>Aedes taeniorhynchus</i>	2	2		
<i>Aedes triseriatus</i>	115	204		
<i>Aedes vexans</i>	7	10		
<i>Anopheles atropos</i>	1	1		
<i>Anopheles bradleyi</i>	55	263		
<i>Anopheles punctipennis</i>	10	11		
<i>Anopheles quadrimaculatus</i>	85	878		
<i>Coquillettidia perturbans</i>	27	426		
<i>Culex erraticus</i>	10	22		
<i>Culex pipiens</i>	585	7867		
<i>Culex restuans</i>	535	4042		
<i>Culex salinarius</i>	199	684		
<i>Culex</i> spp.	35	97		
<i>Culex territans</i>	27	270		
<i>Culiseta melanura</i>	105	304		
<i>Orthopodomyia signifera</i>	2	2		
<i>Psorophora columbiae</i>	2	2		
<i>Psorophora ferox</i>	3	8		
<i>Uranotaenia sapphirina</i>	1	3		
Cumberland	117	2455		
<i>Aedes albopictus</i>	7	88		
<i>Aedes cantator</i>	1	1		
<i>Aedes japonicus</i>	7	12		
<i>Aedes sollicitans</i>	8	215		

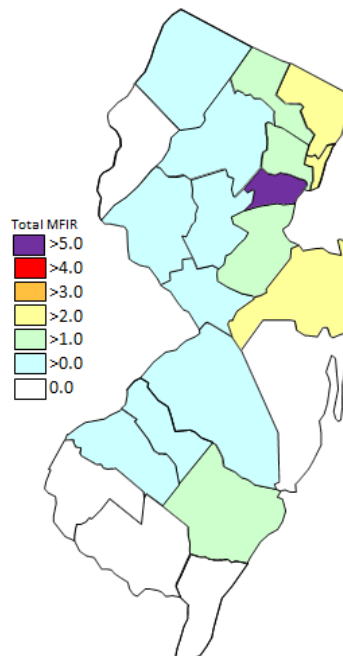
<i>Aedes taeniorhynchus</i>	3	26		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes vexans</i>	16	296		
<i>Anopheles bradleyi</i>	4	122		
<i>Anopheles crucians</i>	1	5		
<i>Anopheles punctipennis</i>	5	44		
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Coquillettidia perturbans</i>	6	108		
<i>Culex erraticus</i>	3	80		
<i>Culex pipiens</i>	2	9		
<i>Culex salinarius</i>	25	1211		
<i>Culex</i> spp.	9	108		
<i>Culiseta melanura</i>	9	52		
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	6	58		
<i>Psorophora ferox</i>	1	13		
Essex	163	996	1	1.004
<i>Aedes albopictus</i>	61	281		
<i>Aedes japonicus</i>	5	8		
<i>Aedes triseriatus</i>	2	2		
<i>Anopheles punctipennis</i>	1	1		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Culex</i> spp.	93	703	1	1.422
Gloucester	228	10760	6	0.558
<i>Aedes albopictus</i>	32	588		
<i>Aedes japonicus</i>	15	191		
<i>Aedes triseriatus</i>	1	4		
<i>Anopheles punctipennis</i>	2	10		
<i>Culex pipiens</i>	166	9876	6	0.608
<i>Culiseta melanura</i>	12	91		
Hudson	147	7002	15	2.142
<i>Aedes albopictus</i>	20	471	1	2.123
<i>Culex</i> spp.	127	6531	14	2.144
Hunterdon	134	5994	5	0.834
<i>Culex</i> spp.	134	5994	5	0.834
Mercer	257	6031	6	0.995
<i>Aedes albopictus</i>	47	521		
<i>Aedes japonicus</i>	16	81		
<i>Aedes triseriatus</i>	2	24		
<i>Aedes vexans</i>	1	3		
<i>Culex erraticus</i>	1	2		
<i>Culex pipiens</i>	27	603	1	1.658
<i>Culex restuans</i>	107	3310	2	0.604
<i>Culex</i> spp.	56	1487	3	2.017
Middlesex	255	9547	11	1.152
<i>Aedes albopictus</i>	51	406		
<i>Coquillettidia perturbans</i>	1	2		
<i>Culex erraticus</i>	1	1		

<i>Culex</i> spp.	167	8605	11	1.278
<i>Culiseta melanura</i>	35	533		
Monmouth	457	4974	10	2.010
<i>Aedes albopictus</i>	264	2402	1	0.416
<i>Aedes atlanticus</i>	1	2		
<i>Aedes canadensis canadensis</i>	18	311		
<i>Aedes cantator</i>	10	193		
<i>Aedes grossbecki</i>	1	1		
<i>Aedes japonicus</i>	21	41		
<i>Aedes sollicitans</i>	3	7		
<i>Aedes taeniorhynchus</i>	3	8		
<i>Aedes triseriatus</i>	5	12		
<i>Aedes trivittatus</i>	1	1		
<i>Aedes vexans</i>	5	21		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles crucians</i>	1	1		
<i>Anopheles punctipennis</i>	21	40		
<i>Anopheles quadrimaculatus</i>	2	2		
<i>Coquillettidia perturbans</i>	4	5		
<i>Culex erraticus</i>	4	15		
<i>Culex restuans</i>	1	3		
<i>Culex</i> spp.	76	1850	9	4.865
<i>Culiseta melanura</i>	12	37		
<i>Psorophora columbiae</i>	1	1		
<i>Psorophora ferox</i>	2	20		
Morris	219	8177	2	0.245
<i>Aedes albopictus</i>	14	54		
<i>Culex</i> spp.	205	8123	2	0.246
Ocean	196	2986		
<i>Aedes albopictus</i>	55	601		
<i>Aedes canadensis canadensis</i>	1	70		
<i>Aedes japonicus</i>	21	76		
<i>Aedes triseriatus</i>	8	14		
<i>Aedes vexans</i>	1	1		
<i>Anopheles punctipennis</i>	2	2		
<i>Coquillettidia perturbans</i>	17	312		
<i>Culex erraticus</i>	3	36		
<i>Culex restuans</i>	1	2		
<i>Culex</i> spp.	67	1782		
<i>Culiseta melanura</i>	20	90		
Passaic	220	5538	9	1.625
<i>Aedes albopictus</i>	10	40		
<i>Aedes japonicus</i>	54	370	2	5.405
<i>Aedes triseriatus</i>	5	6		
<i>Aedes vexans</i>	13	37		
<i>Culex</i> spp.	138	5085	7	1.377
Salem	189	1306		
<i>Aedes albopictus</i>	39	140		
<i>Aedes japonicus</i>	13	33		
<i>Aedes triseriatus</i>	18	28		

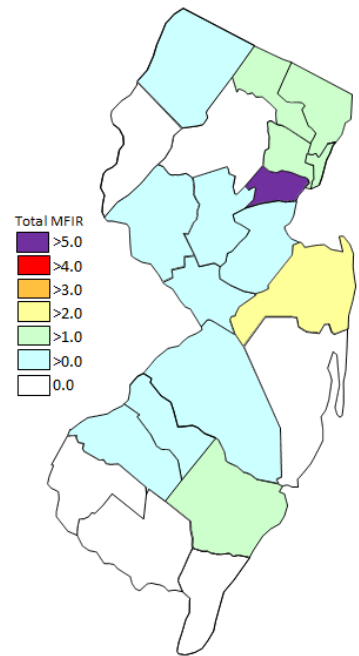
	<i>Anopheles bradleyi</i>	1	7		
	<i>Anopheles punctipennis</i>	2	2		
	<i>Anopheles quadrimaculatus</i>	8	28		
	<i>Coquillettidia perturbans</i>	10	83		
	<i>Culex erraticus</i>	16	177		
	<i>Culex pipiens</i>	1	1		
	<i>Culex restuans</i>	5	5		
	<i>Culex</i> spp.	60	573		
	<i>Culiseta melanura</i>	12	224		
	<i>Psorophora columbiae</i>	1	1		
	<i>Psorophora ferox</i>	3	4		
Somerset		127	2829	2	0.707
	<i>Aedes albopictus</i>	4	16		
	<i>Aedes japonicus</i>	4	35		
	<i>Aedes triseriatus</i>	1	4		
	<i>Culex</i> spp.	118	2774	2	0.721
Sussex		217	7636	3	0.393
	<i>Aedes albopictus</i>	1	1		
	<i>Aedes japonicus</i>	13	468		
	<i>Aedes triseriatus</i>	1	16		
	<i>Aedes trivittatus</i>	1	33		
	<i>Anopheles punctipennis</i>	1	44		
	<i>Coquillettidia perturbans</i>	12	856		
	<i>Culex salinarius</i>	3	91		
	<i>Culex</i> spp.	185	6127	3	0.490
Union		65	3688	26	7.050
	<i>Aedes albopictus</i>	7	133		
	<i>Culex</i> spp.	58	3555	26	7.314
Warren		151	7937		
	<i>Culex</i> spp.	151	7937		
Grand Total		6020	127536	135	1.059



Cumulative WNV activity in 2015.



WNV activity to 20 August 2016.



WNV activity last week, 2016.

Saint Louis Encephalitis (SLE) to 20 August 2016.

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.

Currently, there are no reported positive pools of SLE for 2016. There are no human cases reported.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		62	2969		
	<i>Anopheles barberi</i>	1	1		
	<i>Culex erraticus</i>	1	6		
	<i>Culex</i> spp.	60	2962		
Cape May		619	7963		
	<i>Culex pipiens</i>	584	7866		
	<i>Culex</i> spp.	35	97		
Grand Total		681	10932		

La Crosse Encephalitis (LAC) to 20 August 2016.

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).

Currently, there are no reported positive pools of LAC for 2016. There are no human cases reported.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		24	298		
	<i>Aedes albopictus</i>	6	86		
	<i>Aedes atropalpus</i>	3	18		
	<i>Aedes japonicus</i>	8	174		
	<i>Aedes triseriatus</i>	7	20		
Grand Total		24	298		

Dengue (DENV) to 20 August 2016.

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 have tested positive in 2016. Currently, New Jersey has 32 imported human cases of Dengue.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		21	249	21	249	21	249	21	249		
	<i>Aedes albopictus</i>	21	249	21	249	21	249	21	249		
Bergen		25	197	25	197	25	197	25	197		
	<i>Aedes albopictus</i>	25	197	25	197	25	197	25	197		
Camden		20	81	20	81	20	81	20	81		
	<i>Aedes albopictus</i>	20	81	20	81	20	81	20	81		
Cumberland		7	88	7	88	7	88	7	88		
	<i>Aedes albopictus</i>	7	88	7	88	7	88	7	88		
Essex		61	281	61	281	61	281	61	281		
	<i>Aedes albopictus</i>	61	281	61	281	61	281	61	281		
Gloucester		16	389	16	389	16	389	16	389		
	<i>Aedes albopictus</i>	16	389	16	389	16	389	16	389		
Hudson		20	471	20	471	20	471	20	471		
	<i>Aedes albopictus</i>	20	471	20	471	20	471	20	471		
Mercer		47	521	47	521	47	521	47	521		
	<i>Aedes albopictus</i>	47	521	47	521	47	521	47	521		
Middlesex		52	407	52	407	52	407	52	407		
	<i>Aedes albopictus</i>	51	406	51	406	51	406	51	406		
	<i>Culiseta melanura</i>	1	1	1	1	1	1	1	1		
Monmouth		227	2280	227	2280	227	2280	227	2280		
	<i>Aedes albopictus</i>	227	2280	227	2280	227	2280	227	2280		
Morris		16	57	16	57	16	57	16	57		
	<i>Aedes albopictus</i>	14	54	14	54	14	54	14	54		
	<i>Culex spp.</i>	2	3	2	3	2	3	2	3		
Passaic		2	3	2	3	2	3	2	3		
	<i>Aedes albopictus</i>	2	3	2	3	2	3	2	3		
Salem		39	140	39	140	39	140	39	140		
	<i>Aedes albopictus</i>	39	140	39	140	39	140	39	140		
Sussex		1	1	1	1	1	1	1	1		
	<i>Aedes albopictus</i>	1	1	1	1	1	1	1	1		
Grand Total		554	5165	554	5165	554	5165	554	5165		

Chikungunya (CHIK) to 20 August 2016.

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 have tested positive in 2016. Currently, New Jersey has 2 imported human case of Chikungunya.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		21	249		

	<i>Aedes albopictus</i>	21	249		
Bergen		25	197		
	<i>Aedes albopictus</i>	25	197		
Camden		20	81		
	<i>Aedes albopictus</i>	20	81		
Cape May		215	359		
	<i>Aedes albopictus</i>	215	359		
Cumberland		7	88		
	<i>Aedes albopictus</i>	7	88		
Essex		61	281		
	<i>Aedes albopictus</i>	61	281		
Gloucester		16	389		
	<i>Aedes albopictus</i>	16	389		
Hudson		20	471		
	<i>Aedes albopictus</i>	20	471		
Mercer		47	521		
	<i>Aedes albopictus</i>	47	521		
Middlesex		52	407		
	<i>Aedes albopictus</i>	51	406		
	<i>Culiseta melanura</i>	1	1		
Monmouth		227	2280		
	<i>Aedes albopictus</i>	227	2280		
Morris		16	57		
	<i>Aedes albopictus</i>	14	54		
	<i>Culex</i> spp.	2	3		
Passaic		2	3		
	<i>Aedes albopictus</i>	2	3		
Salem		39	140		
	<i>Aedes albopictus</i>	39	140		
Sussex		1	1		
	<i>Aedes albopictus</i>	1	1		
Grand Total		769	5524		

Zika (ZIKV) to 20 August 2016.

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 2016. Currently, New Jersey has 97 imported human cases of Zika.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		8	92		
	<i>Aedes albopictus</i>	8	92		
Bergen		10	125		
	<i>Aedes albopictus</i>	10	125		
Camden		4	15		
	<i>Aedes albopictus</i>	4	15		
Cape May		215	359		
	<i>Aedes albopictus</i>	215	359		

Cumberland		1	1		
	<i>Aedes albopictus</i>	1	1		
Essex		22	116		
	<i>Aedes albopictus</i>	22	116		
Gloucester		16	389		
	<i>Aedes albopictus</i>	16	389		
Hudson		2	48		
	<i>Aedes albopictus</i>	2	48		
Mercer		61	632		
	<i>Aedes albopictus</i>	61	632		
Middlesex		18	189		
	<i>Aedes albopictus</i>	18	189		
Monmouth		57	706		
	<i>Aedes albopictus</i>	57	706		
Morris		1	2		
	<i>Aedes albopictus</i>	1	2		
Salem		5	14		
	<i>Aedes albopictus</i>	5	14		
Sussex		1	1		
	<i>Aedes albopictus</i>	1	1		
Grand Total		421	2689		