

VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV and CHIK

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CDC WEEK 37: 13 September to 19 September, 2015

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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	1.50	0.00	19	11	1	52.63
Green Bank (Burlington Co.)/23	Coastal	2.62	0.52	98 (111)	13 (14)	1	10.20
Corbin City (Atlantic Co.)/25	Coastal	1.75	0.32	240 (248)	14 (15)		
Dennisville (Cape May Co.)/50	Coastal	4.89	0.02	223	13		
Winslow (Camden Co.)/50	Inland	1.52	0.28	1833	45	7	3.82
Centerton (Salem Co.)/50	Inland	3.53	0.82	746	23	1	1.34
Turkey Swamp (Monmouth Co.)/49	Inland	1.02	0.24	385 (397)	18 (19)		
Glassboro (Gloucester Co.)/50	Inland	0.95	0.62	279	16	1	3.58

*Current week (in parentheses) results pending. ‡ corrected

Remarks: One new detection of a positive pool occurred in *Culiseta melanura* at the Glassboro resting box site, for a statewide total of 21 positive pools, 14 in *Culiseta melanura*, 6 in *Culex erraticus* and 1 in *Culex pipiens*. There has been one horse case reported previously. First detection of EEE in a pool of *Culiseta melanura* was collected at the Winslow resting box site on the 27th of July.

Traditional Resting Box Sites: Eleven EEE positive *Cs. melanura* pools have been detected at the state resting box sites to date. Five of the eight sites have now detected positive pools. 3823 *Cs. melanura* from 153 pools have been tested for EEE with an additional 3 pools containing 33 *Cs. melanura* to be tested. MFIR for the traditional resting box sites is 2.88 with a statewide MFIR of 1.80 for *Cs. melanura* and a statewide MFIR of 1.08 for all species tested.

		Additional <i>Cs. melanura</i> trapped by counties *traps with positives indicated in BOLD .			
County	Trap types*	Pools	Mosquitoes	Positives	MFIR
Atlantic	CO ₂	18	318		
Burlington	CO₂	63	2156	2	0.93
Cape May	GR, RB	117	671		
Cumberland	CO ₂ , RB	16	227	1	4.41
Gloucester		27	454		
Middlesex	RB	9	46		
Ocean	CO ₂ , GR, RB	17	75		
Salem	CO ₂	2	2		
TOTAL		269	3949	3	0.76

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas. Previous to the current week, three positive pools (two from Burlington County and one from Cumberland County) have been detected. The first county positive was collected from a CO₂ trap on 3 August.

Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	3	3		
<i>Aedes atlanticus</i>	1	7		
<i>Aedes canadensis canadensis</i>	1	22		
<i>Aedes cantator</i>	39	54		
<i>Aedes japonicus</i>	3	5		
<i>Aedes sollicitans</i>	16	383		
<i>Aedes taeniorhynchus</i>	2	13		
<i>Aedes triseriatus</i>	2	2		
<i>Aedes vexans</i>	1	1		
<i>Anopheles bradleyi</i>	37	210		
<i>Anopheles crucians</i>	3	45		
<i>Anopheles punctipennis</i>	25	114		
<i>Anopheles quadrimaculatus</i>	2	51		
<i>Coquillettidia perturbans</i>	112	2135		
<i>Culex erraticus</i>	48	1127	6	5.324
<i>Culex pipiens</i>	616	6577	1	0.152
<i>Culex restuans</i>	2	2		
<i>Culex salinarius</i>	156	809		
<i>Culex</i> sp.	42	121		
<i>Psorophora ferox</i>	1	1		
State Total	1112	11682	7	0.599

Additional Species: Nineteen additional species were tested for EEE. Previous to the current week, seven positive pools (6 from *Culex erraticus* collected on 18 Aug, in Cape May and the 6th from *Culex pipiens* collected in Gloucester County on 2 Sep).

Horses and Humans: One horse, a 2 yo unvaccinated mare in Gloucester County, euthanized 25 Aug (no date of onset reported).

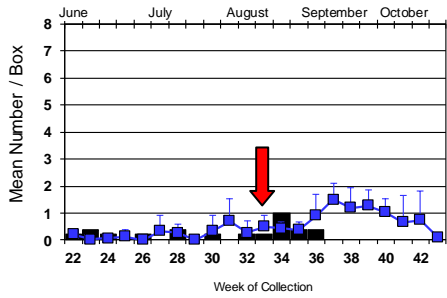
No humans have been reported with EEE.

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

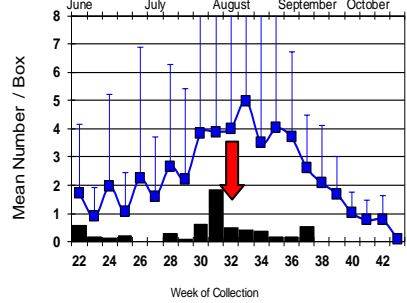
Culiseta melanura Population Graphs

Coastal

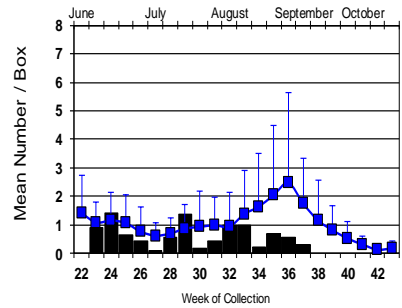
BASS RIVER (Burlington Co.) 2015 (black bars), 3 Year Mean (blue line with squares)



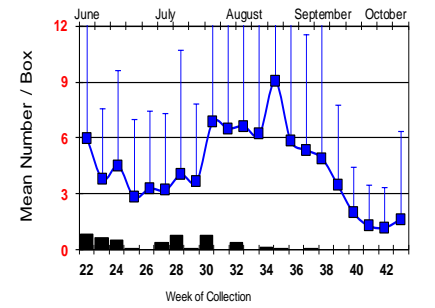
GREEN BANK (Burlington Co.) 2015 (black bars), 24 Year Mean (blue line with squares)



CORBINCITY (Atlantic Co.) 2015 (black bars), 30 Year Mean (blue line with squares)

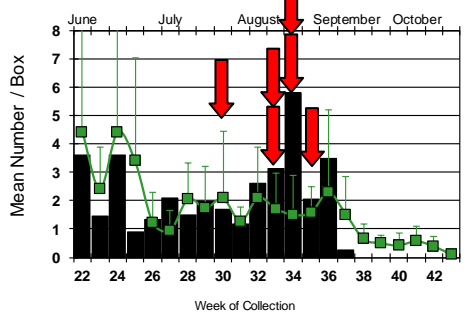


DENNISVILLE (Cape May Co.) 2015 (black bars), 38 Year Mean (blue line with squares)

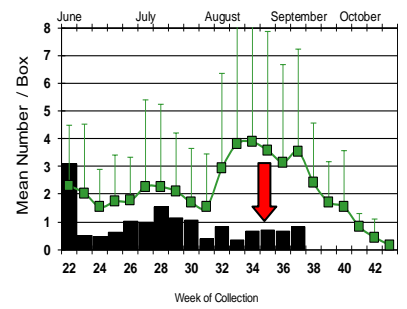


Inland

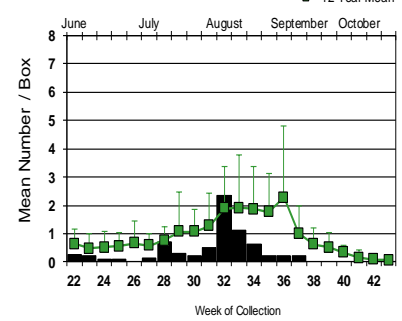
WINSLOW (Camden Co.) 2015 (black bars), 6 Year Mean (green line with squares)



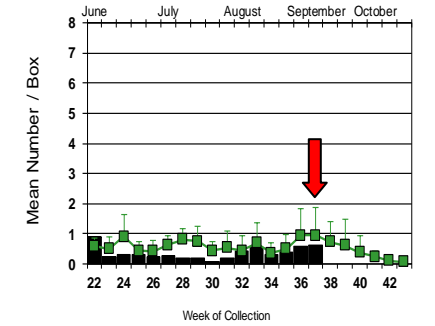
CENTERTON (Salem Co.) 2015 (black bars), 30 Year Mean (green line with squares)



TURKEY SWAMP (Monmouth Co.) 2015 (black bars), 12 Year Mean (green line with squares)



GLASSBORO (Gloucester Co.) 2015 (black bars), 6 Year Mean (green line with squares)



Populations of *Culiseta melanura* continue to be below or not significantly different from historical values. One new positive pool was detected at the Glassboro resting box site, indicating dissemination of the virus continues to occur.

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

EEE in US (2015 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: FL(18/1goat) GA(2) LA(1) **MI(1)** MS(2) NC(1) NJ(1) **NY(2)** SC(3) TX(8) VA(2)
- mosquito pools: NJ (21) NY(13) **VT(1)**
- sentinel: FL(64), TX(24)
- human: LA (1), NY(2)

West Nile Virus Positive Organisms in US, 2015

West Nile in US (2015 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					3
Alaska					
Arizona	0	71/78		2/3	58/65
Arkansas				3	11
California	762/855	2444/2568	235/269	10/14	123/157
Colorado	8/12	108		7/11	57/61
Connecticut		130/146			1
Delaware	2				4
DC					1
Florida		8	101/120		6
Georgia	0	24		0	5
Hawaii					
Idaho	0	13		3/4	7
Illinois	26/42	1275/1471		5/6	10/22
Indiana	0	393/414			7/8
Iowa		2/7		1/2	2/4
Kansas		1			10/11
Kentucky				3/4	
Louisiana	52	461			44
Maine					
Maryland					2
Mass.		134/153		0	2/3
Michigan	10	9		1	1
Minnesota	3	2		1	4
Mississippi		44		1	25/27
Missouri		452		11/13	13/16

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					1
Nebraska	1	73/79		0	35/39
Nevada		104			3
New Hampshire		0		0	0
New Jersey	23/24	670/721		0	10/16
New Mexico				1	3/7
New York		36			3/12
North Carolina					
North Dakota	0	4		2	10/12
Ohio		309			16/19
Oklahoma		2			30/42
Oregon	8/10	46/53	0	3	1
Pennsylvania	25	2443		1	18
Rhode Island		1		0	0
South Carolina					1
South Dakota		7			23/29
Tennessee		117			3
Texas	13/14	1131/1206		5/7	86/111
Utah		202/238	4	0	3
Vermont		57/67			
Virginia				1	
Washington	7	153		28/31	2021
West Virginia					
Wisconsin	35/38	11		1	1/3
Wyoming					4

* 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 21 September 2015

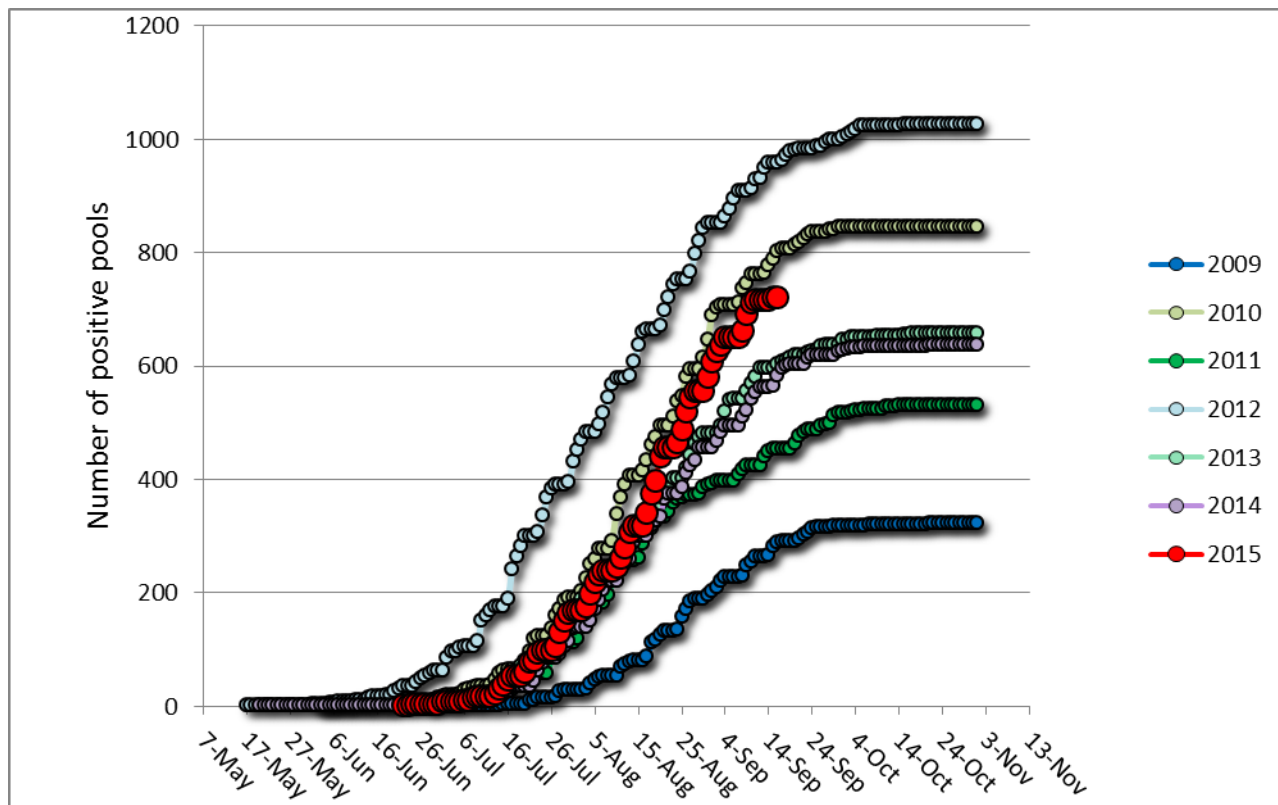
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	1158	8563	21	2.452
<i>Aedes atlanticus</i>	2	13		
<i>Aedes atropalpus</i>	11	18		
<i>Aedes aurifer</i>	1	1		
<i>Aedes canadensis canadensis</i>	21	260	1	3.846
<i>Aedes cantator</i>	45	224		
<i>Aedes grossbecki</i>	9	40		
<i>Aedes japonicus</i>	440	1954	8	4.094
<i>Aedes sollicitans</i>	16	383		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	11	63		
<i>Aedes triseriatus</i>	256	750	3	4.000
<i>Aedes trivittatus</i>	5	16		
<i>Aedes vexans</i>	80	1284	1	0.779
<i>Anopheles atropos</i>	1	1		
<i>Anopheles barberi</i>	2	2		
<i>Anopheles bradleyi</i>	40	229		
<i>Anopheles crucians</i>	4	46		
<i>Anopheles punctipennis</i>	85	271		
<i>Anopheles quadrimaculatus</i>	205	4703		
<i>Coquillettidia perturbans</i>	119	2216		
<i>Culex erraticus</i>	77	1394	2	1.435
<i>Culex pipiens</i>	927	21108	116	5.496
<i>Culex restuans</i>	521	2873	5	1.740
<i>Culex salinarius</i>	164	876	2	2.283
<i>Culex</i> sp.	2341	88322	548	6.205
<i>Culex territans</i>	18	53		
<i>Culiseta melanura</i>	428	7782	14	1.799
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora ciliata</i>	3	20		
<i>Psorophora columbiae</i>	18	235		
<i>Psorophora ferox</i>	11	20		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	2	4		
Grand Total	7024	143727	721	5.016

Remarks: To date, 7024 pools of 143,727 mosquitoes from 33 species have been tested, with 721 positive pools detected, most in ornithophilic *Culex/Culiseta* pools. No detection in new species from the previous week has occurred. Additional positives occurred in *Ae. albopictus*, *Cx. pipiens*, *Cx. restuans*, Mixed *Culex* pools and *Cs. melanura*. First positive of the season occurred in Middlesex County, in a pool of mixed *Culex*, collected on the 22nd of June. First positive pool in non-*Culex* was in an *Aedes albopictus* pool, collected in Monmouth County on 10 July. First positive pool in a non-*Culex* ornithophilic species was found in *Culiseta melanura* in Cape May 21 July. Overall state MFIR is 5.016, up from the previous week of 4.917.

Humans, Horses and Wild Birds: Sixteen human cases (2 fatalities) of WNV have been reported in Bergen (1), Burlington (3), Camden (1), Cumberland (2), Essex (1), Gloucester (3), Middlesex (2), Monmouth (2) and Passaic (1) counties. For further information, see <http://www.state.nj.us/health/cd/westnile/techinfo.shtml>.

No horse cases have been detected.

Bird testing began in mid-April. Twenty-four positive birds have been reported, mostly corvids. To date, 58 birds have been tested. Species includes: American Crow (*Corvus brachyrhynchos* 7/10) Fish Crow (*Corvus ossifragus* 1/11), Blue Jay (*Cyanocitta cristata* 4/6), unidentified corvid (5/6), Hawk/Raptor (2/3) and other avian species (5/22). Counties (positives) submitting birds are Atlantic, Bergen, Burlington, Cape May, Cumberland, Essex, Gloucester, Hunterdon, Mercer, Monmouth, Morris, Ocean, Passaic, Salem and Warren.



The figure above shows WNV activity as the accumulation of positive pools over the season.

WNV Results by County through 21 September 2015

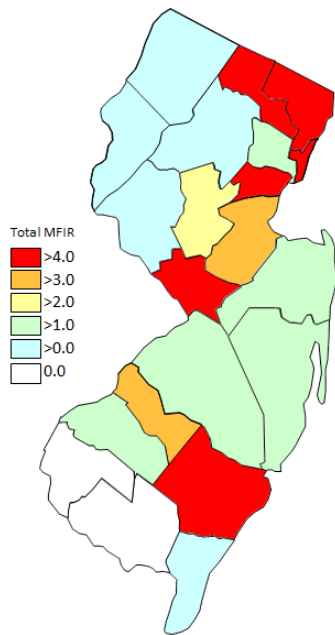
County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		203	6246	14	2.241
	<i>Aedes albopictus</i>	35	276	1	3.623
	<i>Aedes japonicus</i>	13	60		
	<i>Aedes sollicitans</i>	3	136		
	<i>Aedes taeniorhynchus</i>	1	5		
	<i>Aedes triseriatus</i>	1	2		
	<i>Aedes vexans</i>	6	238		
	<i>Anopheles bradleyi</i>	2	4		
	<i>Anopheles quadrimaculatus</i>	2	24		
	<i>Coquillettidia perturbans</i>	26	943		
	<i>Culex erraticus</i>	5	113		
	<i>Culex pipiens</i>	14	818	9	11.002
	<i>Culex salinarius</i>	1	15		
	<i>Culex</i> spp.	61	3053	3	0.983
	<i>Culiseta melanura</i>	32	558	1	1.792
	<i>Psorophora ferox</i>	1	1		
Bergen		141	6898	81	11.743
	<i>Aedes albopictus</i>	7	14	1	71.429
	<i>Aedes japonicus</i>	11	318		

<i>Aedes triseriatus</i>	1	1		
<i>Culex</i> spp.	122	6565	80	12.186
Burlington	200	5068	17	3.354
<i>Aedes albopictus</i>	16	173	2	11.561
<i>Aedes atlanticus</i>	1	7		
<i>Aedes atropalpus</i>	1	4		
<i>Aedes canadensis canadensis</i>	1	22		
<i>Aedes japonicus</i>	5	67		
<i>Aedes sollicitans</i>	1	8		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	2	13		
<i>Aedes triseriatus</i>	3	13		
<i>Aedes vexans</i>	3	21		
<i>Anopheles bradleyi</i>	2	141		
<i>Anopheles crucians</i>	2	44		
<i>Anopheles punctipennis</i>	3	18		
<i>Coquillettidia perturbans</i>	6	100		
<i>Culex erraticus</i>	2	7	1	142.857
<i>Culex salinarius</i>	9	216		
<i>Culex</i> spp.	55	1940	11	5.670
<i>Culiseta melanura</i>	87	2273	3	1.320
Camden	259	8728	56	6.416
<i>Aedes albopictus</i>	23	47	2	42.553
<i>Aedes canadensis canadensis</i>	3	15		
<i>Aedes cantator</i>	1	1		
<i>Aedes japonicus</i>	45	368	2	5.435
<i>Anopheles punctipennis</i>	2	6		
<i>Coquillettidia perturbans</i>	2	2		
<i>Culex</i> spp.	133	6446	46	7.136
<i>Culiseta melanura</i>	46	1834	6	3.272
<i>Psorophora ferox</i>	4	9		
Cape May	2509	17325	29	1.674
<i>Aedes albopictus</i>	268	532		
<i>Aedes atropalpus</i>	10	14		
<i>Aedes aurifer</i>	1	1		
<i>Aedes canadensis canadensis</i>	7	7		
<i>Aedes cantator</i>	39	54		
<i>Aedes japonicus</i>	220	427		
<i>Aedes sollicitans</i>	6	8		
<i>Aedes taeniorhynchus</i>	6	15		
<i>Aedes triseriatus</i>	188	418		
<i>Aedes vexans</i>	18	44		
<i>Anopheles atropos</i>	1	1		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	35	69		
<i>Anopheles punctipennis</i>	23	27		
<i>Anopheles quadrimaculatus</i>	186	4593		
<i>Coquillettidia perturbans</i>	49	816		
<i>Culex erraticus</i>	36	1040		
<i>Culex pipiens</i>	612	6261	23	3.674
<i>Culex restuans</i>	462	1606	2	1.245
<i>Culex salinarius</i>	146	346	2	5.780
<i>Culex</i> spp.	34	83		

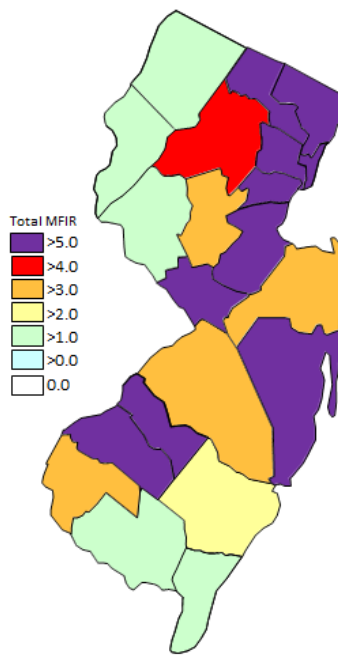
	<i>Culex territans</i>	18	53		
	<i>Culiseta melanura</i>	132	896	2	2.232
	<i>Orthopodomyia signifera</i>	1	1		
	<i>Psorophora columbiae</i>	5	5		
	<i>Psorophora ferox</i>	2	2		
	<i>Psorophora howardii</i>	1	1		
	<i>Uranotaenia sapphirina</i>	2	4		
Cumberland		191	3200	6	1.875
	<i>Aedes albopictus</i>	27	275		
	<i>Aedes atlanticus</i>	1	6		
	<i>Aedes canadensis canadensis</i>	2	53		
	<i>Aedes cantator</i>	1	2		
	<i>Aedes grossbecki</i>	9	40		
	<i>Aedes japonicus</i>	5	13		
	<i>Aedes sollicitans</i>	6	231		
	<i>Aedes taeniorhynchus</i>	2	30		
	<i>Aedes triseriatus</i>	3	7		
	<i>Aedes trivittatus</i>	1	2		
	<i>Aedes vexans</i>	25	828	1	1.208
	<i>Anopheles bradleyi</i>	1	15		
	<i>Anopheles punctipennis</i>	4	36		
	<i>Anopheles quadrimaculatus</i>	5	39		
	<i>Coquillettidia perturbans</i>	10	65		
	<i>Culex erraticus</i>	9	79		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	5	256		
	<i>Culex spp.</i>	44	776	5	6.443
	<i>Culiseta melanura</i>	16	227		
	<i>Psorophora ciliata</i>	3	20		
	<i>Psorophora columbiae</i>	11	199		
Essex		135	2091	11	5.261
	<i>Aedes albopictus</i>	5	9		
	<i>Aedes japonicus</i>	20	45		
	<i>Aedes triseriatus</i>	3	3	1	333.333
	<i>Aedes trivittatus</i>	1	1		
	<i>Anopheles punctipennis</i>	2	3		
	<i>Anopheles quadrimaculatus</i>	3	20		
	<i>Culex spp.</i>	99	2004	10	4.990
	<i>Psorophora ferox</i>	2	6		
Gloucester		468	14552	84	5.772
	<i>Aedes albopictus</i>	162	1124	7	6.228
	<i>Aedes japonicus</i>	12	102		
	<i>Aedes triseriatus</i>	4	6		
	<i>Aedes vexans</i>	2	5		
	<i>Anopheles punctipennis</i>	15	82		
	<i>Coquillettidia perturbans</i>	3	5		
	<i>Culex pipiens</i>	226	12494	76	6.083
	<i>Culiseta melanura</i>	43	733	1	1.364
	<i>Psorophora ferox</i>	1	1		
Hudson		173	6998	61	8.717
	<i>Aedes albopictus</i>	24	380		
	<i>Culex spp.</i>	149	6618	61	9.217

Hunterdon	200	9613	18	1.872
<i>Culex</i> spp.	200	9613	18	1.872
Mercer	365	7981	42	5.262
<i>Aedes albopictus</i>	114	1342		
<i>Aedes japonicus</i>	17	78	1	12.821
<i>Aedes vexans</i>	17	111		
<i>Coquillettidia perturbans</i>	6	54		
<i>Culex erraticus</i>	2	10		
<i>Culex pipiens</i>	74	1534	8	5.215
<i>Culex restuans</i>	54	1259	3	2.383
<i>Culex</i> spp.	81	3593	30	8.350
Middlesex	320	9939	79	7.948
<i>Aedes albopictus</i>	109	357	4	11.204
<i>Culex</i> spp.	202	9536	75	7.865
<i>Culiseta melanura</i>	9	46		
Monmouth	502	7864	29	3.688
<i>Aedes albopictus</i>	250	2840	2	0.704
<i>Aedes canadensis canadensis</i>	6	93		
<i>Aedes cantator</i>	4	167		
<i>Aedes japonicus</i>	15	43		
<i>Aedes triseriatus</i>	5	13		
<i>Aedes trivittatus</i>	1	1		
<i>Aedes vexans</i>	3	5		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles crucians</i>	2	2		
<i>Anopheles punctipennis</i>	24	64		
<i>Anopheles quadrimaculatus</i>	4	8		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex erraticus</i>	12	85		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	3	43		
<i>Culex</i> spp.	149	4076	27	6.624
<i>Culiseta melanura</i>	19	390		
<i>Psorophora columbiae</i>	2	31		
Morris	278	11283	55	4.875
<i>Aedes albopictus</i>	28	368		
<i>Culex</i> spp.	250	10915	55	5.039
Ocean	226	3126	21	6.718
<i>Aedes albopictus</i>	64	634	2	3.155
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	36	132	3	22.727
<i>Aedes triseriatus</i>	7	24	1	41.667
<i>Aedes vexans</i>	2	3		
<i>Anopheles punctipennis</i>	2	5		
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Coquillettidia perturbans</i>	5	129		
<i>Culex erraticus</i>	2	4		
<i>Culex</i> spp.	87	2112	15	7.102
<i>Culiseta melanura</i>	19	77		

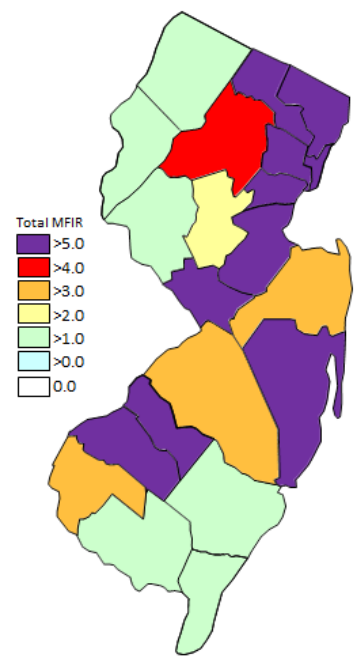
Passaic	20	313	4	12.780
<i>Aedes albopictus</i>	2	3		
<i>Aedes japonicus</i>	4	8	1	125.000
<i>Aedes triseriatus</i>	2	3		
<i>Aedes vexans</i>	1	1		
<i>Culex</i> spp.	11	298	3	10.067
Salem	129	1449	5	3.451
<i>Aedes albopictus</i>	18	142		
<i>Aedes japonicus</i>	11	21	1	47.619
<i>Aedes triseriatus</i>	13	19	1	52.632
<i>Aedes vexans</i>	1	2		
<i>Anopheles punctipennis</i>	3	3		
<i>Anopheles quadrimaculatus</i>	3	14		
<i>Coquillettidia perturbans</i>	9	26		
<i>Culex erraticus</i>	9	56	1	17.857
<i>Culex pipiens</i>	1	1		
<i>Culex restuans</i>	3	6		
<i>Culex</i> spp.	32	410	1	2.439
<i>Culiseta melanura</i>	25	748	1	1.337
<i>Psorophora ferox</i>	1	1		
Somerset	181	2628	8	3.044
<i>Aedes albopictus</i>	2	8		
<i>Aedes japonicus</i>	8	121		
<i>Aedes triseriatus</i>	8	84		
<i>Anopheles punctipennis</i>	1	4		
<i>Coquillettidia perturbans</i>	1	29		
<i>Culex</i> spp.	161	2382	8	3.359
Sussex	185	3558	6	1.686
<i>Aedes japonicus</i>	15	129		
<i>Aedes triseriatus</i>	13	135		
<i>Anopheles punctipennis</i>	5	21		
<i>Coquillettidia perturbans</i>	1	46		
<i>Culex</i> spp.	151	3227	6	1.859
Union	142	9656	86	8.906
<i>Aedes canadensis canadensis</i>	1	67	1	14.925
<i>Culex</i> spp.	141	9589	85	8.864
Warren	197	5211	9	1.727
<i>Aedes albopictus</i>	4	39		
<i>Aedes japonicus</i>	3	22		
<i>Aedes triseriatus</i>	5	22		
<i>Aedes trivittatus</i>	2	12		
<i>Aedes vexans</i>	2	26		
<i>Anopheles punctipennis</i>	1	2		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Culex</i> spp.	179	5086	9	1.770
Grand Total	7024	143727	721	5.016



Cumulative WNV activity in 2014.



WNV activity to 21 September 2015.



WNV activity last week, 2015.

NOTE New scale on activity maps – addition of MFIR 5.0 and above in purple

Saint Louis Encephalitis (SLE) 2015.

New Jersey will be testing for SLE this year only when adjacent states show human activity (Cape May tests its own 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.

County	Species	Pools	Mosquitoes	Positives	MFIR
Cape May		631	6273		
	<i>Culex pipiens</i>	597	6191		
	<i>Culex restuans</i>	1	1		
	<i>Culex</i> spp.	33	81		
Grand Total		631	6273		

La Crosse Encephalitis (LAC) 2015.

New Jersey will be testing for LAC this year only when adjacent states show human activity (Cape May tests its own 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).

County	Species	Pools	Mosquitoes	Positives	MFIR
Cape May		190	424		
	<i>Aedes albopictus</i>	1	1		

	<i>Aedes japonicus</i>	1	5		
	<i>Aedes triseriatus</i>	188	418		
Grand Total		190	424		

Dengue (DENV) to 21 September 2015.

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. There are currently 40 imported human cases in New Jersey, no local transmission.

Note Same pools of *Ae. albopictus* are tested for the four serotypes of Dengue as well as Chikungunya.

No pools have tested positive in 2015. Currently, there are 23 imported human cases reported in New Jersey.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		35	276	35	276	35	276	35	276		
		35	276	35	276	35	276	35	276		
Burlington		16	173	16	173	16	173	16	173		
		16	173	16	173	16	173	16	173		
Camden		22	45	22	45	22	45	22	45		
		22	45	22	45	22	45	22	45		
Cumberland		27	275	27	275	27	275	27	275		
		27	275	27	275	27	275	27	275		
Gloucester		161	1150	162	1158	162	1158	162	1158		
		161	1150	162	1158	162	1158	162	1158		
Hudson		24	380	24	380	24	380	24	380		
		24	380	24	380	24	380	24	380		
Mercer		114	1342	114	1342	114	1342	114	1342		
		114	1342	114	1342	114	1342	114	1342		
Middlesex		109	357	109	357	109	357	109	357		
		109	357	109	357	109	357	109	357		
Monmouth		224	2650	224	2650	224	2650	205	2539		
		224	2650	224	2650	224	2650	205	2539		
Morris		28	368	28	368	28	368	28	368		
		28	368	28	368	28	368	28	368		

Salem	18	142	18	142	18	142	18	142		
	18	142	18	142	18	142	18	142		
Warren	4	39	4	39	4	39	4	39		
	4	39	4	39	4	39	4	39		
Grand Total	782	7197	783	7205	783	7205	764	7094		

Chikungunya (CHIK) to 21 September 2015.

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 2015. Currently, there are 23 imported human cases reported in New Jersey.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		35	276		
	<i>Aedes albopictus</i>	35	276		
Burlington		16	173		
	<i>Aedes albopictus</i>	16	173		
Camden		22	45		
	<i>Aedes albopictus</i>	22	45		
Cape May		264	526		
	<i>Aedes albopictus</i>	263	525		
	<i>Aedes japonicus</i>	1	1		
Cumberland		27	275		
	<i>Aedes albopictus</i>	27	275		
Gloucester		162	1158		
	<i>Aedes albopictus</i>	162	1158		
Hudson		24	380		
	<i>Aedes albopictus</i>	24	380		
Mercer		114	1342		
	<i>Aedes albopictus</i>	114	1342		
Middlesex		109	357		
	<i>Aedes albopictus</i>	109	357		
Monmouth		224	2650		
	<i>Aedes albopictus</i>	224	2650		
Morris		28	368		

	<i>Aedes albopictus</i>	28	368		
Salem		18	142		
	<i>Aedes albopictus</i>	18	142		
Warren		4	39		
	<i>Aedes albopictus</i>	4	39		
Grand Total		1047	7731		