

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 41: 5 October to 11 October, 2014

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Culiseta melanura and Eastern Equine Encephalitis

SITE/Boxes	Inland or Coastal	Historic Population Mean	Current Weekly Mean	Total Tested* (Collected)	Total Pools Tested* (Submitted)	EEE Isolation Pools	MFIR
Bass River (Burlington Co.)/5	Coastal	0.90	0.20	33 (34)	8 (9)		
Green Bank (Burlington Co.)/25	Coastal	0.78	0.40	367 (377)	19 (20)	1	2.72
Corbin City (Atlantic Co.)/25	Coastal	0.32	0.36	315 (324)	18 (19)		
Dennisville (Cape May Co.)/50	Coastal	1.23	0.12	453	20	5	10.96
Winslow (Camden Co.)/50	Inland	0.53	0.38	1259	35	3	2.38
Centerton (Salem Co.)/50	Inland	0.82	0.82	643	23	2	3.11
Turkey Swamp (Monmouth Co.)/50	Inland	0.17	0.00	220	19	1	4.55
Glassboro (Gloucester Co.)/50	Inland	0.16	0.22	557	21		

*Current week (in parentheses) results pending.

Remarks: One new positive EEE mosquito pool has been detected this past week at a Cape May County site. Total number of positive EEE pools is 33, 32 pools in *Cs. melanura* and 1 in *Culex salinarius*. Statewide, for all 16,227 mosquitoes tested, MFIR is 2.03, down from 2.16 of the previous week.

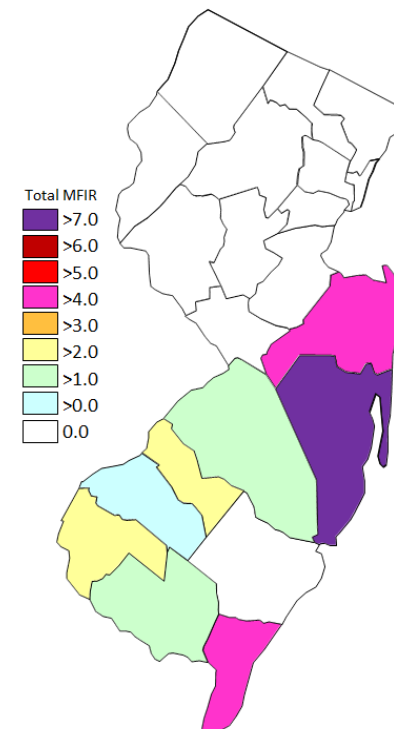
Traditional Resting Box Sites: No new EEE positive *Cs. melanura* pools were detected at the state resting box sites this past week. To date, 3847 *Cs. melanura* from 163 pools have been tested for EEE at the traditional resting box sites. Overall MFIR for these traditional sites is 3.12, down from 3.24 of the previous week. Four additional pools containing 20 *Cs. melanura* remain to be tested.

Additional <i>Cs. melanura</i> trapped by counties				
*traps with positives indicated in BOLD .				
County	Trap types*	Number collected (pools)	Number of positive pools	MFIR
Atlantic	CO ₂ , Gravid	74 (9)		
Burlington	CO₂	5429 (124)	11	2.026
Cape May	Gravid, RB	428 (39)	5	11.682
Cumberland	CO ₂ , RB	143 (21)	1	6.993
Gloucester	RB	925 (82)	1	1.081
Monmouth	Other	4 (2)		
Ocean	CO₂, Gravid, RB	112 (25)	2	17.857
Salem	CO ₂	9 (5)		
TOTAL		7124 (307)	20	2.807

Additional *Cs. melanura*: Counties submit additional pools of *Cs. melanura* caught in other trap types as well as resting boxes. One additional positive pool was detected this week in an additional resting box in Cape May County. Virus was first detected in these additional pools from a Gloucester County resting box sampled on 23 July.

Graph to right illustrates MFIR values for counties with EEE positive mosquito pools. While Burlington County has detected 12 pools, and Ocean County has detected only two pools, Ocean County has the higher MFIR value for having a lower denominator (total number of mosquitoes) in the calculation.

Counties with all mosquito EEE activity



Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	4	12		
<i>Aedes atlanticus</i>	1	5		
<i>Aedes canadensis canadensis</i>	15	266		
<i>Aedes cantator</i>	20	39		
<i>Aedes cinereus</i>	1	1		
<i>Aedes japonicus</i>	7	26		
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	6	57		
<i>Aedes taeniorhynchus</i>	4	30		
<i>Aedes triseriatus</i>	9	33		
<i>Aedes vexans</i>	8	51		
<i>Anopheles bradleyi</i>	22	475		
<i>Anopheles crucians</i>	3	17		
<i>Anopheles punctipennis</i>	43	860		
<i>Anopheles quadrimaculatus</i>	33	898		
<i>Coquillettidia perturbans</i>	50	783		
<i>Culex erraticus</i>	30	209		
<i>Culex pipiens</i>	119	757		
<i>Culex restuans</i>	4	16		
<i>Culex salinarius</i>	47	609	1	1.642
<i>Culex spp.</i>	21	93		
<i>Culex territans</i>	1	1		
<i>Culiseta morsitans</i>	1	1		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	2	14		
<i>Psorophora ferox</i>	1	1		
State Total	454	5256	1	0.190

Additional Species: Counties submit additional pools of species other than *Cs. melanura* for EEE virus testing. First detection into non-*melanura* species has occurred with a positive pool of *Culex salinarius*, collected in Burlington County on 16 Sep.

Horses and Humans: Three horses have been reported with EEE: Earliest onset date is on 11 Aug, 2014 for a 4 yo mare in Gloucester County, died 14 Sep. Second case with onset date of 11 Sep for a 2 yo mare in Ocean County, euthanized same date. Third case with onset date of 21 Sep 2014 for a 6 yo gelding in Burlington County, euthanized same date. Vaccination history for all horses was either uncertain or not done.

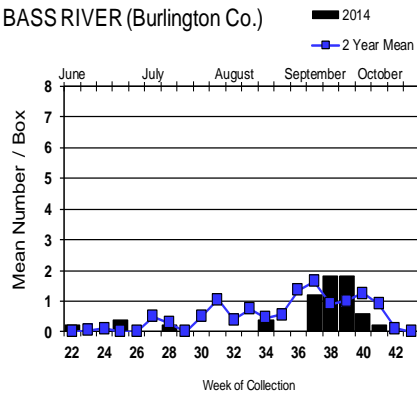
No human cases have been reported.

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

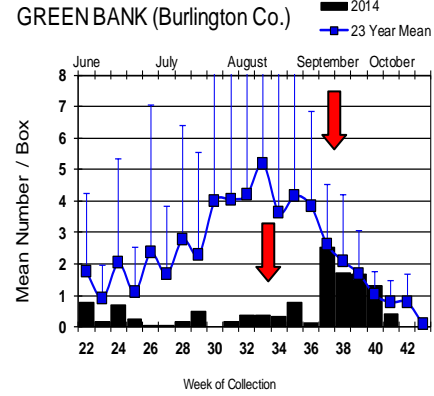
Culiseta melanura Population Graphs

Coastal

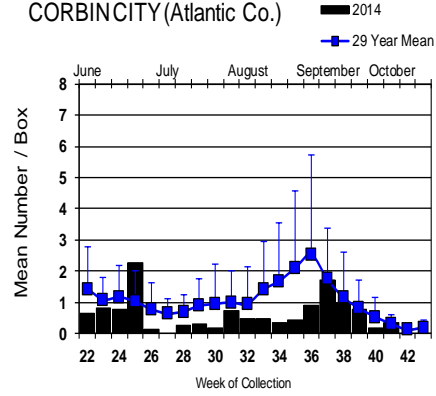
BASS RIVER (Burlington Co.)



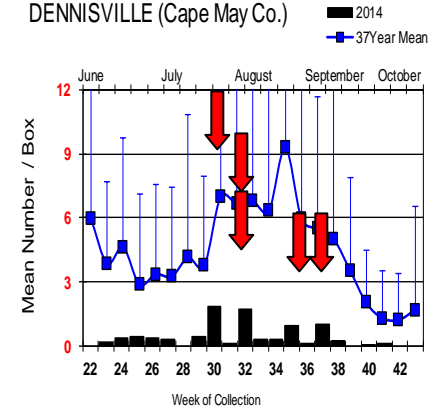
GREEN BANK (Burlington Co.)



CORBINCITY (Atlantic Co.)

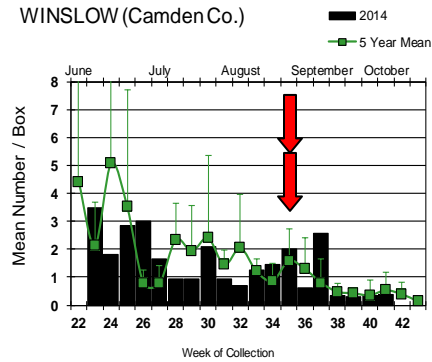


DENNISVILLE (Cape May Co.)

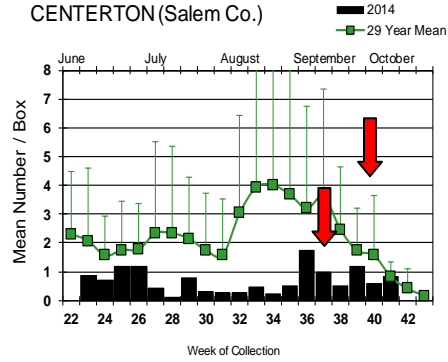


Inland

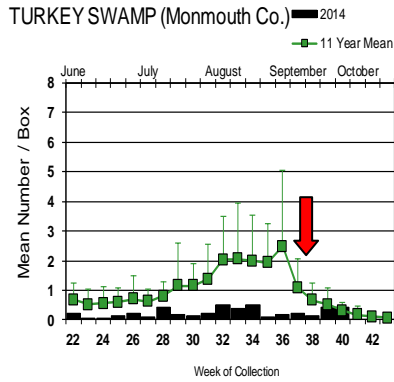
WINSLOW (Camden Co.)



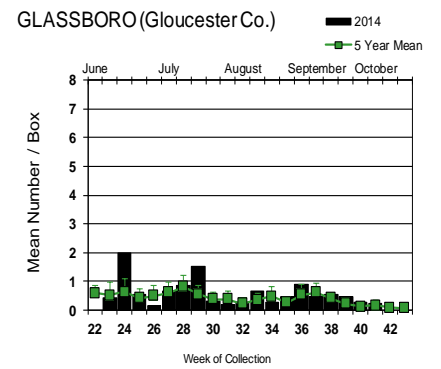
CENTERTON (Salem Co.)



TURKEY SWAMP (Monmouth Co.)



GLASSBORO (Gloucester Co.)



Populations of *Cs. melanura* continue to decline while detection of EEE in both mosquitoes and horses continue. Due diligence is required when in the habitat of *Cs. melanura* or potential bridge vectors.

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

EEE in US (2014 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: AL(5) FL (55 +2 deer) GA(8) LA(10) MA(1) ME(1) MI(5) MS(1) NC(9) NH(2) NJ(3) NY(11) OH(5) SC(7) TX(5) VA(1)
- mosquito pools: GA(1) LA(1) MA(33) MD(1) ME(22) NH(18) NJ(33) NY(87) VA(108) VT(6)
- sentinel: AL(3) FL(154) GA(1) ME(1 emu) NC(2) VA(33/3 cassowaries)
- human: AL(1) ME(1) NH(2) NY(2)

West Nile Virus Positive Organisms in US

West Nile in US (2014 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			1	1	1
Alaska					
Arizona	1	277/280		3/4	48/55
Arkansas					5/6
California	2253/2314	3139/3210	361/394	14	375/488
Colorado	3	195		4	90/99
Connecticut		64/66			4
Delaware	3		3/10		
DC					3
Florida			114/175	5	7/10
Georgia	0	25/36			10/11
Hawaii					
Idaho		62		6	19
Illinois	36/38	1238/1245			28/30
Indiana		163			4/6
Iowa		9		3	11/12
Kansas		1			23/28
Kentucky				3	
Louisiana		921/924	52/54	1	123/128
Maine		0		0	0
Maryland		28/33		1	2/4
Mass.		56		0	3
Michigan	19	9		1	1
Minnesota	2	21		2	9/10
Mississippi		67		1	43/44
Missouri	2	43		9	10

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Montana		12		4	5
Nebraska	6	248		0	99
Nevada		96			3
New Hampshire		1		0	0
New Jersey	18	602/617		0	3
New Mexico		2		4	14
New York		741/750		1	16
North Carolina					
North Dakota	0	6		4*	21/22
Ohio		313		1	6/9
Oklahoma		5/9		7	13/14
Oregon	7	58	0	3	7
Pennsylvania	14/15	1419/1435		1	6/8
Rhode Island		2			
South Carolina	1				
South Dakota	1	75		1	49
Tennessee	0	664/694		0	10/13
Texas	74/76	1901/1978		4/6	156/212
Utah	2	159	1	3/4	1/2
Vermont		8		0	0
Virginia		130	15/21		1/3
Washington	0	80		4/5	8
West Virginia	1	6/7		0	0
Wisconsin	25	3		2	5/8
Wyoming	1	12		3/4	5

* 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 13 October 2014

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	920	8516	11	1.292
<i>Aedes atlanticus</i>	5	13		
<i>Aedes atropalpus</i>	1	5		
<i>Aedes canadensis canadensis</i>	55	687		
<i>Aedes cantator</i>	33	243		
<i>Aedes cinereus</i>	1	1		
<i>Aedes japonicus</i>	568	3225	5	1.550
<i>Aedes mitchellae</i>	1	1		
<i>Aedes sollicitans</i>	12	107		
<i>Aedes sticticus</i>	3	7		
<i>Aedes taeniorhynchus</i>	17	364		
<i>Aedes triseriatus</i>	174	619	1	1.616
<i>Aedes trivittatus</i>	15	67		
<i>Aedes vexans</i>	68	446		
<i>Anopheles bradleyi</i>	40	900		
<i>Anopheles crucians</i>	3	17		
<i>Anopheles punctipennis</i>	110	1219		
<i>Anopheles quadrimaculatus</i>	104	2054		
<i>Coquillettidia perturbans</i>	96	1206		
<i>Culex erraticus</i>	90	591	1	1.692
<i>Culex pipiens</i>	706	19106	54	2.826
<i>Culex restuans</i>	370	6062	24	3.959
<i>Culex salinarius</i>	54	632		
<i>Culex spp.</i>	3464	128851	520	4.036
<i>Culex territans</i>	11	31		0.000
<i>Culiseta melanura</i>	500	11024	8	0.726
<i>Culiseta morsitans</i>	1	1		
<i>Orthopodomyia signifera</i>	3	3		
<i>Psorophora ciliata</i>	4	4		
<i>Psorophora columbiae</i>	17	177		
<i>Psorophora ferox</i>	14	209	1	4.785
State Total	7460	186388	625	3.353

Remarks: To date, 7460 pools of 186,388 mosquitoes from 30 species have been tested, with 625 positive pools detected. *Psorophora ferox*, collected 30 Sep in Gloucester County has been found positive. (MFIR for this species in this county calculates out to 1000 – unrealistically high but the result of this particular calculation – single and only mosquito in the county sampled and positive. The other 208 *Ps. ferox* sampled in the state were not positive and illustrates the need for common sense in interpreting these values.) First positive was detected in a Mixed *Culex* pool collected on 20 May in Camden County. Nineteen counties have detected positive pools, including Atlantic, Bergen, Burlington, Camden, Cape May, Essex, Gloucester, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Somerset, Sussex, Union and Warren Counties. Overall MFIR for the state has increased from 3.385 to 3.400.

Humans, Horses and Wild Birds: Five human cases of WNV have occurred, one each in Gloucester, Monmouth and Union counties and two in Hudson County. 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. First positive bird (Fish Crow in Mercer County collected 8 July) has been reported. To date, 110 birds have been tested, with 18 positives (no new tested from previous week). Species includes: American Crow (*Corvis brachyrhynchos* 3/3) Fish Crow (*Corvus ossifragus* 10/34), Blue Jay (*Cyanocitta cristata* 2/12), Hawk/Raptor (1/7), unidentified corvid (1/4) and other avian species (1/50). Counties (positives) submitting birds are Atlantic, Bergen, Burlington, Cape May, Cumberland, Essex, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Ocean, Passaic, Salem, Sussex, Union and Warren.

WNV Results by County through 13 October 2014

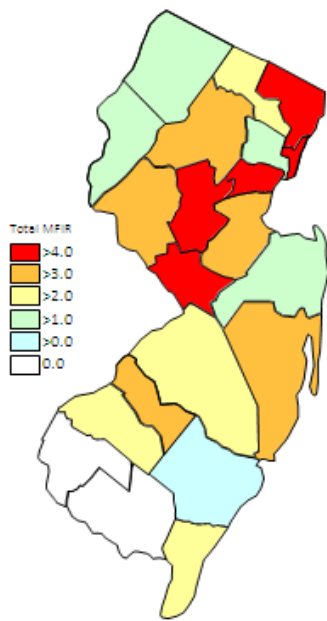
County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		180	3815	19	4.980
	<i>Aedes albopictus</i>	29	276	1	3.623
	<i>Aedes atlanticus</i>	1	1		
	<i>Aedes canadensis canadensis</i>	4	27		
	<i>Aedes cantator</i>	3	10		
	<i>Aedes japonicus</i>	8	40		
	<i>Aedes sollicitans</i>	2	6		
	<i>Aedes sticticus</i>	1	1		
	<i>Aedes taeniorhynchus</i>	6	247		
	<i>Aedes vexans</i>	7	57		
	<i>Anopheles bradleyi</i>	5	15		
	<i>Anopheles punctipennis</i>	2	4		
	<i>Anopheles quadrimaculatus</i>	3	10		
	<i>Coquillettidia perturbans</i>	5	24		
	<i>Culex erraticus</i>	3	26		
	<i>Culex</i> spp.	67	2554	18	7.048
	<i>Culiseta melanura</i>	28	391		
	<i>Psorophora ferox</i>	6	126		
Bergen		244	17577	138	7.851
	<i>Aedes albopictus</i>	9	52	1	19.231
	<i>Aedes japonicus</i>	3	199		
	<i>Anopheles punctipennis</i>	1	1		
	<i>Culex</i> spp.	231	17325	137	7.908
Burlington		480	11535	15	1.300
	<i>Aedes albopictus</i>	47	329		
	<i>Aedes atlanticus</i>	1	5		
	<i>Aedes canadensis canadensis</i>	12	259		
	<i>Aedes cantator</i>	2	13		
	<i>Aedes cinereus</i>	1	1		
	<i>Aedes japonicus</i>	37	289		
	<i>Aedes mitchellae</i>	1	1		
	<i>Aedes taeniorhynchus</i>	4	30		
	<i>Aedes triseriatus</i>	15	78		
	<i>Aedes trivittatus</i>	1	41		
	<i>Aedes vexans</i>	11	101		
	<i>Anopheles bradleyi</i>	13	315		
	<i>Anopheles punctipennis</i>	3	13		
	<i>Anopheles quadrimaculatus</i>	2	23		
	<i>Coquillettidia perturbans</i>	8	143		
	<i>Culex erraticus</i>	9	59		
	<i>Culex pipiens</i>	3	3		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	27	451		
	<i>Culex</i> spp.	127	3535	10	2.829

<i>Culiseta melanura</i>	151	5829	5	0.858
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	3	15		
Camden	414	10376	36	3.470
<i>Aedes albopictus</i>	26	53		
<i>Aedes japonicus</i>	112	453	1	2.208
<i>Culex</i> spp.	241	8611	35	4.065
<i>Culiseta melanura</i>	35	1259		
Cape May	812	7060	7	0.992
<i>Aedes albopictus</i>	53	310		
<i>Aedes atropalpus</i>	1	5		
<i>Aedes canadensis canadensis</i>	16	20		
<i>Aedes cantator</i>	18	26		
<i>Aedes japonicus</i>	47	129		
<i>Aedes taeniorhynchus</i>	1	50		
<i>Aedes triseriatus</i>	37	117		
<i>Aedes vexans</i>	1	1		
<i>Anopheles bradleyi</i>	8	159		
<i>Anopheles punctipennis</i>	1	1		
<i>Anopheles quadrimaculatus</i>	34	875		
<i>Coquillettidia perturbans</i>	5	54		
<i>Culex erraticus</i>	11	96		
<i>Culex pipiens</i>	273	2884	4	1.387
<i>Culex restuans</i>	209	1311	1	0.763
<i>Culex salinarius</i>	14	82		
<i>Culex</i> spp.	10	20		
<i>Culex territans</i>	10	30		
<i>Culiseta melanura</i>	60	887	2	2.255
<i>Orthopodomyia signifera</i>	3	3		
Cumberland	221	3203		
<i>Aedes albopictus</i>	7	13		
<i>Aedes atlanticus</i>	3	7		
<i>Aedes canadensis canadensis</i>	2	3		
<i>Aedes japonicus</i>	5	5		
<i>Aedes sollicitans</i>	6	57		
<i>Aedes taeniorhynchus</i>	3	32		
<i>Aedes triseriatus</i>	1	12		
<i>Aedes vexans</i>	17	156		
<i>Anopheles bradleyi</i>	12	409		
<i>Anopheles punctipennis</i>	24	184		
<i>Anopheles quadrimaculatus</i>	11	121		
<i>Coquillettidia perturbans</i>	11	334		
<i>Culex erraticus</i>	2	23		
<i>Culex pipiens</i>	2	11		
<i>Culex salinarius</i>	7	86		
<i>Culex</i> spp.	73	1441		
<i>Culiseta melanura</i>	23	159		
<i>Psorophora ciliata</i>	3	3		
<i>Psorophora columbiae</i>	7	145		
<i>Psorophora ferox</i>	2	2		
Essex	265	2795	5	1.789
<i>Aedes albopictus</i>	22	78		

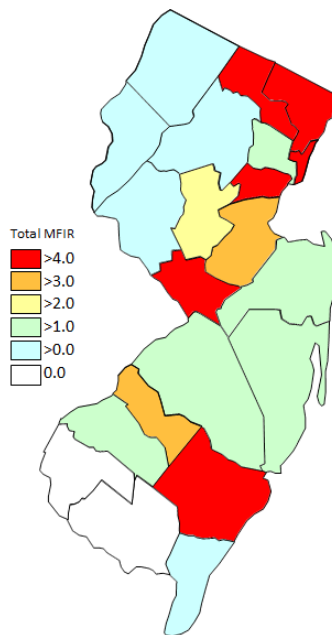
<i>Aedes japonicus</i>	39	125		
<i>Aedes triseriatus</i>	5	9		
<i>Aedes trivittatus</i>	7	17		
<i>Aedes vexans</i>	1	4		
<i>Anopheles quadrimaculatus</i>	6	7		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex</i> spp.	182	2552	5	1.959
<i>Psorophora ferox</i>	2	2		
Gloucester	630	19253	37	1.922
<i>Aedes albopictus</i>	106	1369	2	1.461
<i>Aedes japonicus</i>	17	201	1	4.975
<i>Aedes triseriatus</i>	9	70		
<i>Aedes vexans</i>	1	4		
<i>Anopheles punctipennis</i>	37	868		
<i>Anopheles quadrimaculatus</i>	29	889		
<i>Coquillettidia perturbans</i>	6	41		
<i>Culex pipiens</i>	321	14328	32	2.233
<i>Culiseta melanura</i>	103	1482	1	0.675
<i>Psorophora ferox</i>	1	1	1	1000
Hudson	189	8992	80	8.897
<i>Aedes albopictus</i>	14	220	2	9.091
<i>Culex</i> spp.	175	8772	78	8.892
Hunterdon	299	13263	10	0.754
<i>Culex</i> spp.	299	13263	10	0.754
Mercer	524	10202	62	6.077
<i>Aedes albopictus</i>	130	965		
<i>Aedes canadensis canadensis</i>	2	5		
<i>Aedes japonicus</i>	53	168	1	5.952
<i>Aedes triseriatus</i>	10	28	1	35.714
<i>Aedes vexans</i>	5	48		
<i>Culex erraticus</i>	4	10	1	100.000
<i>Culex pipiens</i>	103	1874	18	9.605
<i>Culex restuans</i>	156	4745	23	4.847
<i>Culex salinarius</i>	2	8		
<i>Culex</i> spp.	59	2351	18	7.656
Middlesex	382	13410	53	3.952
<i>Aedes albopictus</i>	69	502	3	5.976
<i>Aedes triseriatus</i>	2	14		
<i>Culex</i> spp.	311	12894	50	3.878
Monmouth	521	7234	10	1.382
<i>Aedes albopictus</i>	171	2225		
<i>Aedes canadensis canadensis</i>	14	273		
<i>Aedes cantator</i>	7	59		
<i>Aedes japonicus</i>	53	174		
<i>Aedes sollicitans</i>	4	44		
<i>Aedes taeniorhynchus</i>	3	5		
<i>Aedes triseriatus</i>	17	43		
<i>Aedes trivittatus</i>	7	9		
<i>Aedes vexans</i>	15	43		

	<i>Anopheles punctipennis</i>	22	31		
	<i>Anopheles quadrimaculatus</i>	7	13		
	<i>Coquillettidia perturbans</i>	6	6		
	<i>Culex erraticus</i>	9	19		
	<i>Culex restuans</i>	2	2		
	<i>Culex salinarius</i>	1	1		
	<i>Culex</i> spp.	154	4065	10	2.460
	<i>Culex territans</i>	1	1		
	<i>Culiseta melanura</i>	22	215		
	<i>Culiseta morsitans</i>	1	1		
	<i>Psorophora columbiae</i>	4	4		
	<i>Psorophora ferox</i>	1	1		
Morris		298	11884	9	0.757
	<i>Aedes albopictus</i>	6	81		
	<i>Coquillettidia perturbans</i>	4	200		
	<i>Culex</i> spp.	288	11603	9	0.776
Ocean		417	4718	7	1.484
	<i>Aedes albopictus</i>	101	1191		
	<i>Aedes canadensis canadensis</i>	4	97		
	<i>Aedes cantator</i>	3	135		
	<i>Aedes japonicus</i>	69	291	2	6.873
	<i>Aedes sticticus</i>	2	6		
	<i>Aedes triseriatus</i>	18	55		
	<i>Aedes vexans</i>	9	29		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Anopheles crucians</i>	3	17		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	21	106		
	<i>Culex erraticus</i>	11	15		
	<i>Culex salinarius</i>	3	4		
	<i>Culex</i> spp.	119	2543	5	1.966
	<i>Culiseta melanura</i>	50	150		
	<i>Psorophora ferox</i>	2	77		
Passaic		174	4536	19	4.189
	<i>Aedes albopictus</i>	17	50		
	<i>Aedes japonicus</i>	40	353		
	<i>Aedes triseriatus</i>	10	18		
	<i>Aedes vexans</i>	1	3		
	<i>Anopheles punctipennis</i>	1	1		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	2	12		
	<i>Culex</i> spp.	102	4098	19	4.636
Salem		383	3530		
	<i>Aedes albopictus</i>	81	479		
	<i>Aedes japonicus</i>	35	75		
	<i>Aedes triseriatus</i>	32	60		
	<i>Anopheles bradleyi</i>	1	1		
	<i>Anopheles punctipennis</i>	13	78		
	<i>Anopheles quadrimaculatus</i>	6	80		
	<i>Coquillettidia perturbans</i>	26	268		
	<i>Culex erraticus</i>	41	343		
	<i>Culex pipiens</i>	4	6		

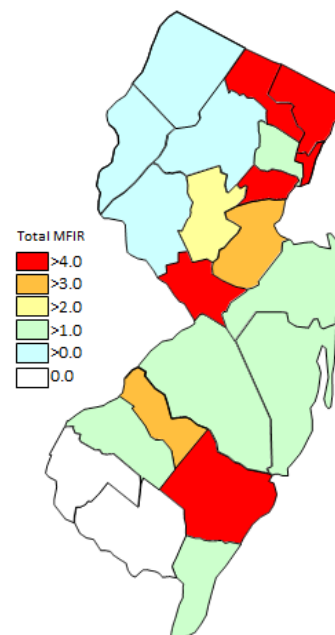
	<i>Culex restuans</i>	2	3		
	<i>Culex</i> spp.	111	1472		
	<i>Culiseta melanura</i>	28	652		
	<i>Psorophora columbiae</i>	3	13		
Somerset		267	5081	13	2.559
	<i>Aedes albopictus</i>	10	39		
	<i>Aedes canadensis canadensis</i>	1	3		
	<i>Aedes japonicus</i>	20	238		
	<i>Aedes triseriatus</i>	5	21		
	<i>Anopheles punctipennis</i>	1	2		
	<i>Culex</i> spp.	230	4778	13	2.721
Sussex		269	7102	4	0.563
	<i>Aedes japonicus</i>	14	301		
	<i>Aedes triseriatus</i>	8	77		
	<i>Anopheles punctipennis</i>	3	11		
	<i>Anopheles quadrimaculatus</i>	2	27		
	<i>Coquillettidia perturbans</i>	1	17		
	<i>Culex</i> spp.	241	6669	4	0.600
Union		209	10518	94	8.937
	<i>Aedes albopictus</i>	16	191	2	10.471
	<i>Aedes japonicus</i>	6	84		
	<i>Culex</i> spp.	187	10243	92	8.982
Warren		282	10304	7	0.679
	<i>Aedes albopictus</i>	6	93		
	<i>Aedes japonicus</i>	10	100		
	<i>Aedes triseriatus</i>	5	17		
	<i>Anopheles punctipennis</i>	2	25		
	<i>Anopheles quadrimaculatus</i>	2	7		
	<i>Culex</i> spp.	257	10062	7	0.696
Grand Total		7460	186388	625	3.353



Cumulative WNV activity in 2013.



WNV activity to 13 October 2014.



WNV activity last week, 2014.

Saint Louis Encephalitis (SLE) to 13 October 2014.

New Jersey will be selectively testing for SLE this year. 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.

No pools have been detected positive for SLE in 2014.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		165	3800		
	<i>Aedes albopictus</i>	6	48		
	<i>Aedes japonicus</i>	31	255		
	<i>Aedes triseriatus</i>	1	1		
	<i>Culex erraticus</i>	1	3		
	<i>Culex pipiens</i>	3	3		
	<i>Culex restuans</i>	1	1		
	<i>Culex</i> spp.	122	3489		
Cape May		127	764		
	<i>Culex pipiens</i>	117	744		
	<i>Culex</i> spp.	10	20		
Grand Total		292	4564		

La Crosse Encephalitis (LAC) through 13 October 2014.

New Jersey will be selectively testing for La Crosse (LAC) virus this year. 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).

No pools have been detected positive for LAC in 2014.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		56	482		
	<i>Aedes albopictus</i>	25	185		
	<i>Aedes canadensis canadensis</i>	9	172		
	<i>Aedes japonicus</i>	7	47		
	<i>Aedes triseriatus</i>	15	78		
Cape May		37	123		
	<i>Aedes triseriatus</i>	36	116		
	<i>Culex pipiens</i>	1	7		
Salem		14	29		
	<i>Aedes triseriatus</i>	14	29		
Grand Total		107	634		

Dengue (DENV) to 13 October 2014.

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 32 imported human cases in New Jersey, no local transmission.

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

No pools have been detected positive for DENV in 2014.

County	Species	DENV1		DENV2		DENV3		DENV4		Positives	MFIR
		Pool	Mos.	Pool	Mos.	Pool	Mos.	Pool	Mos.		
Atlantic		26	267	26	267	26	267	25	261		
	<i>Aedes albopictus</i>	26	267	26	267	26	267	25	261		
Bergen		9	52	9	52	9	52	9	52		
	<i>Aedes albopictus</i>	9	52	9	52	9	52	9	52		
Burlington		20	128	20	128	20	128	20	128		
	<i>Aedes albopictus</i>	20	128	20	128	20	128	20	128		
Camden		18	43	18	43	18	43	18	43		
	<i>Aedes albopictus</i>	18	43	18	43	18	43	18	43		
Cape May		25	261	25	261	25	261	25	261		

	<i>Aedes albopictus</i>	25	261	25	261	25	261	25	261		
Cumberland		6	12	6	12	6	12	6	12		
	<i>Aedes albopictus</i>	6	12	6	12	6	12	6	12		
Gloucester		94	1124	94	1124	94	1124	94	1124		
	<i>Aedes albopictus</i>	94	1124	94	1124	94	1124	94	1124		
Hudson		14	220	14	220	14	220	14	220		
	<i>Aedes albopictus</i>	14	220	14	220	14	220	14	220		
Mercer		113	892	113	892	113	892	113	892		
	<i>Aedes albopictus</i>	113	892	113	892	113	892	113	892		
Middlesex		68	502	68	502	68	502	68	502		
	<i>Aedes albopictus</i>	67	494	67	494	67	494	67	494		
	<i>Culex spp.</i>	1	8	1	8	1	8	1	8		
Monmouth		119	1946	119	1946	119	1946	119	1946		
	<i>Aedes albopictus</i>	119	1946	119	1946	119	1946	119	1946		
Morris		2	24	2	24	2	24	2	24		
	<i>Aedes albopictus</i>	2	24	2	24	2	24	2	24		
Ocean		1	25	1	25	1	25	1	25		
	<i>Aedes albopictus</i>	1	25	1	25	1	25	1	25		
Passaic		1	2	1	2	1	2	1	2		
	<i>Aedes albopictus</i>	1	2	1	2	1	2	1	2		
Salem		77	467	77	467	77	467	77	467		
	<i>Aedes albopictus</i>	77	467	77	467	77	467	77	467		
Somerset		4	10	4	10	4	10	4	10		
	<i>Aedes albopictus</i>	4	10	4	10	4	10	4	10		
Warren		5	76	5	76	5	76	5	76		
	<i>Aedes albopictus</i>	5	76	5	76	5	76	5	76		
Grand Total		602	6051	602	6051	602	6051	601	6045		

Chikungunya (CHIK) to 13 October 2014.

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. There are currently 109 imported human cases in New Jersey, no local transmission.

No pools have been detected positive for CHIK in 2014.

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		26	267		
	<i>Aedes albopictus</i>	26	267		
Bergen		9	52		
	<i>Aedes albopictus</i>	9	52		
Burlington		20	128		
	<i>Aedes albopictus</i>	20	128		
Camden		18	43		
	<i>Aedes albopictus</i>	18	43		
Cape May		25	261		
	<i>Aedes albopictus</i>	25	261		
Cumberland		6	12		
	<i>Aedes albopictus</i>	6	12		
Gloucester		94	1124		
	<i>Aedes albopictus</i>	94	1124		
Hudson		14	220		
	<i>Aedes albopictus</i>	14	220		
Mercer		113	892		
	<i>Aedes albopictus</i>	113	892		
Middlesex		68	502		
	<i>Aedes albopictus</i>	67	494		
	<i>Culex spp.</i>	1	8		
Monmouth		119	1946		
	<i>Aedes albopictus</i>	119	1946		
Morris		2	24		
	<i>Aedes albopictus</i>	2	24		
Ocean		1	25		
	<i>Aedes albopictus</i>	1	25		
Passaic		1	2		
	<i>Aedes albopictus</i>	1	2		
Salem		77	467		
	<i>Aedes albopictus</i>	77	467		
Somerset		4	10		
	<i>Aedes albopictus</i>	4	10		
Warren		5	76		

<i>Aedes albopictus</i>	5	76		
Grand Total	602	6051		