

VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV and CHIK

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CDC WEEK 40: 4 October to 10 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	1.03	0.20	29 (30)	13 (14)	1	38.48
Green Bank (Burlington Co.)/25	Coastal	1.02	0.40	133 (143)	16 (17)	1	7.52
Corbin City (Atlantic Co.)/25	Coastal	0.53	0.64	283 (299)	17 (18)		
Dennisville (Cape May Co.)/50	Coastal	1.27	0.00	230	13		
Winslow (Camden Co.)/50	Inland	0.42	0.14	1921	49	7	3.64
Centerton (Salem Co.)/50	Inland	1.53	0.34	861	27	2	2.32
Turkey Swamp (Monmouth Co.)/50	Inland	0.51	0.00	408	20		
Glassboro (Gloucester Co.)/50	Inland	0.38	0.20	309	19	1	3.24

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

Remarks: One new positive pool of EEE was detected at an Ocean County CO₂ trap site, collected 30 Sep. There have been a total of 23 positive pools detected statewide: 16 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. Five of the eight sites have detected positive pools. 4174 *Cs. melanura* from 174 pools have been tested for EEE with an additional 3 pools containing 27 *Cs. melanura* to be tested. MFIR for the traditional resting box sites is 2.87 with a statewide MFIR of 1.84 for *Cs. melanura* and a statewide MFIR of 0.98 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	21	336		
Burlington	CO₂	79	2400	2	0.83
Cape May	CO ₂ , GR, RB	139	736		
Cumberland	CO ₂ , RB	23	262	1	3.82
Gloucester	CO ₂ , GR, RB	50	668		
Middlesex	RB	10	47		
Ocean	CO₂ , GR, RB	22	90	1	11.11
Salem	CO ₂ , GR	3	6		
TOTAL		347	4545	4	0.88

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas. Latest positive pool was collected 30 Sep in Ocean County. 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>	5	6		
<i>Aedes atlanticus</i>	1	7		
<i>Aedes canadensis canadensis</i>	2	24		
<i>Aedes cantator</i>	39	54		
<i>Aedes japonicus</i>	4	6		
<i>Aedes sollicitans</i>	17	400		
<i>Aedes taeniorhynchus</i>	5	25		
<i>Aedes triseriatus</i>	2	2		
<i>Aedes vexans</i>	5	110		
<i>Anopheles bradleyi</i>	49	322		
<i>Anopheles crucians</i>	4	56		
<i>Anopheles punctipennis</i>	35	153		
<i>Anopheles quadrimaculatus</i>	7	61		
<i>Coquillettidia perturbans</i>	117	2143		
<i>Culex erraticus</i>	88	2109	6	2.845
<i>Culex pipiens</i>	814	8342	1	0.120
<i>Culex restuans</i>	2	2		
<i>Culex salinarius</i>	184	870		
<i>Culex</i> sp.	54	153		
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora ciliata</i>	1	2		
<i>Psorophora ferox</i>	4	9		
State Total	1440	14857	7	0.471

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).

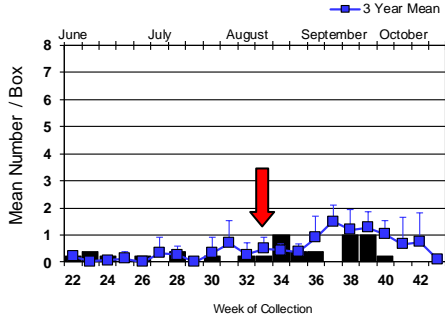
No humans have been reported with EEE.

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

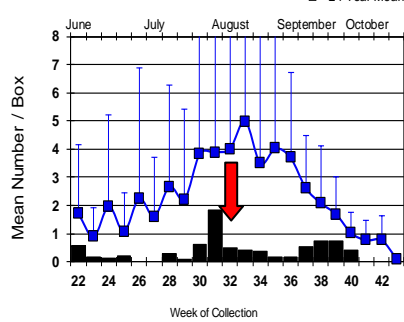
Culiseta melanura Population Graphs

Coastal

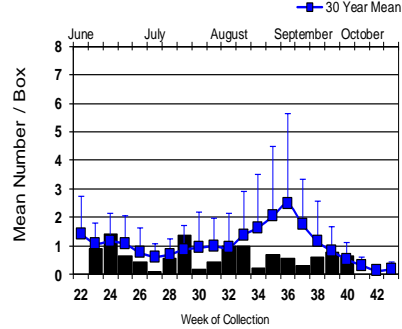
BASS RIVER (Burlington Co.)



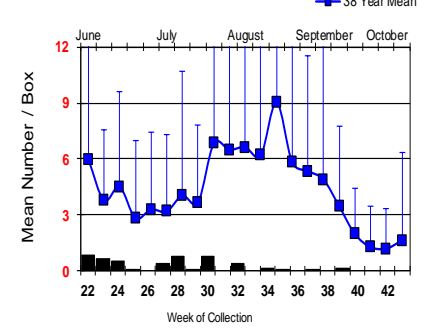
GREEN BANK (Burlington Co.)



CORBINCITY (Atlantic Co.)

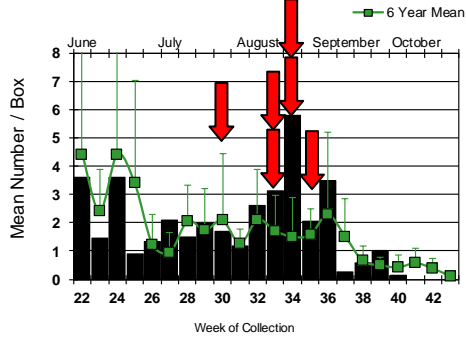


DENNISVILLE (Cape May Co.)

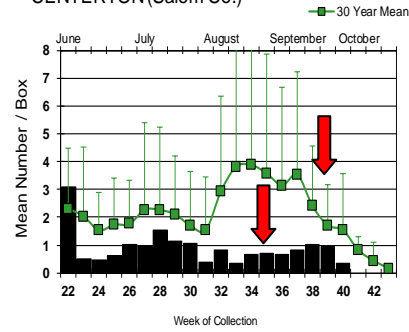


Inland

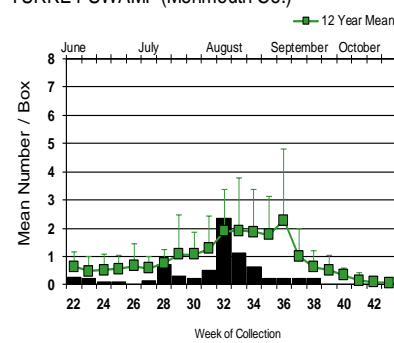
WINSLOW (Camden Co.)



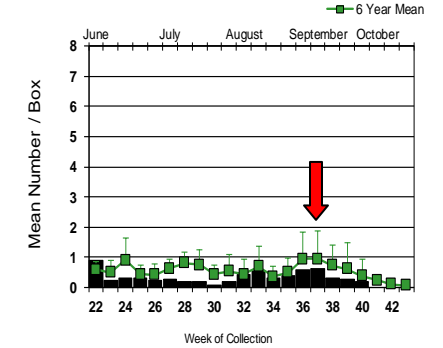
CENTERTON (Salem Co.)





TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



Populations of *Culiseta melanura* continue to be mostly below or not significantly different from historical values.



 = 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(2) NJ (23) 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					5/6
Alaska					
Arizona	0	78/81		3	57/79
Arkansas				3	14/16
California	1014/1092	2855/2907	330/344	15/17	245/311
Colorado	13	192		13	82/83
Connecticut		153/157			6/8
Delaware	2				4
DC					1
Florida		8	169/186		7/8
Georgia	0	24		0	8/9
Hawaii					
Idaho	0	13		5	13
Illinois	51	1666/1697		8	43/52
Indiana	0	463/465			12/15
Iowa		7		2	6
Kansas		1			18/20
Kentucky				6/8	
Louisiana	65	497		1	55
Maine		1			1
Maryland					2/38
Mass.		161		0	8
Michigan	10	9		1	13
Minnesota	3	2		1	5
Mississippi		44		1	35/37
Missouri		452		15	20/21

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					2
Nebraska	2	97/102		0	53/57
Nevada		104			7
New Hampshire		3		1	0
New Jersey	28	864/894		1	23/25
New Mexico				1	8
New York		36		1	24
North Carolina					
North Dakota	0	4		3	18
Ohio		486/540			26/28
Oklahoma		2			53/67
Oregon	10	56	0	5	1
Pennsylvania	30	2689		2	28/30
Rhode Island		4		0	0
South Carolina					1
South Dakota		7			35
Tennessee		117			3
Texas	14	1328/1382		11/14	151/176
Utah		266	4	0	3
Vermont		90/97			
Virginia				1	12
Washington	7	157		33/36	23
West Virginia					
Wisconsin	44	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 12 October 2015

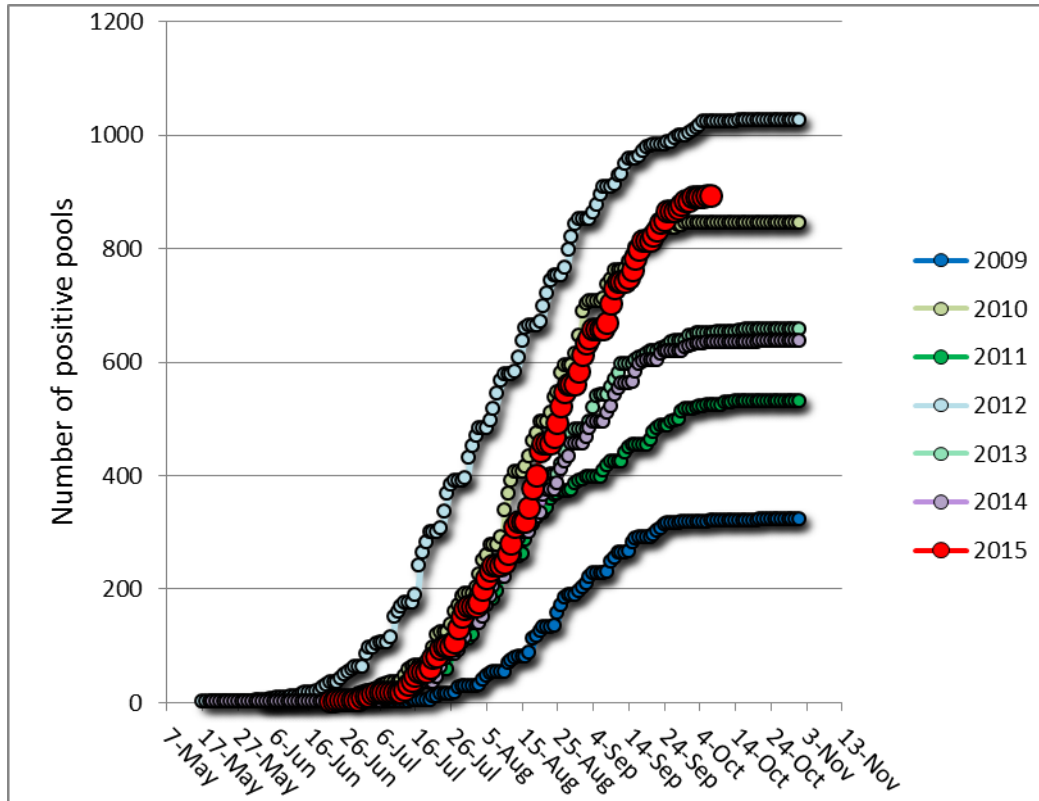
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	1494	11010	22	1.998
<i>Aedes atlanticus</i>	2	13		
<i>Aedes atropalpus</i>	12	21		
<i>Aedes aurifer</i>	1	1		
<i>Aedes canadensis canadensis</i>	22	196		
<i>Aedes cantator</i>	45	224		
<i>Aedes grossbecki</i>	9	40		
<i>Aedes japonicus</i>	535	2221	10	4.502
<i>Aedes sollicitans</i>	17	400		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	17	89		
<i>Aedes triseriatus</i>	300	863	3	3.476
<i>Aedes trivittatus</i>	6	17		
<i>Aedes vexans</i>	125	2458	4	1.627
<i>Anopheles atropos</i>	1	1		
<i>Anopheles barberi</i>	3	3		
<i>Anopheles bradleyi</i>	54	347		
<i>Anopheles crucians</i>	6	60		
<i>Anopheles punctipennis</i>	123	460		
<i>Anopheles quadrimaculatus</i>	237	4905		
<i>Coquillettidia perturbans</i>	126	2229		
<i>Culex erraticus</i>	136	2453	2	0.815
<i>Culex pipiens</i>	1267	28760	183	6.363
<i>Culex restuans</i>	660	3386	10	2.953
<i>Culex salinarius</i>	195	943	2	2.121
<i>Culex</i> sp.	2884	101729	641	6.301
<i>Culex territans</i>	23	70		
<i>Culiseta melanura</i>	529	8731	17	1.947
<i>Orthopodomyia signifera</i>	2	2		
<i>Psorophora ciliata</i>	4	22		
<i>Psorophora columbiae</i>	23	243		
<i>Psorophora ferox</i>	15	29		
<i>Psorophora howardii</i>	1	1		
<i>Uranotaenia sapphirina</i>	5	13		
Grand Total	8880	171941	894	5.199

Remarks: To date, 8880 pools of 171,941 mosquitoes from 33 species have been tested, with 894 positive pools detected, most in ornithophilic *Culex/Culiseta* pools. No detection in new species from the previous week has occurred. 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 5.199, barely up from the previous week of 5.197.

Humans, Horses and Wild Birds: Twenty-five human cases (2 fatalities) of WNV have been reported in Bergen (2), Burlington (4), Camden (1), Cumberland (5), Essex (2), 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>.

One WNV horse case has tested positive (presumptive) in a 10 yo gelding from Gloucester County. No known vaccination history was given and the horse was euthanized on 3 October.

Bird testing began in mid-April. Twenty-eight positive birds have been reported, mostly corvids. To date, 69 birds have been tested. Species includes: American Crow (*Corvus brachyrhynchos* 8/11) Fish Crow (*Corvus ossifragus* 1/12), 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 has now surpassed the total number of positive pools but during CDC Week 40, there were 153705 mosquitoes in 6987 pools tested in 2010 (~12% of the pools) while this year about ~10% of the pools are positive.

WNV Results by County through 12 October 2015

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		261	7152	16	2.237
	<i>Aedes albopictus</i>	51	395	1	2.532
	<i>Aedes japonicus</i>	13	60		
	<i>Aedes sollicitans</i>	3	136		
	<i>Aedes taeniorhynchus</i>	4	19		
	<i>Aedes triseriatus</i>	1	2		
	<i>Aedes vexans</i>	11	461		
	<i>Anopheles bradleyi</i>	3	9		
	<i>Anopheles punctipennis</i>	1	14		
	<i>Anopheles quadrimaculatus</i>	3	28		
	<i>Coquillettidia perturbans</i>	26	943		
	<i>Culex erraticus</i>	10	128		
	<i>Culex pipiens</i>	24	1110	11	9.910
	<i>Culex restuans</i>	3	9		
	<i>Culex salinarius</i>	1	15		
	<i>Culex spp.</i>	67	3199	3	0.938
	<i>Culiseta melanura</i>	38	619	1	1.616
	<i>Psorophora columbiae</i>	1	4		

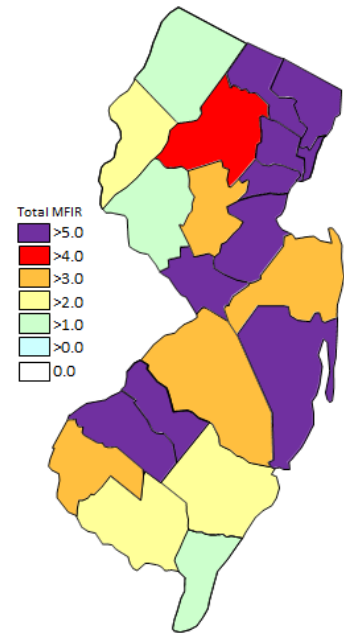
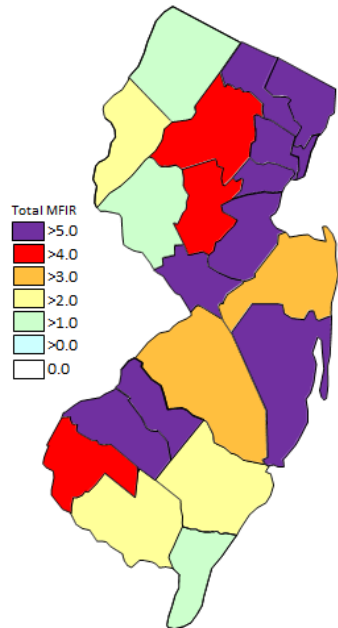
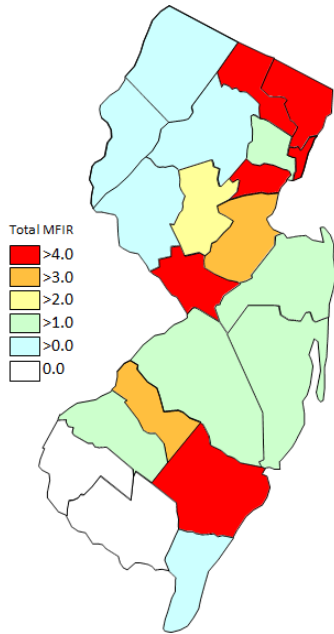
<i>Psorophora ferox</i>	1	1		
Bergen	186	7595	97	12.772
<i>Aedes albopictus</i>	9	22	1	45.455
<i>Aedes japonicus</i>	14	356		
<i>Aedes triseriatus</i>	1	1		
<i>Culex</i> spp.	162	7216	96	13.304
Burlington	292	6005	19	3.164
<i>Aedes albopictus</i>	21	207	2	9.662
<i>Aedes atlanticus</i>	1	7		
<i>Aedes atropalpus</i>	1	4		
<i>Aedes canadensis canadensis</i>	2	24		
<i>Aedes japonicus</i>	17	94		
<i>Aedes sollicitans</i>	2	25		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	5	25		
<i>Aedes triseriatus</i>	4	14		
<i>Aedes vexans</i>	8	187		
<i>Anopheles bradleyi</i>	6	223		
<i>Anopheles crucians</i>	3	55		
<i>Anopheles punctipennis</i>	6	27		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Coquillettidia perturbans</i>	8	103		
<i>Culex erraticus</i>	7	12	1	83.333
<i>Culex pipiens</i>	6	12	1	83.333
<i>Culex restuans</i>	3	15		
<i>Culex salinarius</i>	12	231		
<i>Culex</i> spp.	69	2174	12	5.520
<i>Culiseta melanura</i>	108	2562	3	1.171
<i>Orthopodomyia signifera</i>	1	1		
Camden	291	9083	64	7.046
<i>Aedes albopictus</i>	24	48	2	41.667
<i>Aedes canadensis canadensis</i>	3	15		
<i>Aedes cantator</i>	1	1		
<i>Aedes japonicus</i>	53	389	3	7.712
<i>Anopheles punctipennis</i>	2	6		
<i>Coquillettidia perturbans</i>	3	6		
<i>Culex</i> spp.	150	6686	52	7.777
<i>Culiseta melanura</i>	50	1922	7	3.642
<i>Psorophora ferox</i>	5	10		
Cape May	3089	21001	39	1.857
<i>Aedes albopictus</i>	361	781		
<i>Aedes atropalpus</i>	11	17		
<i>Aedes aurifer</i>	1	1		
<i>Aedes canadensis canadensis</i>	7	7		
<i>Aedes cantator</i>	39	54		
<i>Aedes japonicus</i>	249	488		
<i>Aedes sollicitans</i>	6	8		
<i>Aedes taeniorhynchus</i>	6	15		
<i>Aedes triseriatus</i>	221	504		
<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>	201	4761		
<i>Coquillettidia perturbans</i>	50	817		
<i>Culex erraticus</i>	62	1985		
<i>Culex pipiens</i>	797	7856	30	3.819
<i>Culex restuans</i>	585	1970	4	2.030
<i>Culex salinarius</i>	172	393	2	5.089
<i>Culex spp.</i>	44	112		
<i>Culex territans</i>	23	70		
<i>Culiseta melanura</i>	154	968	3	3.099
<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	284	4056	12	2.959
<i>Aedes albopictus</i>	36	350		
<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>	9	21		
<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>	43	1251	3	2.398
<i>Anopheles bradleyi</i>	1	15		
<i>Anopheles punctipennis</i>	14	121		
<i>Anopheles quadrimaculatus</i>	7	41		
<i>Coquillettidia perturbans</i>	12	69		
<i>Culex erraticus</i>	16	96		
<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>	68	955	8	8.377
<i>Culiseta melanura</i>	23	262		
<i>Psorophora ciliata</i>	3	20		
<i>Psorophora columbiae</i>	13	201		
Essex	148	2119	12	5.663
<i>Aedes albopictus</i>	6	10		
<i>Aedes japonicus</i>	24	55		
<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>	105	2019	11	5.448
<i>Psorophora ferox</i>	2	6		
Gloucester	664	20498	140	6.830
<i>Aedes albopictus</i>	195	1301	8	6.149
<i>Aedes japonicus</i>	20	137		
<i>Aedes triseriatus</i>	6	20		

	<i>Aedes vexans</i>	9	121	1	8.264
	<i>Anopheles punctipennis</i>	25	118		
	<i>Anopheles quadrimaculatus</i>	5	8		
	<i>Coquillettidia perturbans</i>	3	5		
	<i>Culex pipiens</i>	327	17800	129	7.247
	<i>Culiseta melanura</i>	69	977	2	2.047
	<i>Psorophora ciliata</i>	1	2		
	<i>Psorophora ferox</i>	4	9		
Hudson		212	8391	74	8.819
	<i>Aedes albopictus</i>	24	380		
	<i>Culex</i> spp.	188	8011	74	9.237
Hunterdon		245	11390	20	1.756
	<i>Culex</i> spp.	245	11390	20	1.756
Mercer		499	9655	53	5.489
	<i>Aedes albopictus</i>	175	2033		
	<i>Aedes japonicus</i>	26	89	1	11.236
	<i>Aedes vexans</i>	18	116		
	<i>Coquillettidia perturbans</i>	6	54		
	<i>Culex erraticus</i>	8	38		
	<i>Culex pipiens</i>	105	1956	11	5.624
	<i>Culex restuans</i>	64	1384	6	4.335
	<i>Culex</i> spp.	97	3985	35	8.783
Middlesex		426	12422	86	6.923
	<i>Aedes albopictus</i>	142	471	4	8.493
	<i>Culex</i> spp.	274	11904	82	6.888
	<i>Culiseta melanura</i>	10	47		
Monmouth		614	9745	35	3.592
	<i>Aedes albopictus</i>	304	3601	2	0.555
	<i>Aedes canadensis canadensis</i>	6	93		
	<i>Aedes cantator</i>	4	167		
	<i>Aedes japonicus</i>	21	63	1	15.873
	<i>Aedes triseriatus</i>	6	14		
	<i>Aedes trivittatus</i>	1	1		
	<i>Aedes vexans</i>	11	245		
	<i>Anopheles barberi</i>	2	2		
	<i>Anopheles crucians</i>	3	5		
	<i>Anopheles punctipennis</i>	29	77		
	<i>Anopheles quadrimaculatus</i>	6	14		
	<i>Coquillettidia perturbans</i>	1	1		
	<i>Culex erraticus</i>	13	89		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	5	48		
	<i>Culex</i> spp.	178	4880	32	6.557
	<i>Culiseta melanura</i>	21	413		
	<i>Psorophora columbiae</i>	2	31		
Morris		335	13474	67	4.973
	<i>Aedes albopictus</i>	28	368		
	<i>Culex</i> spp.	307	13106	67	5.112

Ocean	294	3995	24	6.008
<i>Aedes albopictus</i>	81	772	2	2.591
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	44	158	3	18.987
<i>Aedes triseriatus</i>	12	32	1	31.250
<i>Aedes vexans</i>	3	4		
<i>Anopheles punctipennis</i>	3	6		
<i>Anopheles quadrimaculatus</i>	2	4		
<i>Coquillettidia perturbans</i>	6	130		
<i>Culex erraticus</i>	6	15		
<i>Culex</i> spp.	110	2777	18	6.482
<i>Culiseta melanura</i>	26	94		
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	179	1717	7	4.077
<i>Aedes albopictus</i>	25	177		
<i>Aedes japonicus</i>	15	31	1	32.258
<i>Aedes triseriatus</i>	15	22	1	45.455
<i>Aedes vexans</i>	1	2		
<i>Anopheles bradleyi</i>	1	1		
<i>Anopheles punctipennis</i>	7	12		
<i>Anopheles quadrimaculatus</i>	6	23		
<i>Coquillettidia perturbans</i>	9	26		
<i>Culex erraticus</i>	14	90	1	11.111
<i>Culex pipiens</i>	2	2		
<i>Culex restuans</i>	3	6		
<i>Culex</i> spp.	48	455	3	6.593
<i>Culiseta melanura</i>	30	867	1	1.153
<i>Psorophora columbiae</i>	2	2		
<i>Psorophora ferox</i>	1	1		
Somerset	227	3127	14	4.477
<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.	207	2881	14	4.859
Sussex	220	4093	8	1.955
<i>Aedes japonicus</i>	15	129		
<i>Aedes triseriatus</i>	13	135		
<i>Anopheles punctipennis</i>	9	43		
<i>Coquillettidia perturbans</i>	1	46		
<i>Culex</i> spp.	182	3740	8	2.139
Union	181	10757	92	8.553
<i>Aedes albopictus</i>	3	27		
<i>Culex</i> spp.	178	10730	92	8.574

Warren	213	5353	11	2.055
<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.	194	5211	11	2.111
Grand Total	8880	171941	894	5.199



Cumulative WNV activity in 2014. WNV activity to 12 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		837	8032		
	<i>Culex pipiens</i>	792	7919		
	<i>Culex restuans</i>	1	1		
	<i>Culex</i> spp.	44	112		
Grand Total		837	8032		

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		222	509		
	<i>Aedes albopictus</i>	1	1		
	<i>Aedes japonicus</i>	1	5		
	<i>Aedes triseriatus</i>	220	503		
Grand Total		222	509		

Dengue (DENV) to 12 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 32 imported human cases reported in New Jersey.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		51	395	51	395	51	395	51	395		

	51	395	51	395	51	395	51	395		
Burlington	21	207	21	207	21	207	21	207		
	21	207	21	207	21	207	21	207		
Camden	22	45	22	45	22	45	22	45		
	22	45	22	45	22	45	22	45		
Cumberland	36	350	36	350	36	350	36	350		
	36	350	36	350	36	350	36	350		
Gloucester	189	1287	190	1295	190	1295	190	1295		
	189	1287	190	1295	190	1295	190	1295		
Hudson	24	380	24	380	24	380	24	380		
	24	380	24	380	24	380	24	380		
Mercer	175	2033	175	2033	175	2033	175	2033		
	175	2033	175	2033	175	2033	175	2033		
Middlesex	141	451	141	451	141	451	141	451		
	141	451	141	451	141	451	141	451		
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	25	177	25	177	25	177	25	177		
	25	177	25	177	25	177	25	177		
Warren	5	56	5	56	5	56	5	56		
	5	56	5	56	5	56	5	56		
Grand Total	981	8933	982	8941	982	8941	963	8830		

Chikungunya (CHIK) to 12 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		51	395		
	<i>Aedes albopictus</i>	51	395		

Burlington		21	207		
	<i>Aedes albopictus</i>	21	207		
Camden		22	45		
	<i>Aedes albopictus</i>	22	45		
Cape May		357	775		
	<i>Aedes albopictus</i>	356	774		
	<i>Aedes japonicus</i>	1	1		
Cumberland		36	350		
	<i>Aedes albopictus</i>	36	350		
Gloucester		190	1295		
	<i>Aedes albopictus</i>	190	1295		
Hudson		24	380		
	<i>Aedes albopictus</i>	24	380		
Mercer		175	2033		
	<i>Aedes albopictus</i>	175	2033		
Middlesex		141	451		
	<i>Aedes albopictus</i>	141	451		
Monmouth		264	3184		
	<i>Aedes albopictus</i>	264	3184		
Morris		28	368		
	<i>Aedes albopictus</i>	28	368		
Salem		25	177		
	<i>Aedes albopictus</i>	25	177		
Warren		5	56		
	<i>Aedes albopictus</i>	5	56		
Grand Total		1339	9716		