

VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV and CHIK

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CDC WEEK 39: 27 September to 3 October, 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	1.27	1.00	24 (29)	12 (13)	1	41.67
Green Bank (Burlington Co.)/25	Coastal	1.69	0.72	115 (133) ‡	15 (16)	1	8.70
Corbin City (Atlantic Co.)/25	Coastal	0.81	0.80	263 (283)	15 (16)		
Dennisville (Cape May Co.)/50	Coastal	1.97	0.16	230	13		
Winslow (Camden Co.)/50	Inland	0.50	1.02	1914	48	7	3.66
Centerton (Salem Co.)/50	Inland	1.71	0.94	844	26	2	2.37
Turkey Swamp (Monmouth Co.)/50	Inland	0.62	0.22	408	19		
Glassboro (Gloucester Co.)/50	Inland	0.62	0.28	308	18	1	3.25

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

Remarks: One new positive pool of EEE was detected at the Centerton resting box site. There have been a total of 22 positive pools detected statewide: 15 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: Twelve EEE positive *Cs. melanura* pools have been detected at the state resting box sites to date, the latest from the Centerton site, collected on 28 Sep. Five of the eight sites have detected positive pools. 4095 *Cs. melanura* from 167 pools have been tested for EEE with an additional 4 pools containing 54 *Cs. melanura* to be tested. MFIR for the traditional resting box sites is 2.93 with a statewide MFIR of 1.82 for *Cs. melanura* and a statewide MFIR of 0.99 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	20	333		
Burlington	CO₂	68	2190	2	0.91
Cape May	GR, RB	136	731		
Cumberland	CO ₂ , RB	18	243	1	4.12
Gloucester		34	503		
Middlesex	RB	9	46		
Ocean	CO ₂ , GR, RB	20	87		
Salem	CO ₂	2	2		
TOTAL		307	4135	3	0.73

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>	17	400		
<i>Aedes taeniorhynchus</i>	3	18		
<i>Aedes triseriatus</i>	2	2		
<i>Aedes vexans</i>	2	5		
<i>Anopheles bradleyi</i>	47	279		
<i>Anopheles crucians</i>	3	45		
<i>Anopheles punctipennis</i>	28	122		
<i>Anopheles quadrimaculatus</i>	5	57		
<i>Coquillettidia perturbans</i>	115	2140		
<i>Culex erraticus</i>	78	1930	6	3.109
<i>Culex pipiens</i>	763	7904	1	0.127
<i>Culex restuans</i>	2	2		
<i>Culex salinarius</i>	178	845		
<i>Culex sp.</i>	50	142		
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora ferox</i>	1	1		
State Total	1342	13984	7	0.501

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).

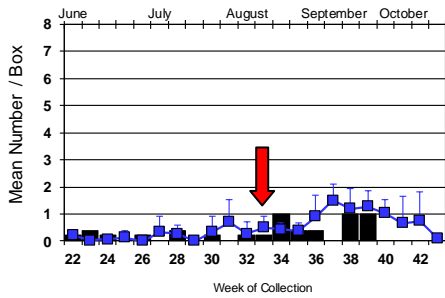
No humans have been reported with EEE.

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

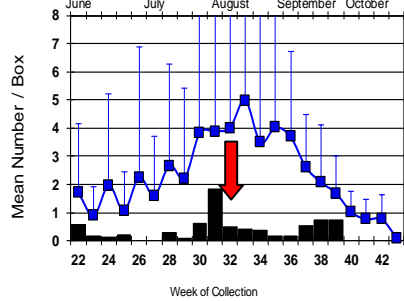
Culiseta melanura Population Graphs

Coastal

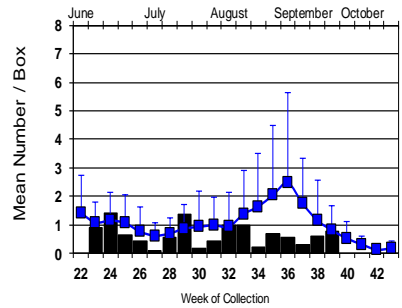
BASS RIVER (Burlington Co.) 2015
 3 Year Mean



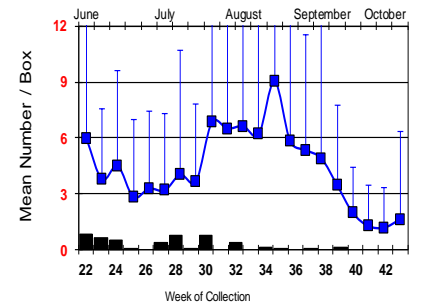
GREEN BANK (Burlington Co.) 2015
 24 Year Mean



CORBINCITY (Atlantic Co.) 2015
 30 Year Mean

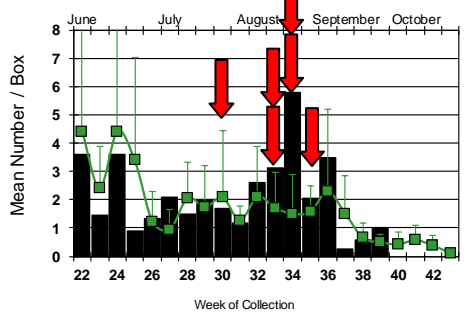


DENNISVILLE (Cape May Co.) 2015
 38 Year Mean

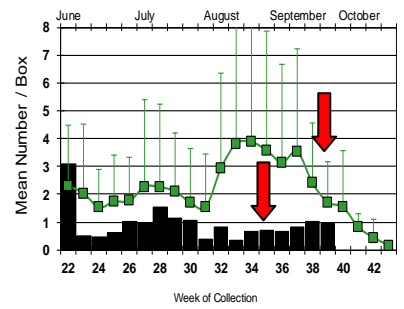


Inland

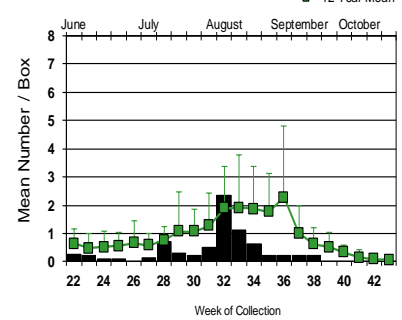
WINSLOW (Camden Co.) 2015
 6 Year Mean



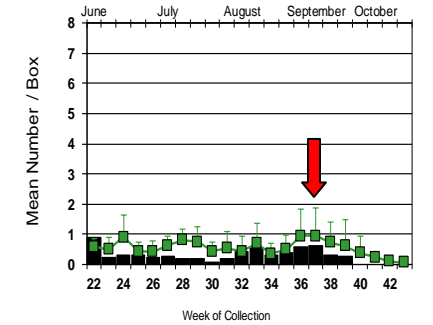
CENTERTON (Salem Co.) 2015
 30 Year Mean



TURKEY SWAMP (Monmouth Co.) 2015
 12 Year Mean



GLASSBORO (Gloucester Co.) 2015
 6 Year Mean



Populations of *Culiseta melanura* continue to be mostly below or not significantly different from historical values, except at Winslow where averages were above historical means. One new positive pool was detected at Centerton.

= 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(19/1goat) GA(2) LA(2) MI(1) MS(2) NC(1) NJ(1) NY(4) SC(3) TX(8) VA(2)
- mosquito pools: MA(1) ME(1) NH(1) NJ (22) NY(13) VT(1)
- sentinel: FL(66), 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					3/5
Alaska					
Arizona	0	78		3	57
Arkansas				3	14
California	967/1014	2768/2855	314/330	15	201/245
Colorado	12/13	164/192		12/13	74/82
Connecticut		153			5/6
Delaware	2				4
DC					1
Florida		8	169		7
Georgia	0	24		0	5/8
Hawaii					
Idaho	0	13		5	13
Illinois	50/51	1613/1666		8	30/43
Indiana	0	437/463			12
Iowa		7		2	4/6
Kansas		1			14/18
Kentucky				4/6	
Louisiana	65	483/497		1	54/55
Maine		1			1
Maryland					2/38
Mass.		159/161		0	5/7
Michigan	10	9		1	9/13
Minnesota	3	2		1	4/5
Mississippi		44		1	32/35
Missouri		452		14/15	19/20

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					2
Nebraska	1/2	86/97		0	50/53
Nevada		104			7
New Hampshire		3		1	0
New Jersey	28	817/864		0	18/23
New Mexico				1	8
New York		36		1	15/24
North Carolina					
North Dakota	0	4		2/3	12/18
Ohio		486			26
Oklahoma		2			53
Oregon	10	56	0	4/5	1
Pennsylvania	29/30	2653/2689		1/2	27/28
Rhode Island		3/4		0	0
South Carolina					1
South Dakota		7			31/35
Tennessee		117			3
Texas	14	1328		11	151
Utah		249/266	4	0	3
Vermont		90			
Virginia				1	12
Washington	7	157		31/33	22/23
West Virginia					
Wisconsin	43/44	13/15		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 5 October 2015

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	1412	10385	22	2.118
<i>Aedes atlanticus</i>	2	13		
<i>Aedes atropalpus</i>	11	18		
<i>Aedes aurifer</i>	1	1		
<i>Aedes canadensis canadensis</i>	21	194		
<i>Aedes cantator</i>	45	224		
<i>Aedes grossbecki</i>	9	40		
<i>Aedes japonicus</i>	507	2170	9	4.147
<i>Aedes sollicitans</i>	17	400		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	14	71		
<i>Aedes triseriatus</i>	293	847	3	3.542
<i>Aedes trivittatus</i>	6	17		
<i>Aedes vexans</i>	106	1988	3	1.509
<i>Anopheles atropos</i>	1	1		
<i>Anopheles barberi</i>	3	3		
<i>Anopheles bradleyi</i>	50	298		
<i>Anopheles crucians</i>	5	49		
<i>Anopheles punctipennis</i>	111	398		
<i>Anopheles quadrimaculatus</i>	232	4874		
<i>Coquillettidia perturbans</i>	123	2222		
<i>Culex erraticus</i>	119	2257	2	0.886
<i>Culex pipiens</i>	1187	27283	169	6.194
<i>Culex restuans</i>	645	3310	9	2.719
<i>Culex salinarius</i>	187	913	2	2.191
<i>Culex</i> sp.	2766	99682	630	6.320
<i>Culex territans</i>	23	70		
<i>Culiseta melanura</i>	482	8242	15	1.820
<i>Orthopodomyia signifera</i>	2	2		
<i>Psorophora ciliata</i>	3	20		
<i>Psorophora columbiae</i>	21	238		
<i>Psorophora ferox</i>	11	20		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	5	13		
Grand Total	8422	166265	864	5.197

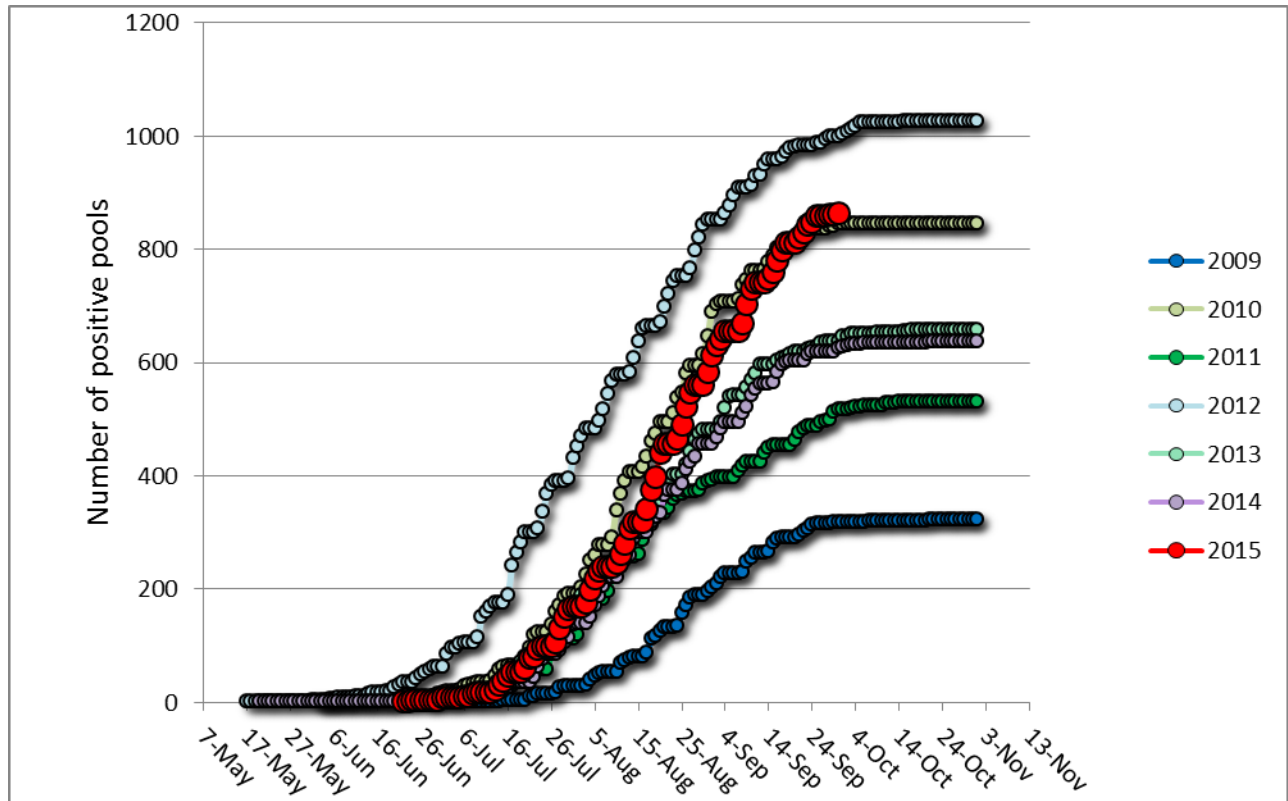
Remarks: To date, 8422 pools of 166,265 mosquitoes from 33 species have been tested, with 864 positive pools detected, most in ornithophilic *Culex/Culiseta* pools. No detection in new species from the previous week has occurred. *NOTE* A pool of *Ae. canadensis* reported as positive last week was actually a pool of *Culex* Mix. 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 5.197, up from the previous week of 5.177.

Humans, Horses and Wild Birds: Twenty-three human cases (2 fatalities) of WNV have been reported in Bergen (2), Burlington (3), Camden (1), Cumberland (5), Essex (1), Gloucester (2), Hudson (1), Hunterdon (1), Middlesex (2),

Monmouth (3), Ocean (1) 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-eight positive birds have been reported, mostly corvids. To date, 66 birds have been tested. Species includes: American Crow (*Corvus brachyrhynchos* 8/11) Fish Crow (*Corvus ossifragus* 1/11), Blue Jay (*Cyanocitta cristata* 4/7), unidentified corvid (7/8), Hawk/Raptor (2/3) and other avian species (6/28). 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. This year is on pace to be as active as one of the more active years, 2010. At this point in time, there were 15,000 fewer pools done in 2010, and adjustments would likely bring the current year downward slightly.

WNV Results by County through 5 October 2015

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		243	6909	15	2.171
	<i>Aedes albopictus</i>	45	354	1	2.825
	<i>Aedes japonicus</i>	13	60		
	<i>Aedes sollicitans</i>	3	136		
	<i>Aedes taeniorhynchus</i>	3	8		
	<i>Aedes triseriatus</i>	1	2		
	<i>Aedes vexans</i>	10	439		
	<i>Anopheles bradleyi</i>	2	4		
	<i>Anopheles punctipennis</i>	1	14		
	<i>Anopheles quadrimaculatus</i>	3	28		
	<i>Coquillettidia perturbans</i>	26	943		
	<i>Culex erraticus</i>	9	126		
	<i>Culex pipiens</i>	20	990	10	10.101
	<i>Culex restuans</i>	3	9		
	<i>Culex salinarius</i>	1	15		
	<i>Culex</i> spp.	66	3184	3	0.942

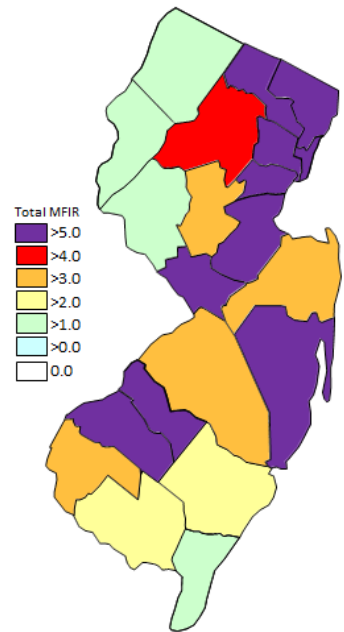
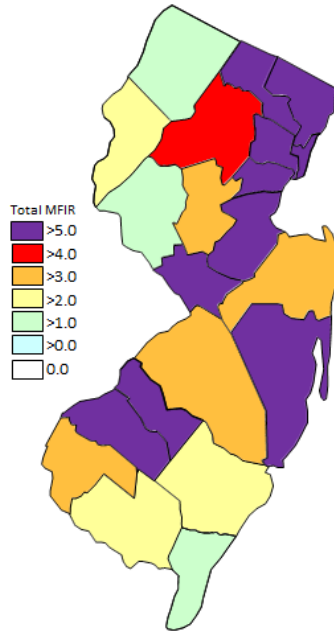
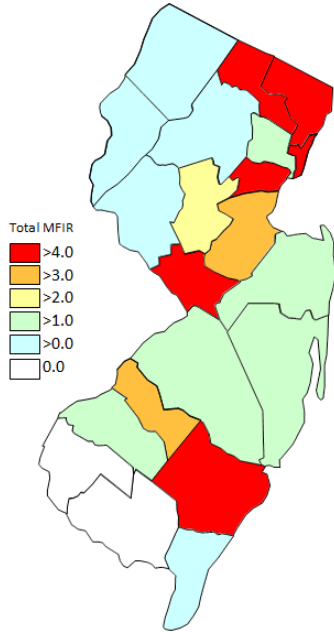
<i>Culiseta melanura</i>	36	596	1	1.678
<i>Psorophora ferox</i>	1	1		
Bergen	184	7575	96	12.673
<i>Aedes albopictus</i>	9	22	1	45.455
<i>Aedes japonicus</i>	14	356		
<i>Aedes triseriatus</i>	1	1		
<i>Culex</i> spp.	160	7196	95	13.202
Burlington	258	5607	19	3.389
<i>Aedes albopictus</i>	20	200	2	10.000
<i>Aedes atlanticus</i>	1	7		
<i>Aedes atropalpus</i>	1	4		
<i>Aedes canadensis canadensis</i>	1	22		
<i>Aedes japonicus</i>	13	87		
<i>Aedes sollicitans</i>	2	25		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	3	18		
<i>Aedes triseriatus</i>	4	14		
<i>Aedes vexans</i>	8	187		
<i>Anopheles bradleyi</i>	4	180		
<i>Anopheles crucians</i>	2	44		
<i>Anopheles punctipennis</i>	6	27		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Coquillettidia perturbans</i>	7	101		
<i>Culex erraticus</i>	6	11	1	90.909
<i>Culex pipiens</i>	6	12	1	83.333
<i>Culex restuans</i>	3	15		
<i>Culex salinarius</i>	10	217		
<i>Culex</i> spp.	63	2103	12	5.706
<i>Culiseta melanura</i>	95	2329	3	1.288
<i>Orthopodomyia signifera</i>	1	1		
Camden	278	9034	64	7.084
<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>	49	376	3	7.979
<i>Anopheles punctipennis</i>	2	6		
<i>Coquillettidia perturbans</i>	2	2		
<i>Culex</i> spp.	145	6663	52	7.804
<i>Culiseta melanura</i>	49	1915	7	3.655
<i>Psorophora ferox</i>	4	9		
Cape May	2983	20237	34	1.680
<i>Aedes albopictus</i>	343	714		
<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>	242	477		
<i>Aedes sollicitans</i>	6	8		
<i>Aedes taeniorhynchus</i>	6	15		
<i>Aedes triseriatus</i>	217	491		
<i>Aedes vexans</i>	18	44		
<i>Anopheles atropos</i>	1	1		

<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	43	99		
<i>Anopheles punctipennis</i>	23	27		
<i>Anopheles quadrimaculatus</i>	198	4734		
<i>Coquillettidia perturbans</i>	50	817		
<i>Culex erraticus</i>	58	1817		
<i>Culex pipiens</i>	747	7439	26	3.495
<i>Culex restuans</i>	576	1938	4	2.064
<i>Culex salinarius</i>	168	382	2	5.236
<i>Culex spp.</i>	41	102		
<i>Culex territans</i>	23	70		
<i>Culiseta melanura</i>	151	963	2	2.077
<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>	5	13		
Cumberland	252	3810	11	2.887
<i>Aedes albopictus</i>	31	295		
<i>Aedes atlanticus</i>	1	6		
<i>Aedes canadensis canadensis</i>	3	54		
<i>Aedes cantator</i>	1	2		
<i>Aedes grossbecki</i>	9	40		
<i>Aedes japonicus</i>	8	19		
<i>Aedes sollicitans</i>	6	231		
<i>Aedes taeniorhynchus</i>	2	30		
<i>Aedes triseriatus</i>	3	7		
<i>Aedes trivittatus</i>	2	3		
<i>Aedes vexans</i>	37	1149	3	2.611
<i>Anopheles bradleyi</i>	1	15		
<i>Anopheles punctipennis</i>	12	102		
<i>Anopheles quadrimaculatus</i>	7	41		
<i>Coquillettidia perturbans</i>	11	68		
<i>Culex erraticus</i>	12	88		
<i>Culex pipiens</i>	6	24	1	41.667
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	5	256		
<i>Culex spp.</i>	60	915	7	7.650
<i>Culiseta melanura</i>	18	243		
<i>Psorophora ciliata</i>	3	20		
<i>Psorophora columbiae</i>	13	201		
Essex	145	2114	12	5.676
<i>Aedes albopictus</i>	6	10		
<i>Aedes japonicus</i>	23	53		
<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>	5	22		
<i>Culex spp.</i>	103	2016	11	5.456
<i>Psorophora ferox</i>	2	6		
Gloucester	593	19201	129	6.718
<i>Aedes albopictus</i>	179	1222	8	6.547
<i>Aedes japonicus</i>	18	134		

	<i>Aedes triseriatus</i>	6	20		
	<i>Aedes vexans</i>	5	13		
	<i>Anopheles punctipennis</i>	19	92		
	<i>Anopheles quadrimaculatus</i>	4	7		
	<i>Coquillettidia perturbans</i>	3	5		
	<i>Culex pipiens</i>	306	16896	120	7.102
	<i>Culiseta melanura</i>	52	811	1	1.233
	<i>Psorophora ferox</i>	1	1		
Hudson		205	8145	73	8.963
	<i>Aedes albopictus</i>	24	380		
	<i>Culex</i> spp.	181	7765	73	9.401
Hunterdon		228	10655	20	1.877
	<i>Culex</i> spp.	228	10655	20	1.877
Mercer		466	9360	51	5.449
	<i>Aedes albopictus</i>	167	1913		
	<i>Aedes japonicus</i>	21	82	1	12.195
	<i>Aedes vexans</i>	17	111		
	<i>Coquillettidia perturbans</i>	6	54		
	<i>Culex erraticus</i>	6	35		
	<i>Culex pipiens</i>	100	1920	11	5.729
	<i>Culex restuans</i>	58	1340	5	3.731
	<i>Culex</i> spp.	91	3905	34	8.707
Middlesex		401	12193	86	7.053
	<i>Aedes albopictus</i>	132	426	4	9.390
	<i>Culex</i> spp.	260	11721	82	6.996
	<i>Culiseta melanura</i>	9	46		
Monmouth		589	9257	34	3.673
	<i>Aedes albopictus</i>	299	3460	2	0.578
	<i>Aedes canadensis canadensis</i>	6	93		
	<i>Aedes cantator</i>	4	167		
	<i>Aedes japonicus</i>	19	61		
	<i>Aedes triseriatus</i>	5	13		
	<i>Aedes trivittatus</i>	1	1		
	<i>Aedes vexans</i>	5	13		
	<i>Anopheles barberi</i>	2	2		
	<i>Anopheles crucians</i>	3	5		
	<i>Anopheles punctipennis</i>	27	71		
	<i>Anopheles quadrimaculatus</i>	5	11		
	<i>Coquillettidia perturbans</i>	1	1		
	<i>Culex erraticus</i>	13	89		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	3	43		
	<i>Culex</i> spp.	173	4793	32	6.676
	<i>Culiseta melanura</i>	20	402		
	<i>Psorophora columbiae</i>	2	31		
Morris		328	13235	65	4.911
	<i>Aedes albopictus</i>	28	368		
	<i>Culex</i> spp.	300	12867	65	5.052

Ocean	273	3927	24	6.112
<i>Aedes albopictus</i>	75	737	2	2.714
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	43	157	3	19.108
<i>Aedes triseriatus</i>	10	30	1	33.333
<i>Aedes vexans</i>	2	3		
<i>Anopheles punctipennis</i>	3	6		
<i>Anopheles quadrimaculatus</i>	2	4		
<i>Coquillettidia perturbans</i>	6	130		
<i>Culex erraticus</i>	2	4		
<i>Culex</i> spp.	105	2762	18	6.517
<i>Culiseta melanura</i>	24	91		
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	164	1641	6	3.656
<i>Aedes albopictus</i>	19	143		
<i>Aedes japonicus</i>	14	28	1	35.714
<i>Aedes triseriatus</i>	15	22	1	45.455
<i>Aedes vexans</i>	1	2		
<i>Anopheles punctipennis</i>	7	12		
<i>Anopheles quadrimaculatus</i>	6	23		
<i>Coquillettidia perturbans</i>	9	26		
<i>Culex erraticus</i>	13	87	1	11.494
<i>Culex pipiens</i>	2	2		
<i>Culex restuans</i>	3	6		
<i>Culex</i> spp.	45	442	2	4.525
<i>Culiseta melanura</i>	28	846	1	1.182
<i>Psorophora columbiae</i>	1	1		
<i>Psorophora ferox</i>	1	1		
Somerset	213	3025	12	3.967
<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.	193	2779	12	4.318
Sussex	208	3938	7	1.778
<i>Aedes japonicus</i>	15	129		
<i>Aedes triseriatus</i>	13	135		
<i>Anopheles punctipennis</i>	7	32		
<i>Coquillettidia perturbans</i>	1	46		
<i>Culex</i> spp.	172	3596	7	1.947
Union	180	10744	91	8.470
<i>Aedes albopictus</i>	3	27		
<i>Culex</i> spp.	177	10717	91	8.491

Warren	211	5345	11	2.058
<i>Aedes albopictus</i>	5	56		
<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.	192	5203	11	2.114
Grand Total	8422	166265	864	5.197



Cumulative WNV activity in 2014.

WNV activity to 5 October 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		785	7613		
	<i>Culex pipiens</i>	743	7510		
	<i>Culex restuans</i>	1	1		
	<i>Culex</i> spp.	41	102		
Grand Total		785	7613		

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		218	496		
	<i>Aedes albopictus</i>	1	1		
	<i>Aedes japonicus</i>	1	5		
	<i>Aedes triseriatus</i>	216	490		
Grand Total		218	496		

Dengue (DENV) to 5 October 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 27 imported human cases reported in New Jersey.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		45	354	45	354	45	354	45	354		

	45	354	45	354	45	354	45	354		
Burlington	20	200	20	200	20	200	20	200		
	20	200	20	200	20	200	20	200		
Camden	22	45	22	45	22	45	22	45		
	22	45	22	45	22	45	22	45		
Cumberland	31	295	31	295	31	295	31	295		
	31	295	31	295	31	295	31	295		
Gloucester	175	1211	176	1219	176	1219	176	1219		
	175	1211	176	1219	176	1219	176	1219		
Hudson	24	380	24	380	24	380	24	380		
	24	380	24	380	24	380	24	380		
Mercer	167	1913	167	1913	167	1913	167	1913		
	167	1913	167	1913	167	1913	167	1913		
Middlesex	132	426	132	426	132	426	132	426		
	132	426	132	426	132	426	132	426		
Monmouth	264	3184	264	3184	264	3184	245	3073		
	264	3184	264	3184	264	3184	245	3073		
Morris	28	368	28	368	28	368	28	368		
	28	368	28	368	28	368	28	368		
Salem	19	143	19	143	19	143	19	143		
	19	143	19	143	19	143	19	143		
Warren	5	56	5	56	5	56	5	56		
	5	56	5	56	5	56	5	56		
Grand Total	932	8575	933	8583	933	8583	914	8472		

Chikungunya (CHIK) to 5 October 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		45	354		
	<i>Aedes albopictus</i>	45	354		

Burlington		20	200		
	<i>Aedes albopictus</i>	20	200		
Camden		22	45		
	<i>Aedes albopictus</i>	22	45		
Cape May		339	708		
	<i>Aedes albopictus</i>	338	707		
	<i>Aedes japonicus</i>	1	1		
Cumberland		31	295		
	<i>Aedes albopictus</i>	31	295		
Gloucester		176	1219		
	<i>Aedes albopictus</i>	176	1219		
Hudson		24	380		
	<i>Aedes albopictus</i>	24	380		
Mercer		167	1913		
	<i>Aedes albopictus</i>	167	1913		
Middlesex		132	426		
	<i>Aedes albopictus</i>	132	426		
Monmouth		264	3184		
	<i>Aedes albopictus</i>	264	3184		
Morris		28	368		
	<i>Aedes albopictus</i>	28	368		
Salem		19	143		
	<i>Aedes albopictus</i>	19	143		
Warren		5	56		
	<i>Aedes albopictus</i>	5	56		
Grand Total		1272	9291		