

VECTOR SURVEILLANCE IN NEW JERSEY

EEE, WNV, SLE, LAC, DENV and CHIK

Prepared by Lisa M. Reed, Scott Crans and Mark Robson

Center for Vector Biology, Rutgers University

CDC WEEK 36: 6 September to 12 September, 2015

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This New Jersey Agricultural Experiment Station report is supported by Rutgers University, Hatch funds, funding from the NJ State Mosquito Control Commission and with the participation of the Department of Health, Department of Agriculture and of the 21 county mosquito control agencies of New Jersey.

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	0.90	0.40	17 (19)	10 (11)	1	58.82
Green Bank (Burlington Co.)/23	Coastal	3.69	0.16	94 (98)	12 (13)	1	10.64
Corbin City (Atlantic Co.)/25	Coastal	2.47	0.56	226 (240)	13 (14)		
Dennisville (Cape May Co.)/50	Coastal	5.35	0.00	222	12		
Winslow (Camden Co.)/50	Inland	2.29	3.48	1819	44	7	5.85
Centerton (Salem Co.)/50	Inland	3.15	0.68	705	22	1	1.42
Turkey Swamp (Monmouth Co.)/49	Inland	2.28	0.24	373 (385)	17 (18)		
Glassboro (Gloucester Co.)/50	Inland	0.94	0.58	248	15		

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

Remarks: A single new detection of a positive pool occurred in *Culex erraticus*, for a total of 20 positive pools, 13 in *Culiseta melanura*, 6 in *Culex erraticus* and 1 in *Culex pipiens*. One horse case has occurred. 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: Ten EEE positive *Cs. melanura* pools have been detected at the state resting box sites to date. Four of the eight sites have now detected positive pools. 3704 *Cs. melanura* from 145 pools have been tested for EEE with an additional 4 pools containing 32 *Cs. melanura* to be tested. MFIR for the traditional resting box sites is 2.70 with a statewide MFIR of 1.72 for *Cs. melanura* and a statewide MFIR of 1.04 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	17	317		
Burlington	CO₂	60	2134	2	0.94
Cape May	GR, RB	117	671		
Cumberland	CO ₂ , RB	15	204	1	4.90
Gloucester		19	408		
Middlesex	RB	8	45		
Ocean	CO ₂ , GR, RB	15	71		
Salem	CO ₂	1	1		
TOTAL		252	3851	3	0.78

Additional *Cs. melanura*: Counties maintain trap sites for *Cs. melanura* in other areas. Previously, three additional 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>	15	375		
<i>Aedes taeniorhynchus</i>	1	8		
<i>Aedes triseriatus</i>	2	2		
<i>Aedes vexans</i>	1	1		
<i>Anopheles bradleyi</i>	36	135		
<i>Anopheles crucians</i>	3	45		
<i>Anopheles punctipennis</i>	20	93		
<i>Anopheles quadrimaculatus</i>	2	51		
<i>Coquillettidia perturbans</i>	110	2133		
<i>Culex erraticus</i>	46	1306	6	4.594
<i>Culex pipiens</i>	613	6553	1	0.153
<i>Culex restuans</i>	2	2		
<i>Culex salinarius</i>	154	802		
<i>Culex sp.</i>	42	121		
<i>Psorophora ferox</i>	1	1		
State Total	1095	11719	7	0.597

Additional Species: Nineteen additional species were tested for EEE. One additional positive in *Culex erraticus* was detected. Previously, six positive pools, 5 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).

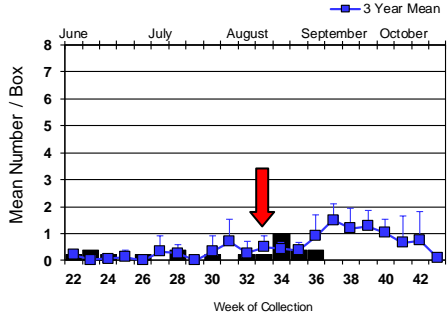
No humans have been reported with EEE.

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

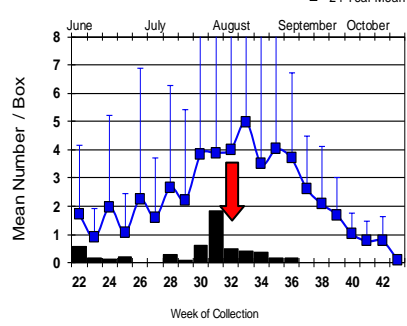
Culiseta melanura Population Graphs

Coastal

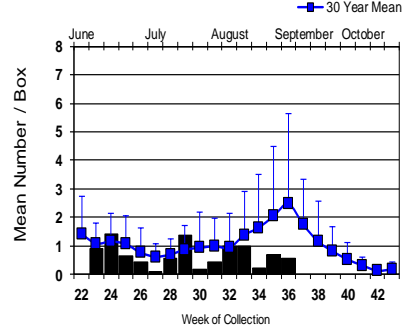
BASS RIVER (Burlington Co.)



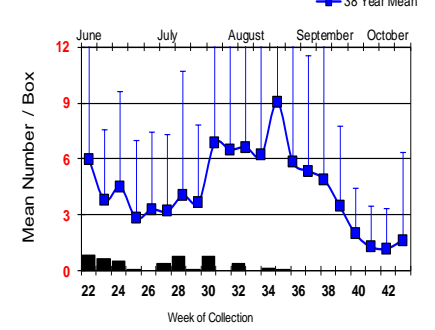
GREEN BANK (Burlington Co.)



CORBINCITY (Atlantic Co.)

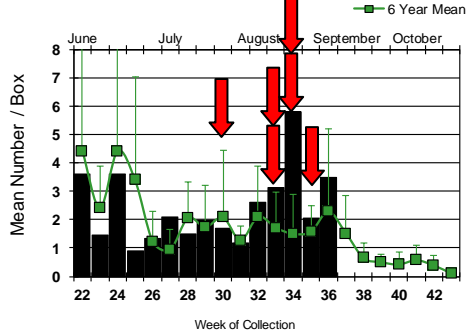


DENNISVILLE (Cape May Co.)

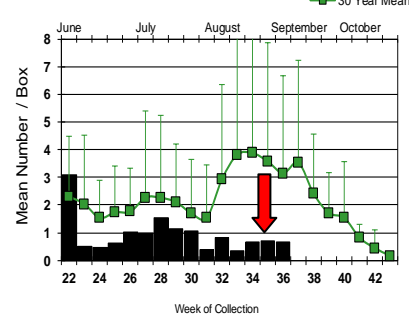


Inland

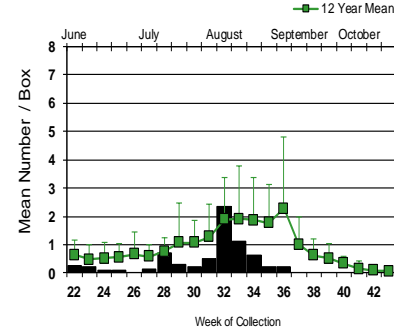
WINSLOW (Camden Co.)



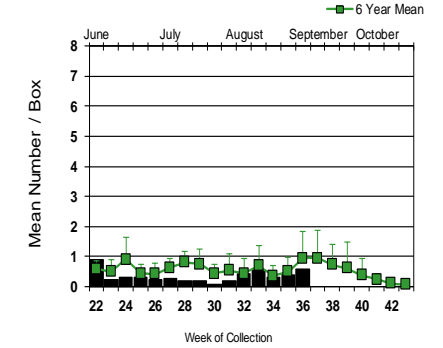
CENTERTON (Salem Co.)





TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



Apart from the Winslow site, populations at the traditional resting box sites were below historical averages. No new positive pools at the traditional resting box sites were detected from the previous week.

  = 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) MS(2) NC(1) NJ(1) SC(3) TX(8) VA(1)
- mosquito pools: NJ (**20**) NY(13)
- sentinel: FL(63), TX(24)
- human: LA (1), NY(1)

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		2	58
Arkansas				3	11
California	701/762	2303/2444	193/235	10	108/123
Colorado	8/12	108		5/7	29/57
Connecticut		130			0
Delaware	2				1/4
DC					1
Florida		8	101		6
Georgia	0	24		0	4/5
Hawaii					
Idaho	0	13		3	7
Illinois	26	1219/1275		4/5	10
Indiana	0	264/393			7
Iowa		2		1	2
Kansas		1			10
Kentucky				3	
Louisiana	37/52	436/461			32/44
Maine					
Maryland					2
Mass.		127/134		0	1/2
Michigan	10	9		1	1
Minnesota	3	2		1	4
Mississippi		44		1	24/25
Missouri		452		9/11	7/13

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana					1
Nebraska	0	73		0	21/35
Nevada		104			3
New Hampshire		0		0	0
New Jersey	21/23	581/670		0	7/10
New Mexico				1	3
New York		36			3
North Carolina					
North Dakota	0	4		2	10
Ohio		309			16
Oklahoma		2			30
Oregon	8	46	0	3	0
Pennsylvania	21/25	2256/2443		1	17/18
Rhode Island		1		0	0
South Carolina					1
South Dakota		7			23
Tennessee		117			3
Texas	13	1131		5	86
Utah		184/202	3/4	0	3
Vermont		41/57			
Virginia					
Washington	6/7	135/153		18/28	20
West Virginia					
Wisconsin	35	11		0	1
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 14 September 2015

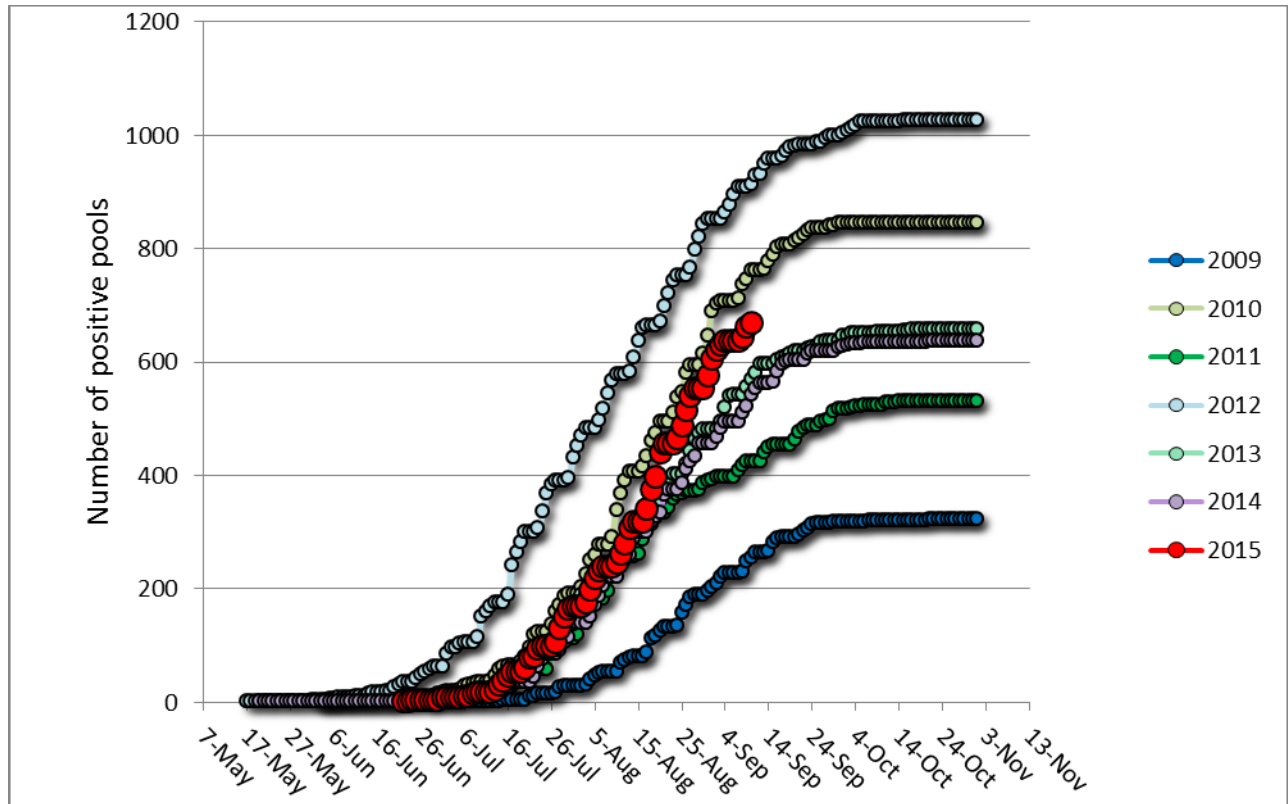
Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	990	6514	18	2.763
<i>Aedes atlanticus</i>	2	13		
<i>Aedes atropalpus</i>	11	18		
<i>Aedes aurifer</i>	1	1		
<i>Aedes canadensis canadensis</i>	21	260	1	3.846
<i>Aedes cantator</i>	45	224		
<i>Aedes grossbecki</i>	9	40		
<i>Aedes japonicus</i>	428	1898	8	4.215
<i>Aedes sollicitans</i>	15	375		
<i>Aedes sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	10	58		
<i>Aedes triseriatus</i>	249	658	3	4.559
<i>Aedes trivittatus</i>	4	5		
<i>Aedes vexans</i>	79	1260	1	0.794
<i>Anopheles atropos</i>	1	1		
<i>Anopheles barberi</i>	2	2		
<i>Anopheles bradleyi</i>	38	152		
<i>Anopheles crucians</i>	4	46		
<i>Anopheles punctipennis</i>	75	238		
<i>Anopheles quadrimaculatus</i>	187	3868		
<i>Coquillettidia perturbans</i>	116	2213		
<i>Culex erraticus</i>	72	1556	2	1.285
<i>Culex pipiens</i>	912	20738	111	5.352
<i>Culex restuans</i>	519	2815	3	1.066
<i>Culex salinarius</i>	161	862	2	2.320
<i>Culex</i> sp.	2216	84552	508	6.008
<i>Culex territans</i>	18	53		
<i>Culiseta melanura</i>	403	7565	13	1.718
<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	6625	136267	670	4.917

Remarks: To date, 6625 pools of 136,267 mosquitoes from 33 species have been tested, with 670 positive pools detected, most in ornithophilic *Culex/Culiseta* pools. No detection in new species from the previous week has occurred. Non-ornithophilic *Culex salinarius* collected on the 14th and 20th in Cape May was the latest species to test positive. Non-*Culex* species to become positive were pools of *Aedes canadensis* (sampled 20 August in Union County), *Aedes triseriatus* (sampled 11 August in Salem County) and *Aedes vexans* (sampled 5 August in Cumberland County). 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 4.917, up from the previous week of 4.545.

Humans, Horses and Wild Birds: Ten human cases of WNV have been reported in Bergen (1), Burlington (1), Camden (1), Cumberland (2), Gloucester (1), Middlesex (2), Monmouth (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-three positive birds have been reported, mostly corvids. To date, 56 birds have been tested. Species includes: American Crow (*Corvus brachyrhynchos* 7/10) Fish Crow (*Corvus ossifragus* 1/10), Blue Jay (*Cyanocitta cristata* 3/5), 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 14 September 2015

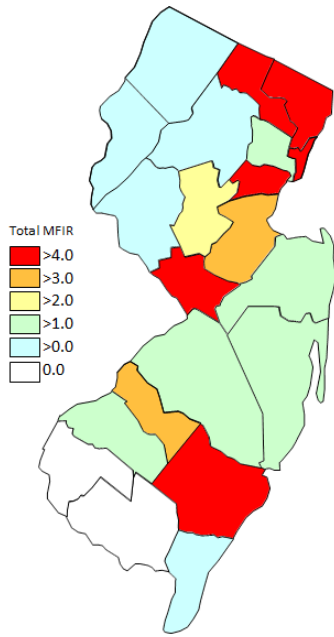
County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		190	6015	11	1.829
	<i>Aedes albopictus</i>	33	270	1	3.704
	<i>Aedes japonicus</i>	12	57		
	<i>Aedes sollicitans</i>	3	136		
	<i>Aedes taeniorhynchus</i>	1	5		
	<i>Aedes triseriatus</i>	1	2		
	<i>Aedes vexans</i>	6	238		
	<i>Anopheles bradleyi</i>	1	2		
	<i>Anopheles quadrimaculatus</i>	1	22		
	<i>Coquillettidia perturbans</i>	26	943		
	<i>Culex erraticus</i>	3	106		
	<i>Culex pipiens</i>	10	622	7	11.254
	<i>Culex salinarius</i>	1	15		
	<i>Culex</i> spp.	61	3053	3	0.983
	<i>Culiseta melanura</i>	30	543		
	<i>Psorophora ferox</i>	1	1		

Bergen	130	6649	74	11.129
<i>Aedes albopictus</i>	6	8	1	125.000
<i>Aedes japonicus</i>	10	310		
<i>Aedes triseriatus</i>	1	1		
<i>Culex</i> spp.	113	6330	73	11.532
Burlington	188	4938	17	3.443
<i>Aedes albopictus</i>	14	166	2	12.048
<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 sticticus</i>	1	1		
<i>Aedes taeniorhynchus</i>	1	8		
<i>Aedes triseriatus</i>	3	13		
<i>Aedes vexans</i>	3	21		
<i>Anopheles bradleyi</i>	1	66		
<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>	7	209		
<i>Culex</i> spp.	55	1940	11	5.670
<i>Culiseta melanura</i>	82	2245	3	1.336
Camden	249	8661	54	6.235
<i>Aedes albopictus</i>	19	43	1	23.256
<i>Aedes canadensis canadensis</i>	3	15		
<i>Aedes cantator</i>	1	1		
<i>Aedes japonicus</i>	44	367	2	5.450
<i>Anopheles punctipennis</i>	2	6		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex</i> spp.	130	6399	45	7.032
<i>Culiseta melanura</i>	45	1820	6	3.297
<i>Psorophora ferox</i>	4	9		
Cape May	2493	16667	26	1.560
<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>	221	428		
<i>Aedes sollicitans</i>	6	8		
<i>Aedes taeniorhynchus</i>	6	15		
<i>Aedes triseriatus</i>	189	419		
<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>	22	25		
<i>Anopheles quadrimaculatus</i>	169	3760		
<i>Coquillettidia perturbans</i>	49	816		
<i>Culex erraticus</i>	40	1240		
<i>Culex pipiens</i>	609	6237	20	3.207
<i>Culex restuans</i>	462	1606	2	1.245

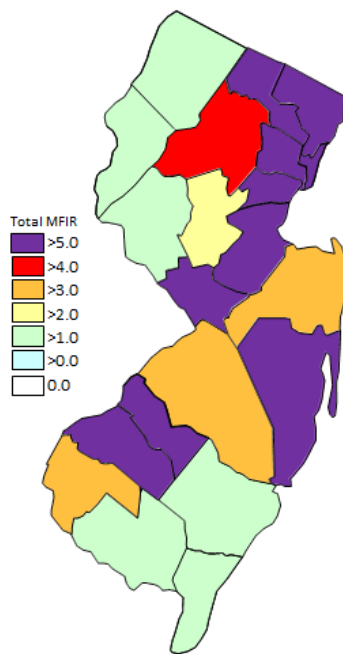
	<i>Culex salinarius</i>	146	346	2	5.780
	<i>Culex</i> spp.	34	83		
	<i>Culex territans</i>	18	53		
	<i>Culiseta melanura</i>	131	895	2	2.235
	<i>Orthopodomyia signifera</i>	1	1		
	<i>Psorophora columbiae</i>	5	5		
	<i>Psorophora ferox</i>	2	2		
	<i>Psorophora howardii</i>	1	1		
	<i>Uranotaenia sapphirina</i>	2	4		
Cumberland		180	3110	6	1.929
	<i>Aedes albopictus</i>	20	221		
	<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>	6	66		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	5	256		
	<i>Culex</i> spp.	44	776	5	6.443
	<i>Culiseta melanura</i>	15	204		
	<i>Psorophora ciliata</i>	3	20		
	<i>Psorophora columbiae</i>	11	199		
Essex		134	2087	11	5.271
	<i>Aedes albopictus</i>	5	9		
	<i>Aedes japonicus</i>	19	41		
	<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</i> spp.	99	2004	10	4.990
	<i>Psorophora ferox</i>	2	6		
Gloucester		428	14287	82	5.739
	<i>Aedes albopictus</i>	137	1036	5	4.826
	<i>Aedes japonicus</i>	12	102		
	<i>Aedes triseriatus</i>	3	5		
	<i>Aedes vexans</i>	2	5		
	<i>Anopheles punctipennis</i>	12	70		
	<i>Coquillettidia perturbans</i>	3	5		
	<i>Culex pipiens</i>	224	12407	76	6.126
	<i>Culiseta melanura</i>	34	656	1	1.524
	<i>Psorophora ferox</i>	1	1		
Hudson		170	6939	60	8.647

<i>Aedes albopictus</i>	22	342		
<i>Culex</i> spp.	148	6597	60	9.095
Hunterdon	185	8980	15	1.670
<i>Culex</i> spp.	185	8980	15	1.670
Mercer	275	6302	32	5.078
<i>Aedes albopictus</i>	47	277		
<i>Aedes japonicus</i>	15	75	1	13.333
<i>Aedes vexans</i>	17	111		
<i>Coquillettidia perturbans</i>	6	54		
<i>Culex erraticus</i>	1	4		
<i>Culex pipiens</i>	68	1471	8	5.438
<i>Culex restuans</i>	52	1201	1	0.833
<i>Culex</i> spp.	69	3109	22	7.076
Middlesex	310	9875	79	8.000
<i>Aedes albopictus</i>	100	294	4	13.605
<i>Culex</i> spp.	202	9536	75	7.865
<i>Culiseta melanura</i>	8	45		
Monmouth	435	6793	25	3.680
<i>Aedes albopictus</i>	208	2159	2	0.926
<i>Aedes canadensis canadensis</i>	6	93		
<i>Aedes cantator</i>	4	167		
<i>Aedes japonicus</i>	11	29		
<i>Aedes triseriatus</i>	4	12		
<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>	19	48		
<i>Anopheles quadrimaculatus</i>	4	8		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex erraticus</i>	11	84		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	2	36		
<i>Culex</i> spp.	137	3737	23	6.155
<i>Culiseta melanura</i>	18	378		
<i>Psorophora columbiae</i>	2	31		
Morris	253	10235	45	4.397
<i>Aedes albopictus</i>	28	368		
<i>Culex</i> spp.	225	9867	45	4.561
Ocean	206	2932	20	6.821
<i>Aedes albopictus</i>	58	598	2	3.344
<i>Aedes canadensis canadensis</i>	1	3		
<i>Aedes japonicus</i>	35	130	3	23.077
<i>Aedes triseriatus</i>	6	23	1	43.478
<i>Aedes vexans</i>	2	3		
<i>Anopheles punctipennis</i>	1	2		
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Coquillettidia perturbans</i>	4	128		
<i>Culex erraticus</i>	1	2		

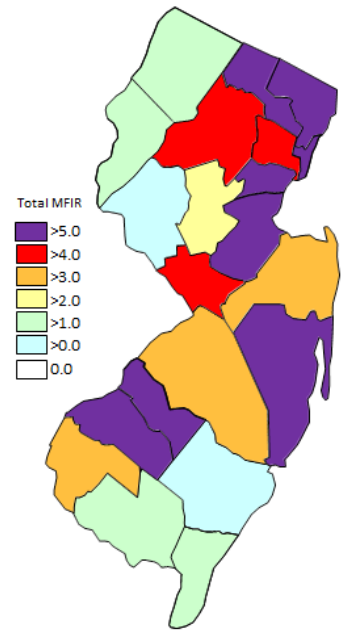
	<i>Culex</i> spp.	80	1967	14	7.117
	<i>Culiseta melanura</i>	17	73		
Passaic		20	313	4	12.780
	<i>Aedes albopictus</i>	2	3		
	<i>Aedes japonicus</i>	4	8	1	125.000
	<i>Aedes triseriatus</i>	2	3		
	<i>Aedes vexans</i>	1	1		
	<i>Culex</i> spp.	11	298	3	10.067
Salem		124	1396	5	3.582
	<i>Aedes albopictus</i>	17	141		
	<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>	8	25		
	<i>Culex erraticus</i>	8	47	1	21.277
	<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>	23	706	1	1.416
	<i>Psorophora ferox</i>	1	1		
Somerset		166	2349	6	2.554
	<i>Aedes albopictus</i>	2	8		
	<i>Aedes japonicus</i>	8	121		
	<i>Aedes triseriatus</i>	7	34		
	<i>Anopheles punctipennis</i>	1	4		
	<i>Coquillettidia perturbans</i>	1	29		
	<i>Culex</i> spp.	147	2153	6	2.787
Sussex		173	3441	5	1.453
	<i>Aedes japonicus</i>	14	122		
	<i>Aedes triseriatus</i>	10	102		
	<i>Anopheles punctipennis</i>	5	21		
	<i>Coquillettidia perturbans</i>	1	46		
	<i>Culex</i> spp.	143	3150	5	1.587
Union		138	9431	85	9.013
	<i>Aedes canadensis canadensis</i>	1	67	1	14.925
	<i>Culex</i> spp.	137	9364	84	8.971
Warren		178	4867	8	1.644
	<i>Aedes albopictus</i>	4	39		
	<i>Aedes japonicus</i>	2	7		
	<i>Aedes triseriatus</i>	4	15		
	<i>Aedes trivittatus</i>	1	1		
	<i>Aedes vexans</i>	1	2		
	<i>Anopheles punctipennis</i>	1	2		
	<i>Anopheles quadrimaculatus</i>	1	2		
	<i>Culex</i> spp.	164	4799	8	1.667
Grand Total		6625	136267	670	4.917



Cumulative WNV activity in 2014.



WNV activity to 14 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		628	6249		
	<i>Culex pipiens</i>	594	6167		
	<i>Culex restuans</i>	1	1		
	<i>Culex</i> spp.	33	81		
Grand Total		628	6249		

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
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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 14 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		33	270	33	270	33	270	33	270		
		33	270	33	270	33	270	33	270		
Burlington		14	166	14	166	14	166	14	166		
		14	166	14	166	14	166	14	166		
Camden		18	41	18	41	18	41	18	41		
		18	41	18	41	18	41	18	41		
Cumberland		20	221	20	221	20	221	20	221		
		20	221	20	221	20	221	20	221		
Gloucester		134	1030	135	1038	135	1038	135	1038		
		134	1030	135	1038	135	1038	135	1038		
Hudson		22	342	22	342	22	342	22	342		
		22	342	22	342	22	342	22	342		
Mercer		47	277	47	277	47	277	47	277		
		47	277	47	277	47	277	47	277		
Middlesex		100	294	100	294	100	294	100	294		
		100	294	100	294	100	294	100	294		
Monmouth		185	1992	185	1992	185	1992	166	1881		
		185	1992	185	1992	185	1992	166	1881		
Morris		28	368	28	368	28	368	28	368		

	28	368	28	368	28	368	28	368		
Salem	17	141	17	141	17	141	17	141		
	17	141	17	141	17	141	17	141		
Warren	4	39	4	39	4	39	4	39		
	4	39	4	39	4	39	4	39		
Grand Total	622	5181	623	5189	623	5189	604	5078		

Chikungunya (CHIK) to 14 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 21 imported human cases reported in New Jersey.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		33	270		
	<i>Aedes albopictus</i>	33	270		
Burlington		14	166		
	<i>Aedes albopictus</i>	14	166		
Camden		18	41		
	<i>Aedes albopictus</i>	18	41		
Cape May		264	526		
	<i>Aedes albopictus</i>	263	525		
	<i>Aedes japonicus</i>	1	1		
Cumberland		20	221		
	<i>Aedes albopictus</i>	20	221		
Gloucester		135	1038		
	<i>Aedes albopictus</i>	135	1038		
Hudson		22	342		
	<i>Aedes albopictus</i>	22	342		
Mercer		47	277		
	<i>Aedes albopictus</i>	47	277		
Middlesex		100	294		
	<i>Aedes albopictus</i>	100	294		
Monmouth		185	1992		
	<i>Aedes albopictus</i>	185	1992		

Morris		28	368		
	<i>Aedes albopictus</i>	28	368		
Salem		17	141		
	<i>Aedes albopictus</i>	17	141		
Warren		4	39		
	<i>Aedes albopictus</i>	4	39		
Grand Total		887	5715		