

VECTOR SURVEILLANCE IN NEW JERSEY
EEE, WNV, SLE and LAC
CDC WEEK 33: August 8 to August 14, 2010
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Mosquito Control Commission.

Culiseta melanura and Eastern Equine Encephalitis

SITE	Inland / Coastal	Historic Mean	Current Weekly Mean	Total Tested to Date*	Total Pools Submitted	EEE Isolations	MFIR
Green Bank (Burlington County)	Coastal	5.92	1.48	132	13	0	0
Corbin City (Atlantic County)	Coastal	1.55	0.04	289	13	0	0
Dennisville (Cape May County)	Coastal	7.07	0.30	639	21	2	3.13
Winslow (Camden County)	Inland	4.22	1.64	1794	40	3	1.67
Centerton (Salem County)	Inland	4.29	4.32	1361	32	2	1.47
Turkey Swamp (Monmouth County)	Inland	2.10	2.50 [†]	526	46	0	0
Glassboro (Gloucester County)	Inland	1.98	0.56	364	12	0	0

*Including trial run last week in May. † results included in next week's report. *adjusted

Remarks: There are **12 positive EEE pools** to report at this time. Eleven positive pools are from *Cs. melanura*, from both traditional resting box monitoring sites and county-run traps. Three of the traditional resting box sites (above) have produced seven positive pools of *Cs. melanura*, the last five positive pools collected from Dennisville, Winslow and Centerton on the 16th or 17th of August. To date, 5105 *Culiseta melanura* mosquitoes

Additional <i>Cs. melanura</i> trapped by counties				
*traps with positives indicated in BOLD .				
County	Trap types*	Number collected	Number of positives	MFIR
Atlantic	CO ₂	17		
Burlington	CO₂	1919	2	1.042
Cape May	CO ₂ , Gravid, RB	1650	1	0.606
Cumberland	RB	322		
Gloucester	RB	871	1	1.148
Ocean	CO ₂ , Gravid, RB	162		
Salem	CO ₂	1		
Sussex	CO ₂ , NJLT	31		
TOTAL		4973	4	0.804

forming 177 pools from the resting box sites have been tested. An additional 4973 *Cs. melanura* forming 225 pools have been sampled by the counties using a variety of traps (table to the left), producing four positive pools (no change from last week). The 12th pool is a *Culex erraticus* pool, collected 3 August in northern Cape May County (no change from last week).

The table below indicates non-melanura species tested for EEE:

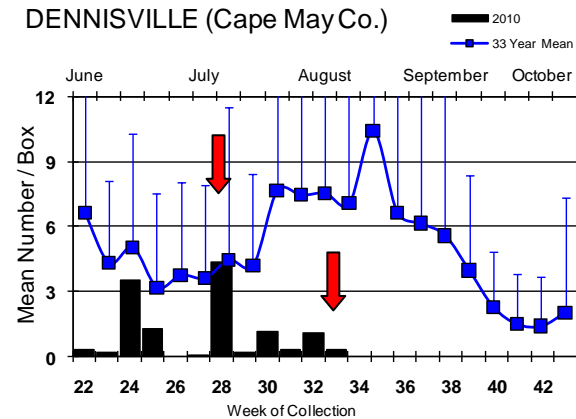
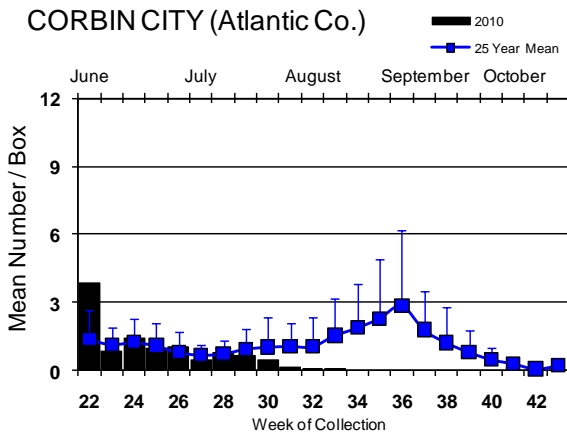
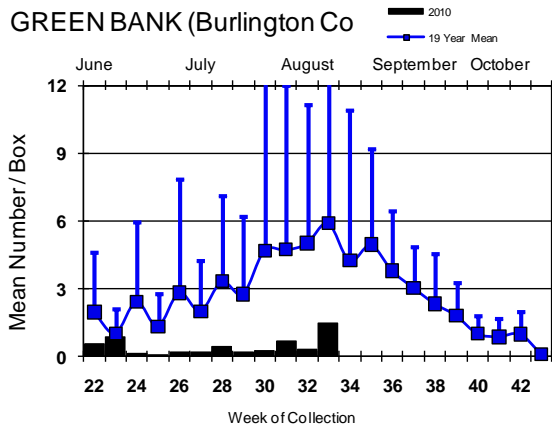
Species other than <i>Cs. melanura</i>	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	11	66		
<i>Aedes canadensis canadensis</i>	4	32		
<i>Aedes japonicus</i>	3	10		
<i>Aedes sollicitans</i>	3	99		
<i>Aedes taeniorhynchus</i>	2	8		
<i>Aedes triseriatus</i>	1	2		
<i>Aedes trivittatus</i>	1	2		
<i>Aedes vexans</i>	8	185		
<i>Anopheles bradleyi</i>	10	96		
<i>Anopheles crucians</i>	2	122		
<i>Anopheles punctipennis</i>	2	14		
<i>Anopheles quadrimaculatus</i>	7	85		
<i>Coquillettidia perturbans</i>	35	780		
<i>Culex erraticus</i>	41	1503	1	0.665
<i>Culex pipiens</i>	204	1726		
<i>Culex restuans</i>	7	17		
<i>Culex salinarius</i>	25	237		
<i>Culex</i> spp.	122	3070		
<i>Culex territans</i>	1	1		
<i>Culiseta minnesotae</i>	1	1		
<i>Psorophora columbiae</i>	1	5		
<i>Uranotaenia sapphirina</i>	1	6		
State Total	427	7380	1	0.136

There are no positive horse or human cases to date.

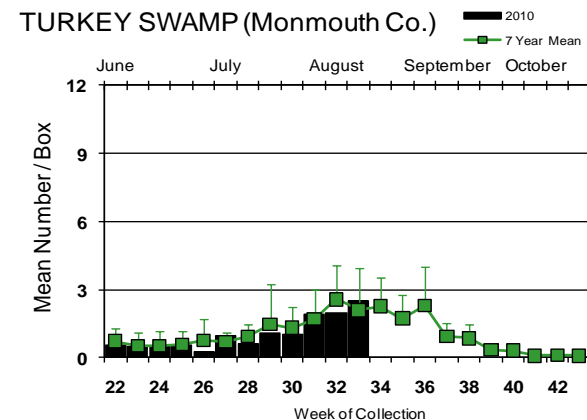
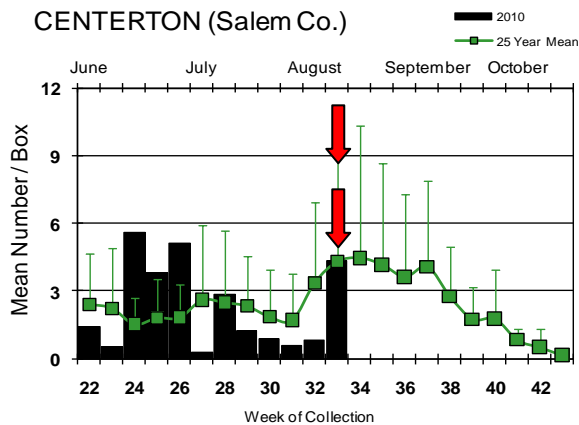
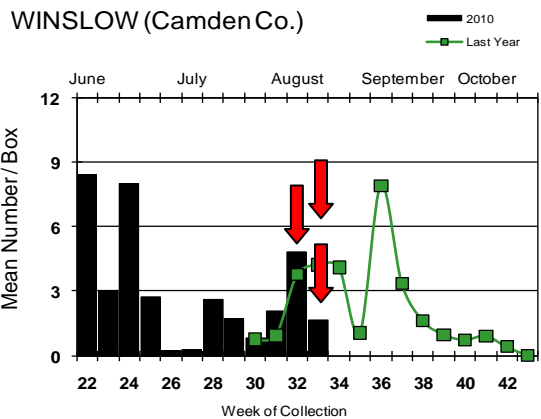
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

Culiseta melanura Population Graphs

Coastal

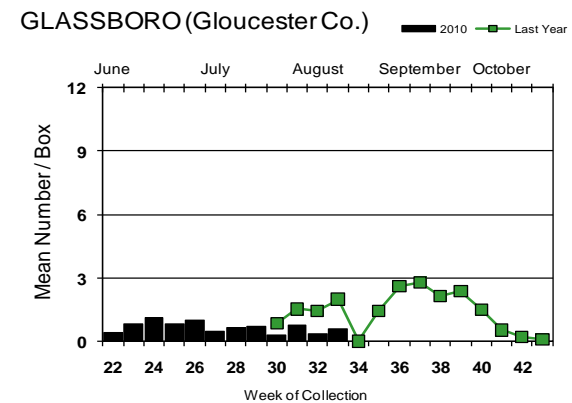


Inland



Cs. melanura populations increased at Green Bank, Centerton (with two positive pools), Turkey Swamp and Glassboro. Populations decreased at Corbin City, Dennisville (with one positive pool) and Winslow (with two positive pools).

↓ = Positive pool(s) detected.



EEE in US (2010 cumulative cases): (Black or Red = previous + new reported cases occurring)

- equine: 6(AL) 81(FL) 5(GA) 9(LA) 4(MA) 19 (MS) 18(MI) 1(VA)
- mosquito: 3(FL) 2(IN) 12(NJ) 26(NY) 51(MA) 7(VA)
- sentinel: 2(AL) 129/30(FL chickens/wild) 1 turkey(ME) 19(TX) 2(VA)
- human: 1(TX-out of country acquired case) 4(FL) 1(MA>RI) 3(MI)

West Nile Virus

West Nile in US (2010 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					2
Alaska					
Arizona		210/223	9		54/62
Arkansas					
California	219/231	676/784	51/78	4	16/22
Colorado		15/22			7/10
Connecticut		46/87			
Delaware			2		
DC					
Florida	1Flavi		65/81	6	1
Georgia	0	12		0	4
Hawaii					
Idaho				1	
Illinois	27/35	401/576			
Indiana	0	90/111		0	0
Iowa		0	1	0	0
Kansas					2
Kentucky				1	
Louisiana		172	0	9/12	1
Maine					
Maryland		1			2
Mass.		25/50		0	0
Michigan					2
Minnesota					1
Mississippi		2		1	1/3
Missouri		48/49			1?
Montana					
Nebraska	0	16/37		0	6/8

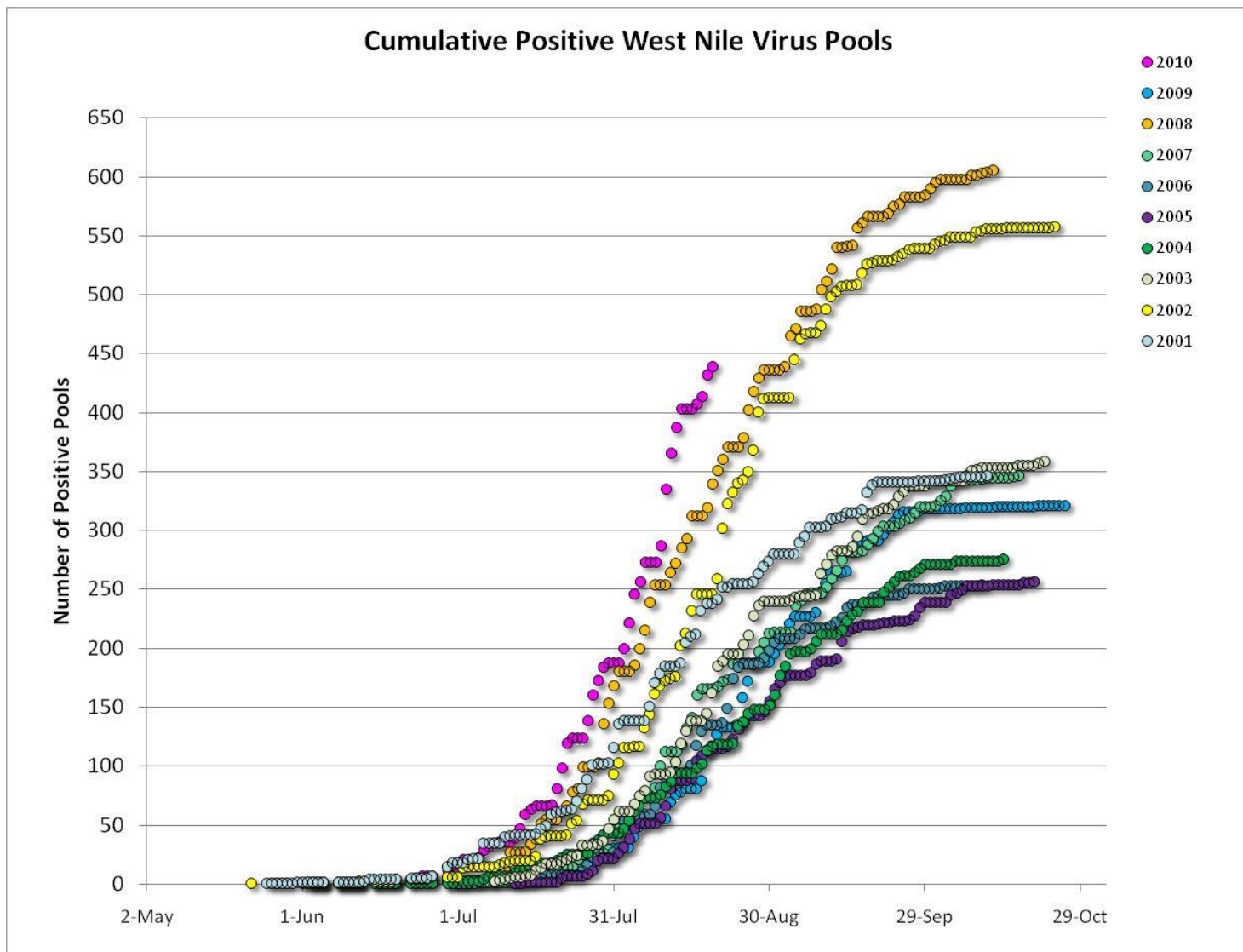
	Birds	Mosquito Pools	Sentinels	Horses	Humans
Nevada		1/6		2	
New Hampshire		0		0	0
New Jersey	54/68	318/443	0	0	0
New Mexico					0
New York	0	305/394		0	8/9
North Carolina			1		
North Dakota				1	3/4
Ohio		19/98		0	0
Oklahoma		2/3			
Oregon	0	1	0	0	0
Pennsylvania	5	349/455		2	1
Rhode Island					
South Carolina					
South Dakota					5
Tennessee	0	43/66		0	0
Texas	0	93		0	3
Utah		3/8			
Vermont	1	3		0	0
Virginia		28/84	7		
Washington	0	71/84		0	0
West Virginia	0	26		0	0
Wisconsin	0			0	0
Wyoming		13			1

Protocol: New Jersey Department of Health and Senior Services (NJDHSS Public Health and Environmental Laboratories, PHEL) and the Cape May County Division of Mosquito Control tests mosquito pools using RT-PCR Taqman techniques.

Mosquito Species Submitted for West Nile Virus Testing through 23 Aug 2010

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	287	1839	7	3.806
<i>Aedes canadensis canadensis</i>	26	475		
<i>Aedes cantator</i>	7	21		
<i>Aedes japonicus</i>	240	1236		
<i>Aedes sollicitans</i>	6	130		
<i>Aedes sticticus</i>	1	1		
<i>Aedes stimulans</i>	3	8		
<i>Aedes taeniorhynchus</i>	5	41		
<i>Aedes triseriatus</i>	95	229		
<i>Aedes trivittatus</i>	7	39		
<i>Aedes vexans</i>	58	503		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles bradleyi</i>	15	107		
<i>Anopheles crucians</i>	2	122		
<i>Anopheles punctipennis</i>	26	271		
<i>Anopheles quadrimaculatus</i>	42	453		
<i>Anopheles walkeri</i>	3	4		
<i>Coquillettidia perturbans</i>	84	1574		
<i>Culex erraticus</i>	53	1833		
<i>Culex pipiens</i>	581	13866	111	8.005
<i>Culex restuans</i>	140	968	2	2.066
<i>Culex salinarius</i>	47	599	1	1.669
<i>Culex spp.</i>	1767	65479	316	4.826
<i>Culex territans</i>	1	1		
<i>Culiseta inornata</i>	1	1		
<i>Culiseta melanura</i>	402	8774	6	0.684
<i>Culiseta minnesotae</i>	1	1		
<i>Orthopodomyia signifera</i>	1	1		
<i>Psorophora ciliata</i>	1	1		
<i>Psorophora columbiae</i>	1	5		
<i>Psorophora cyanescens</i>	1	1		
<i>Psorophora ferox</i>	1	1		
<i>Uranotaenia sapphirina</i>	1	6		
State Total	3907	98591	443	4.493

Remarks: The number of positive WNV mosquito pools to date is 443. Positive pools continue to be primarily from the ornithophilic *Culex* species (*Cx. pipiens* and *Cx. restuans*). *Cx. salinarius*, which feed more opportunistically and includes mammals in their bloodmeals showed their first positive pool in Cape May County. Positive *Ae. albopictus* pools increased to 7. Bergen, Camden, Mercer and Gloucester counties both saw significant increases in WNV activity in *Culex* (Camden County also had positive *Ae. albopictus* and *Cs. melanura*). Somerset and Sussex counties turned in positive (*Culex*) mosquitoes for the first time this season. The cumulative positive pools for this year continue to pace ahead of previous years (graph below).



Humans, Horses and Wild Birds: No humans or horses have been found positive for WNV to date. For more details plus information about WNV, see the West Nile Virus Alert and FAQ Sheets from the NJ Department of Health and Senior Services, Communicable Disease Service, Infectious and Zoonotic Disease Program:
<http://www.state.nj.us/health/cd/westnile/enceph.htm>

Sixty-eight dead, wild birds out of 148 tested are been positive for WNV, well ahead of last year's results in terms of number and timing. This year's positive birds include 60 corvids (12 positives/18 tested American Crows, 24/36 Fish Crows, 20/32 Blue Jays and 4/11 unidentified Crows), 4 negative Hawks (unknown species) and 7/46 unknown species.

2010 Positive Mosquito pools to date / Total Mosquito Pools Submitted	This time last year
443/ 3907 (0.113%)	130/ 5128 (0.025%)
2010 Positive Birds to date / Total Birds Submitted	This time last year
66/ 148 (0.45%)	4/ 59 (0.07%)

WNV Results by County through 23 Aug 2010

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		159	3708	24	6.472
	<i>Aedes albopictus</i>	18	154	1	6.494
	<i>Aedes canadensis canadensis</i>	3	56		
	<i>Aedes cantator</i>	3	14		

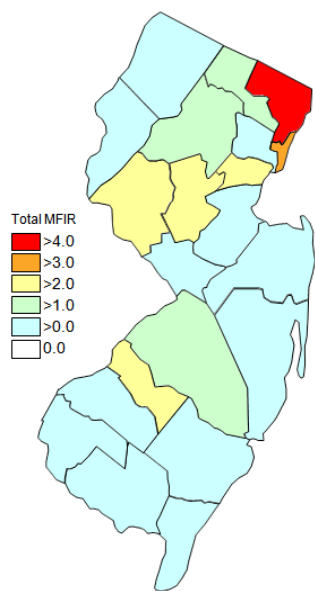
<i>Aedes japonicus</i>	9	19		
<i>Aedes sollicitans</i>	2	10		
<i>Aedes taeniorhynchus</i>	1	24		
<i>Aedes triseriatus</i>	4	8		
<i>Aedes trivittatus</i>	3	26		
<i>Aedes vexans</i>	11	125		
<i>Anopheles bradleyi</i>	3	8		
<i>Anopheles punctipennis</i>	4	68		
<i>Anopheles quadrimaculatus</i>	3	4		
<i>Coquillettidia perturbans</i>	8	30		
<i>Culex erraticus</i>	1	3		
<i>Culex</i> spp.	64	2799	22	7.860
<i>Culiseta melanura</i>	21	359	1	2.786
<i>Orthopodomyia signifera</i>	1	1		
Bergen	140	10014	66	5.591
<i>Aedes albopictus</i>	3	15		
<i>Aedes japonicus</i>	3	14		
<i>Culex</i> spp.	134	9985	66	6.610
Burlington	167	6311	21	3.328
<i>Aedes albopictus</i>	12	87		
<i>Aedes canadensis canadensis</i>	3	105		
<i>Aedes japonicus</i>	1	4		
<i>Aedes sollicitans</i>	3	108		
<i>Aedes taeniorhynchus</i>	2	9		
<i>Aedes vexans</i>	7	183		
<i>Anopheles bradleyi</i>	1	29		
<i>Anopheles crucians</i>	2	122		
<i>Anopheles punctipennis</i>	1	13		
<i>Anopheles quadrimaculatus</i>	1	3		
<i>Coquillettidia perturbans</i>	9	352		
<i>Culex erraticus</i>	8	336		
<i>Culex pipiens</i>	3	23		
<i>Culex salinarius</i>	4	26		
<i>Culex</i> spp.	60	2769	20	7.223
<i>Culiseta melanura</i>	48	2131	1	0.469
<i>Psorophora columbiae</i>	1	5		
<i>Uranotaenia sapphirina</i>	1	6		
Camden	122	2901	35	12.065
<i>Aedes albopictus</i>	22	71	2	28.169
<i>Aedes canadensis canadensis</i>	1	1		
<i>Aedes japonicus</i>	10	14		
<i>Aedes triseriatus</i>	2	2		
<i>Aedes trivittatus</i>	1	1		
<i>Anopheles punctipennis</i>	2	2		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Culex</i> spp.	65	2127	32	15.045
<i>Culiseta melanura</i>	18	682	1	1.466
Cape May	866	10936	5	0.457
<i>Aedes albopictus</i>	21	58		
<i>Aedes canadensis canadensis</i>	2	2		
<i>Aedes japonicus</i>	29	55		
<i>Aedes sollicitans</i>	1	12		

<i>Aedes taeniorhynchus</i>	2	8		
<i>Aedes triseriatus</i>	16	40		
<i>Anopheles bradleyi</i>	6	63		
<i>Anopheles quadrimaculatus</i>	13	284		
<i>Coquillettidia perturbans</i>	10	147		
<i>Culex erraticus</i>	39	1486		
<i>Culex pipiens</i>	329	4030	3	0.744
<i>Culex restuans</i>	98	532		
<i>Culex salinarius</i>	24	300	1	3.333
<i>Culex</i> spp.	123	1077		
<i>Culiseta melanura</i>	153	2842	1	0.352
Cumberland	22	365		
<i>Aedes albopictus</i>	1	10		
<i>Aedes triseriatus</i>	2	2		
<i>Anopheles bradleyi</i>	2	3		
<i>Anopheles punctipennis</i>	1	1		
<i>Anopheles quadrimaculatus</i>	3	4		
<i>Culex erraticus</i>	1	1		
<i>Culex pipiens</i>	2	21		
<i>Culex territans</i>	1	1		
<i>Culiseta melanura</i>	9	322		
Essex	145	1614	16	9.913
<i>Aedes albopictus</i>	19	79		
<i>Aedes japonicus</i>	24	262		
<i>Aedes stimulans</i>	1	3		
<i>Aedes triseriatus</i>	15	29		
<i>Aedes vexans</i>	9	26		
<i>Culex</i> spp.	77	1215	16	13.169
Gloucester	234	8078	74	9.161
<i>Aedes albopictus</i>	13	141		
<i>Aedes japonicus</i>	3	20		
<i>Anopheles quadrimaculatus</i>	1	5		
<i>Coquillettidia perturbans</i>	1	1		
<i>Culex pipiens</i>	166	6709	72	10.732
<i>Culiseta melanura</i>	50	1202	2	1.664
Hudson	137	6812	54	7.927
<i>Culex</i> spp.	137	6812	54	7.927
Hunterdon	150	7465	4	0.536
<i>Culex</i> spp.	10	7465	4	0.536
Mercer	156	3779	38	10.056
<i>Aedes albopictus</i>	27	59	1	16.949
<i>Aedes japonicus</i>	18	31		
<i>Aedes triseriatus</i>	4	5		
<i>Aedes vexans</i>	3	75		
<i>Culex pipiens</i>	64	3014	36	11.944
<i>Culex restuans</i>	27	324	1	3.086
<i>Culex salinarius</i>	12	264		
<i>Culex</i> spp.	1	7		

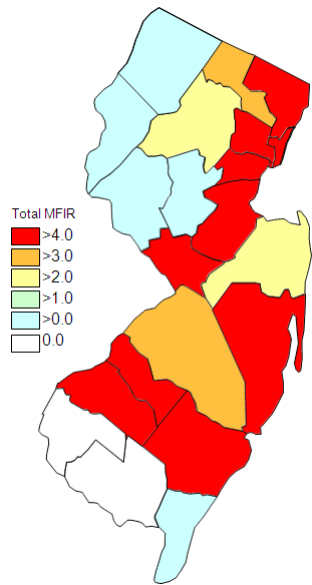
Middlesex	192	9192	43	4.678
<i>Aedes albopictus</i>	1	7		
<i>Aedes japonicus</i>	3	21		
<i>Aedes triseriatus</i>	1	6		
<i>Culex</i> spp.	187	9158	43	4.695
Monmouth	220	1713	4	2.335
<i>Aedes albopictus</i>	33	199		
<i>Aedes canadensis canadensis</i>	10	89		
<i>Aedes cantator</i>	3	6		
<i>Aedes japonicus</i>	29	85		
<i>Aedes triseriatus</i>	12	14		
<i>Aedes vexans</i>	2	5		
<i>Anopheles barberi</i>	1	1		
<i>Anopheles punctipennis</i>	1	1		
<i>Anopheles quadrimaculatus</i>	4	4		
<i>Coquillettidia perturbans</i>	5	8		
<i>Culex erraticus</i>	2	4		
<i>Culex pipiens</i>	1	1		
<i>Culex restuans</i>	1	1		
<i>Culex salinarius</i>	2	2		
<i>Culex</i> spp.	66	784	4	5.102
<i>Culiseta melanura</i>	47	508		
<i>Psorophora cyanescens</i>	1	1		
Morris	135	4666	12	2.572
<i>Aedes japonicus</i>	12	134		
<i>Aedes vexans</i>	1	5		
<i>Anopheles punctipennis</i>	2	6		
<i>Anopheles quadrimaculatus</i>	3	82		
<i>Coquillettidia perturbans</i>	6	207		
<i>Culex</i> spp.	111	4232	12	2.836
Ocean	211	3280	15	4.573
<i>Aedes albopictus</i>	49	595	1	1.681
<i>Aedes canadensis canadensis</i>	7	222		
<i>Aedes japonicus</i>	28	89		
<i>Aedes sticticus</i>	1	1		
<i>Aedes triseriatus</i>	8	23		
<i>Aedes trivittatus</i>	2	2		
<i>Aedes vexans</i>	6	19		
<i>Coquillettidia perturbans</i>	9	95		
<i>Culex erraticus</i>	1	1		
<i>Culex restuans</i>	2	2	1	500.000
<i>Culex salinarius</i>	3	3		
<i>Culex</i> spp.	68	2064	13	6.298
<i>Culiseta inornata</i>	1	1		
<i>Culiseta melanura</i>	25	162		
<i>Psorophora ferox</i>	1	1		
Passaic	94	1345	5	3.717
<i>Aedes albopictus</i>	16	74		
<i>Aedes japonicus</i>	15	149		
<i>Aedes triseriatus</i>	9	20		

<i>Anopheles punctipennis</i>	2	3		
<i>Anopheles quadrimaculatus</i>	1	2		
<i>Coquillettidia perturbans</i>	4	44		
<i>Culex</i> spp.	47	1053	5	4.748
Salem	157	1353		
<i>Aedes albopictus</i>	27	94		
<i>Aedes cantator</i>	1	1		
<i>Aedes japonicus</i>	12	15		
<i>Aedes triseriatus</i>	5	6		
<i>Aedes vexans</i>	18	41		
<i>Anopheles bradleyi</i>	3	4		
<i>Anopheles punctipennis</i>	3	3		
<i>Anopheles quadrimaculatus</i>	9	16		
<i>Anopheles walkeri</i>	3	4		
<i>Coquillettidia perturbans</i>	8	17		
<i>Culex erraticus</i>	1	2		
<i>Culex pipiens</i>	5	11		
<i>Culex restuans</i>	4	6		
<i>Culex</i> spp.	44	598		
<i>Culiseta melanura</i>	14	535		
Somerset	153	1579	1	0.633
<i>Aedes albopictus</i>	12	27		
<i>Aedes japonicus</i>	15	94		
<i>Aedes triseriatus</i>	13	58		
<i>Anopheles punctipennis</i>	8	24		
<i>Anopheles quadrimaculatus</i>	2	4		
<i>Culex</i> spp.	103	1372	1	0.729
Sussex	211	5058	3	0.593
<i>Aedes japonicus</i>	18	140		
<i>Aedes stimulans</i>	2	5		
<i>Coquillettidia perturbans</i>	14	300		
<i>Culex pipiens</i>	11	57		
<i>Culex restuans</i>	8	103		
<i>Culex salinarius</i>	2	4		
<i>Culex</i> spp.	138	4417	3	0.679
<i>Culiseta melanura</i>	17	31		
<i>Culiseta minnesotae</i>	1	1		
Union	117	4116	21	5.102
<i>Aedes albopictus</i>	13	169	2	11.834
<i>Aedes japonicus</i>	10	88		
<i>Coquillettidia perturbans</i>	1	9		
<i>Culex</i> spp.	93	3850	19	4.935
Warren	119	4306	2	0.464
<i>Aedes japonicus</i>	1	2		
<i>Aedes triseriatus</i>	4	16		
<i>Aedes trivittatus</i>	1	10		
<i>Aedes vexans</i>	1	24		
<i>Anopheles punctipennis</i>	2	150		
<i>Anopheles quadrimaculatus</i>	1	44		

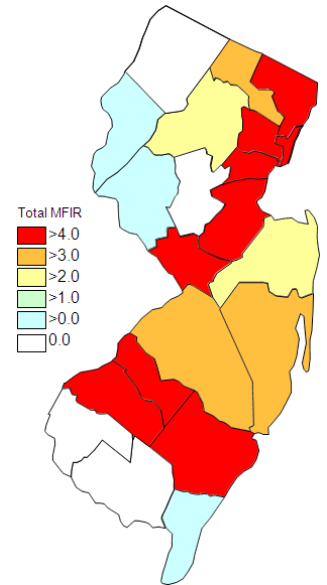
<i>Coquillettidia perturbans</i>	9	364		
<i>Culex</i> spp.	99	3695	2	0.541
<i>Psorophora ciliata</i>	1	1		
Grand Total	3907	98591	443	4.493



Cumulative WNV activity in 2009.



WNV activity to 23 Aug, 2010.



WNV activity last week, 2010.

Saint Louis Encephalitis (SLE) through 23 Aug 2010.

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 tested positive to date for 2010.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		131	5476		
	<i>Aedes albopictus</i>	10	59		
	<i>Aedes canadensis canadensis</i>	2	30		
	<i>Aedes japonicus</i>	1	4		
	<i>Aedes sollicitans</i>	2	87		
	<i>Aedes taeniorhynchus</i>	1	7		
	<i>Aedes vexans</i>	7	183		
	<i>Anopheles bradleyi</i>	1	29		
	<i>Anopheles crucians</i>	2	122		
	<i>Anopheles punctipennis</i>	1	13		
	<i>Anopheles quadrimaculatus</i>	1	3		
	<i>Coquillettidia perturbans</i>	7	285		
	<i>Culex erraticus</i>	5	177		
	<i>Culex pipiens</i>	3	23		
	<i>Culex salinarius</i>	4	26		
	<i>Culex</i> spp.	50	2498		
	<i>Culiseta melanura</i>	32	1919		
	<i>Psorophora columbiae</i>	1	5		
	<i>Uranotaenia sapphirina</i>	1	6		
Camden		53	1169		
	<i>Aedes albopictus</i>	10	25		
	<i>Aedes canadensis canadensis</i>	1	1		
	<i>Aedes japonicus</i>	5	5		
	<i>Aedes triseriatus</i>	2	2		
	<i>Anopheles punctipennis</i>	1	1		
	<i>Culex</i> spp.	34	1135		
Essex		106	1527		
	<i>Aedes albopictus</i>	8	55		
	<i>Aedes japonicus</i>	20	252		
	<i>Aedes vexans</i>	1	5		
	<i>Culex</i> spp.	77	1215		
Hudson		95	5112		
	<i>Culex</i> spp.	95	5112		
Salem		1	7		
	<i>Culex</i> spp.	1	7		
Grand Total		386	13291		

La Crosse Encephalitis (LAC) through 23 Aug 2010.

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 tested positive to date for 2010.

County	Species	Pools	Mosquitoes	Positives	MFIR
Cape May		10	23		
	<i>Aedes triseriatus</i>	10	23		
Cumberland		2	2		
	<i>Aedes triseriatus</i>	2	2		
Warren		10	106		
	<i>Aedes canadensis canadensis</i>	4	86		
	<i>Aedes triseriatus</i>	6	20		
Grand Total		22	131		