RUTGERS
New Jersey Agricultural Experiment Station

VECTOR SURVEILLANCE IN NEW JERSEY
EEE, WNV and SLE
CDC WEEK 31: August 2 to August 8, 2009

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Supported by funding from the NJ State 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	4.9	1.00	211	25	1	4.74
Corbin City (Atlantic County)	Coastal	1.1	0.44	60	13	0	0
Dennisville (Cape May County)	Coastal	7.5	6.35	1055	37	10	9.48
Winslow † (Camden County)	Inland	No history	0.94	85	2	0	0
Centerton (Salem County)	Inland	1.8	0.40	208	25	0	0
Turkey Swamp (Monmouth County)	Inland	1.7	1.94	410	79	0	0
Glassboro (Gloucester County)	Inland	No history	1.52	298	23	0	0

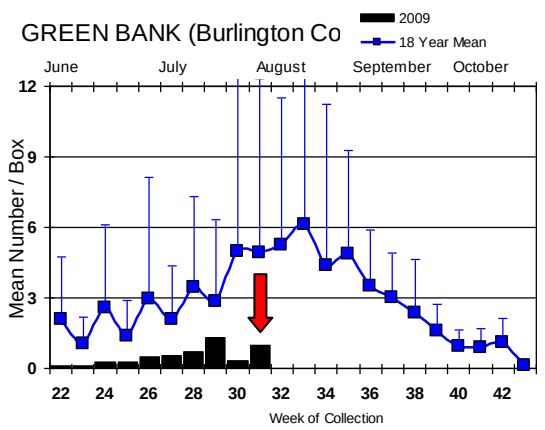
*Including trial run last week in May. † Date of site change-over occurred during Week 30.

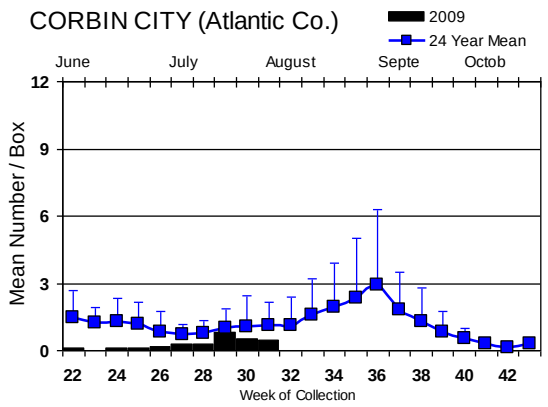
Remarks: The number of positive EEE pools of *Cs. melanura* from Dennisville jumped to 10, raising the MFIR value to over 9. Green Bank also reported its first positive *Cs. melanura* pool. To date, 12 pools of *Cs. melanura* (11 from resting boxes and one from a CO2 trap in Burlington County) and one pool of *Cx. salinarius* have been detected.

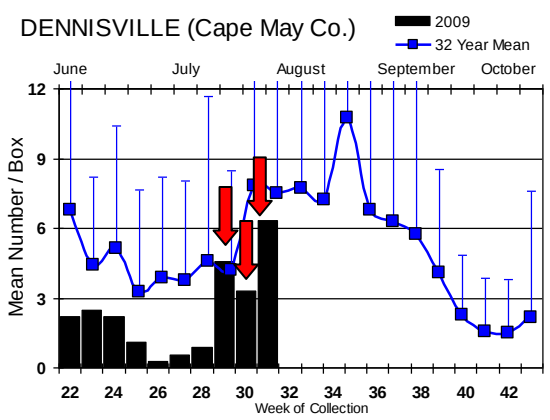
To date, 204 pools from 2327 *Cs. melanura* mosquitoes have been sent for EEE testing from the seven resting box collections. Previously, Ocean County has submitted *Cs. melanura* samples collected from gravid and CO_2 traps while Gloucester County has sampled additional sites with resting boxes. Other species tested for EEE from resting boxes include: *Aedes atlanticus, Ae. japonicus, Ae. thibaulti, Ae. triseriatus, Ae. vexans, Anopheles barberi, An. crucians, An. punctipennis, An. quadrimaculatus, An walkeri, Culex erraticus, Cx. pipiens, Cx. restuans, Cx. salinarius, Cx. territans,* Mixed *Culex* pools, and *Cx. territans.* Additional species from other trap types include: *Aedes abserratus, Ae. albopictus, Ae. atropalpus, Ae. canadensis, Ae. cantator, Ae. cinereus, Ae. japonicus, Ae. sollicitans, Ae. sticticus, Ae. taeniorhynchus, Ae. triseriatus, Ae. trivittatus, Ae. vexans, Anopheles bradleyi, Coquillettidia perturbans, Culiseta inornata and Psorophora ciliate, Ps. Columbiae and Ps. ferox.* 383 pools from 7370 mosquitoes have been tested with two pools (one *Cs. melanura* and one *Cx.salinarius*)

Culiseta melanura Population Graphs

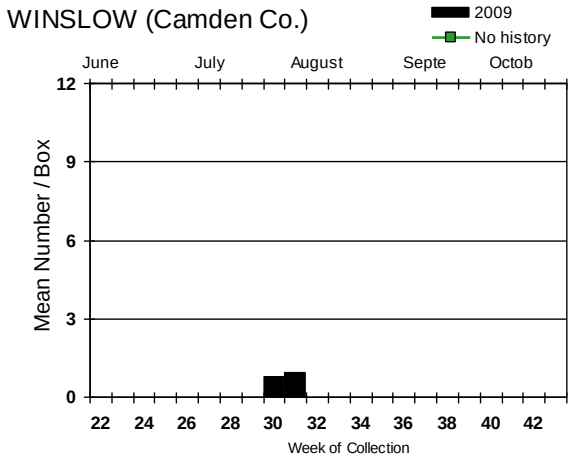
Coastal

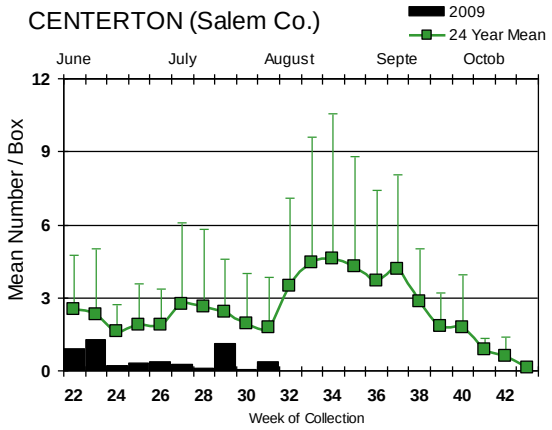


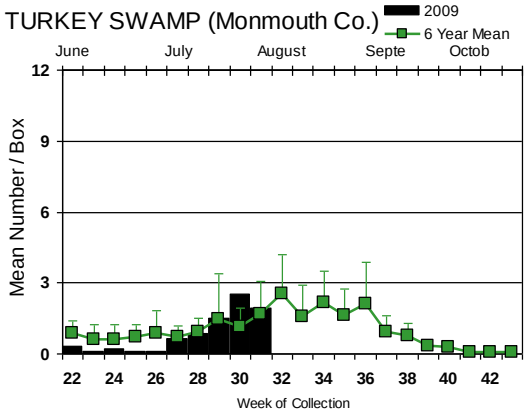




Inland

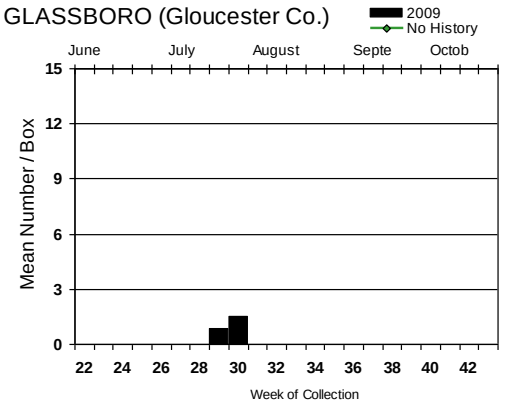






Culiseta melanura populations increased at most sites as the second generation of *Cs. melanura* is emerging. Increasing numbers of EEE positive pools of *Cs. melanura* were detected and a third site (second resting box site) became hot, suggesting dissemination of the virus in southern New Jersey has begun.

= positive pool(s) detected.



EEE in US (2009 cumulative cases): (Red = new reported cases occurring)

- equine: 6(AL) 59(FL) 36(GA) 14(LA) 1(MN) 1(MO) 25(MS) 8(NC) 3(TX) 4(VA)
- mosquito: 1(FL) 1(LA) 2(MA) 14(NJ) 5(NY) 101(VA)
- sentinel: 2(AL) 125/59wild(FL) 17(NC) 30(VA)
- human:

West Nile Virus

West Nile in US (2009 cumulative cases): Single black values indicate no change from previous week. Black values / red values equals previous week/New totals.

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Alabama			2		
Alaska					
Arizona	0	56	4	0	5
Arkansas					1
California	271/298	292/388	24/32	1/3	5/8
Colorado		14/38			2/9
Connecticut	0	1/3	0	0	0
Delaware					
DC					
Florida	2 (flavi)	0	2/3	0	0
Georgia	0	4		2	0
Hawaii					
Idaho		7 counties		4	1
Illinois	5	59	0	0	0
Indiana	0	13/15		0	1
Iowa	3	3/4	1/2	0	1
Kansas					
Kentucky				1/2	
Louisiana		13/37		1	1
Maine					
Maryland	0	1/4		0	0
Mass.		1		0	0
Michigan		0	0	0	0
Minnesota		3			1
Mississippi		3/6		2	9/15
Missouri		195/241		1	1
Montana		+		1	
Nebraska	2	6		0	1

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Nevada		4+			5
New Hampshire		0		0	0
New Jersey	1	16/56	0	0	0
New Mexico		+		0	1
New York	0	3/8	0	0	1
North Carolina					
North Dakota	0	0		0	0
Ohio	0	18/44		0	0
Oklahoma	0	0	0	0	0
Oregon	2/5	76/113	0	2	0
Pennsylvania	2	14/35	0	0	1
Rhode Island	0	0			
South Carolina	0	0			
South Dakota	0	2	0	0	3
Tennessee	0	39/151	0	0	1
Texas	2/6	150/187	0	1	2/11
Utah		120/145		1	0
Vermont	0	0	0	0	0
Virginia		0	1	5	0
Washington	1/7	161/206	0	3/12	0
West Virginia	1	7/72	0	1	0
Wisconsin	2	0	0	0	0
Wyoming		12/17			2

Note: Some data reported by states are provisional and are subject to change. Sources for this table can be found here.
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 5 August 2009

Species	Pools	Mosquitoes	Positives	MFIR
Aedes abserratus	1	1		
Aedes albopictus	222	1493		
Aedes atlanticus	5	8		
Aedes atropalpus	1	15		
Aedes canadensis canadensis	84	2080		
Aedes cantator	45	397		
Aedes cinereus	2	7		
Aedes grossbecki	3	35		
Aedes japonicus	439	3299		
Aedes sollicitans	14	66		
Aedes sticticus	12	115		
Aedes taeniorhynchus	8	95		
Aedes thibaulti	6	9		
Aedes triseriatus	131	461		
Aedes trivittatus	23	388		
Aedes vexans	93	1383		
Anopheles barberi	4	15		
Anopheles bradleyi	19	174	1	5.747
Anopheles crucians	3	26		
Anopheles punctipennis	87	298		
Anopheles quadrimaculatus	73	1219		
Anopheles walkeri	1	19		
Coquillettidia perturbans	44	529		
Culex erraticus	27	1022		
Culex pipiens	548	13160		
Culex restuans	455	5719	1	0.175
Culex salinarius	54	1014		
Culex spp.	2172	93430	41	0.439
Culex territans	27	74		
Culiseta inornata	1	2		
Culiseta melanura	308	2975		
Culiseta morsitans	1	3		
Psorophora ciliata	1	1		
Psorophora columbiae	2	5		
Psorophora ferox	12	63		
Uranotaenia sapphirina	1	14		
State Total	**4933**	**129,623**	**43**	**0.332**

Remarks: The number of pools positive for West Nile virus increased substantially to 43 from 16. Fifteen counties have detected WNV within their borders. Counties to the northeast and southeast of the state have yet to detect WNV. As compared to last year, positive pools are developing more slowly with the same sampling intensity. A positive pool of *Anopheles bradleyi* was collected in Atlantic County on 5 August.

Humans, Horses and Wild Birds: No humans have been reported positive for WNV by PHEL. For more details plus information about WNV, see the PHEL's West Nile Virus Alert and FAQ Sheets:
http://www.state.nj.us/health/cd/westnile/enceph.htm

No confirmed horse cases have occurred. One positive bird (Blue Jay *Cyanocitta* cristata) has been detected as of this week in Ocean County.

2009 Positive Mosquito pools to date / Total Mosquito Pools Submitted (%)	This time last year* (%) * 2008 started later (at least one month) last year than in 2009
43 / 4222 (0.01)	294 / 4172 (0.07)
2009 Positive Birds to date / Total Birds Submitted (%)	This time last year* (%) * 2008 started later (at least one month) last year than in 2009
1 / 57 (0.02)	18 / 111 (0.16)

WNV Results by County through 13 August 2009

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**132**	**3100**	**1**	**0.323**
	Aedes albopictus	8	113		
	Aedes canadensis canadensis	4	38		
	Aedes cantator	6	140		
	Aedes grossbecki	1	8		
	Aedes japonicus	4	60		
	Aedes sollicitans	3	9		
	Aedes sticticus	2	18		
	Aedes taeniorhynchus	4	27		
	Aedes thibaulti	3	3		
	Aedes triseriatus	2	3		
	Aedes trivittatus	1	4		
	Aedes vexans	12	343		
	Anopheles bradleyi	3	28	1	35.714
	Anopheles punctipennis	4	7		
	Anopheles quadrimaculatus	3	5		
	Culex erraticus	1	3		
	Culex restuans	2	5		
	Culex salinarius	2	37		
	Culex spp.	52	2184		
	Culex territans	1	1		
	Culiseta melanura	14	64		
Bergen		**105**	**7480**	**6**	**0.802**
	Aedes albopictus	1	6		
	Aedes japonicus	3	9		
	Culex spp.	101	7465	6	0.804
Burlington		**292**	**7224**	**8**	**1.107**
	Aedes abserratus	1	1		
	Aedes albopictus	24	138		
	Aedes atlanticus	1	1		
	Aedes atropalpus	1	15		
	Aedes canadensis canadensis	20	958		
	Aedes cantator	5	42		
	Aedes cinereus	1	6		
	Aedes grossbecki	1	26		
	Aedes japonicas	22	114		
	Aedes sollicitans	2	22		
	Aedes sticticus	2	85		
	Aedes taeniorhynchus	2	48		
	Aedes triseriatus	11	52		
	Aedes trivittatus	2	9		
	Aedes vexans	19	574		
	Anopheles barberi	1	1		

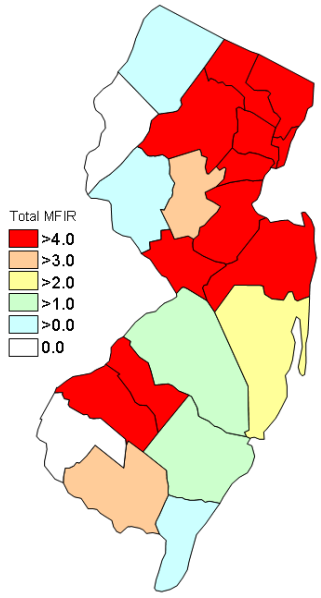
	Anopheles bradleyi	2	18		
	Anopheles crucians	1	5		
	Anopheles punctipennis	8	25		
	Anopheles quadrimaculatus	2	7		
	Coquillettidia perturbans	16	244		
	Culex erraticus	1	4		
	Culex pipiens	1	75		
	Culex restuans	2	4		
	Culex salinarius	4	74		
	Culex spp.	84	3708	8	2.157
	Culex territans	3	13		
	Culiseta inornata	1	2		
	Culiseta melanura	48	930		
	Psorophora ciliate	1	1		
	Psorophora columbiae	1	4		
	Psorophora ferox	1	4		
	Uranotaenia sapphirina	1	14		
Camden		**174**	**5310**	**10**	**1.883**
	Aedes albopictus	9	24		
	Aedes japonicus	22	55		
	Aedes thibaulti	1	1		
	Aedes triseriatus	1	1		
	Aedes trivittatus	2	2		
	Aedes vexans	1	1		
	Anopheles punctipennis	3	8		
	Anopheles quadrimaculatus	3	4		
	Culex pipiens	3	107		
	Culex restuans	2	2		
	Culex spp.	122	5093	10	1.963
	Culex territans	1	1		
	Culiseta melanura	4	11		
Cape May		**1067**	**17859**	**1**	**0.056**
	Aedes albopictus	18	49		
	Aedes canadensis canadensis	3	32		
	Aedes cantator	6	20		
	Aedes japonicus	114	459		
	Aedes sollicitans	1	8		
	Aedes triseriatus	36	117		
	Anopheles bradleyi	8	86		
	Anopheles punctipennis	5	19		
	Anopheles quadrimaculatus	28	983		
	Coquillettidia perturbans	2	27		
	Culex erraticus	16	729		
	Culex pipiens	216	3859		
	Culex restuans	274	3706	1	0.270
	Culex salinarius	17	644		
	Culex spp.	241	6164		
	Culex territans	7	29		
	Culiseta melanura	75	928		
Cumberland		**49**	**1252**		
	Aedes cantator	1	15		
	Aedes japonicus	6	31		
	Anopheles punctipennis	1	1		

	Culex pipiens	1	2		
	Culex restuans	2	6		
	Culex spp.	34	1150		
	Culex territans	1	1		
	Culiseta melanura	3	46		
Essex		**169**	**3162**	**1**	**0.316**
	Aedes albopictus	11	32		
	Aedes japonicus	16	75		
	Aedes sticticus	1	1		
	Aedes triseriatus	9	14		
	Aedes vexans	9	25		
	Anopheles punctipennis	1	1		
	Coquillettidia perturbans	1	1		
	Culex spp.	119	3010	1	0.332
	Psorophora ferox	2	3		
Gloucester		**409**	**10021**		
	Aedes albopictus	25	337		
	Aedes atlanticus	1	1		
	Aedes canadensis canadensis	2	2		
	Aedes japonicus	39	412		
	Aedes thibaulti	1	4		
	Aedes triseriatus	2	2		
	Aedes trivittatus	1	75		
	Aedes vexans	6	57		
	Anopheles barberi	2	13		
	Anopheles crucians	2	21		
	Anopheles punctipennis	17	115		
	Anopheles quadrimaculatus	21	73		
	Anopheles walkeri	1	19		
	Coquillettidia perturbans	2	2		
	Culex pipiens	222	8455		
	Culex restuans	18	106		
	Culex salinarius	1	1		
	Culex territans	4	9		
	Culiseta melanura	42	317		
Hudson		**134**	**7096**	**2**	**0.282**
	Culex spp.	134	7096	**2**	**0.282**
Hunterdon		**162**	**8026**	**1**	**0.125**
	Aedes albopictus	1	45		
	Culex spp.	161	7981	1	0.125
Mercer		**361**	**6105**	**1**	**0.164**
	Aedes albopictus	29	73		
	Aedes japonicus	47	109		
	Aedes triseriatus	7	9		
	Culex erraticus	1	1		
	Culex pipiens	83	596		
	Culex restuans	117	1576		
	Culex salinarius	5	5		
	Culex spp.	72	3736	1	0.268

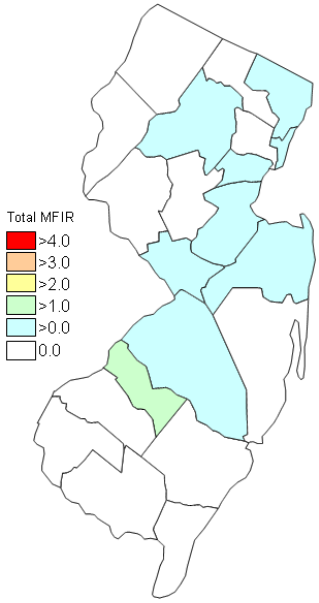
Middlesex		**242**	**11872**	**1**	**0.084**
	Aedes albopictus	6	38		
	Aedes japonicus	19	284		
	Culex spp.	217	11550	1	0.087
Monmouth		**387**	**3747**	**1**	**0.267**
	Aedes albopictus	26	134		
	Aedes canadensis canadensis	18	151		
	Aedes cantator	11	52		
	Aedes japonicus	26	207		
	Aedes sollicitans	2	3		
	Aedes thibaulti	1	1		
	Aedes triseriatus	17	74		
	Aedes trivittatus	6	6		
	Aedes vexans	13	74		
	Anopheles barberi	1	1		
	Anopheles punctipennis	16	36		
	Anopheles quadrimaculatus	4	5		
	Coquillettidia perturbans	4	12		
	Culex erraticus	2	15		
	Culex pipiens	14	21		
	Culex restuans	23	40		
	Culex spp.	114	2479	1	0.403
	Culex territans	8	18		
	Culiseta melanura	79	410		
	Psorophora ferox	2	8		
Morris		**114**	**4749**	**2**	**0.421**
	Aedes japonicus	19	334		
	Aedes triseriatus	3	26		
	Culex spp.	92	4389	2	0.456
Ocean		**353**	**6643**	**1**	**0.151**
	Aedes albopictus	41	442		
	Aedes atlanticus	3	6		
	Aedes canadensis canadensis	34	871		
	Aedes cantator	16	128		
	Aedes cinereus	1	1		
	Aedes grossbecki	1	1		
	Aedes japonicus	41	274		
	Aedes sollicitans	5	23		
	Aedes sticticus	6	10		
	Aedes taeniorhynchus	2	20		
	Aedes triseriatus	21	77		
	Aedes trivittatus	4	14		
	Aedes vexans	27	139		
	Anopheles bradleyi	6	42		
	Anopheles punctipennis	9	11		
	Anopheles quadrimaculatus	1	1		
	Coquillettidia perturbans	8	16		
	Culex restuans	5	5		
	Culex salinarius	11	59		
	Culex spp.	91	4412	1	0.227
	Culiseta melanura	13	45		
	Psorophora columbiae	1	1		
	Psorophora ferox	6	45		

Passaic		**77**	**1628**		
	Aedes albopictus	4	34		
	Aedes canadensis canadensis	1	20		
	Aedes japonicus	16	271		
	Aedes triseriatus	4	20		
	Anopheles punctipennis	1	2		
	Culex spp.	51	1281		
Salem		**107**	**2727**		
	Aedes albopictus	6	26		
	Aedes japonicus	5	26		
	Aedes triseriatus	1	1		
	Aedes vexans	2	150		
	Anopheles punctipennis	9	42		
	Anopheles quadrimaculatus	8	134		
	Coquillettidia perturbans	4	128		
	Culex erraticus	6	270		
	Culex restuans	4	79		
	Culex salinarius	2	150		
	Culex spp.	30	1505		
	Culex territans	2	2		
	Culiseta melanura	28	214		
Somerset		**170**	**4371**	**1**	**0.229**
	Aedes albopictus	6	18		
	Aedes canadensis canadensis	2	8		
	Aedes japonicus	25	427		
	Aedes sticticus	1	1		
	Aedes triseriatus	17	65		
	Aedes trivittatus	7	278		
	Aedes vexans	1	5		
	Anopheles punctipennis	8	21		
	Anopheles quadrimaculatus	3	7		
	Coquillettidia perturbans	3	4		
	Culex spp.	96	3534	1	0.283
	Psorophora ferox	1	3		
Sussex		**161**	**4092**	**1**	**0.244**
	Aedes japonicus	3	3		
	Coquillettidia perturbans	3	94		
	Culex pipiens	8	45		
	Culex restuans	6	190		
	Culex salinarius	12	44		
	Culex spp.	126	3703	1	0.270
	Culiseta melanura	2	10		
	Culiseta morsitans	1	3		
Union		**97**	**3270**	**5**	**1.529**
	Aedes albopictus	8	29		
	Aedes japonicus	11	104		
	Aedes sollicitans	1	1		
	Aedes vexans	3	15		
	Anopheles punctipennis	2	10		
	Coquillettidia perturbans	1	1		

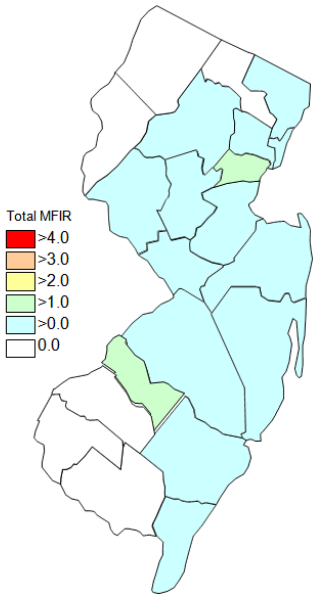
Culex spp.	72	3119	5	1.603
Warren	**163**	**9871**		
Culex spp.	163	9871		
Grand Total	**4925**	**129,605**	**43**	**0.332**



Cumulative activity in 2008

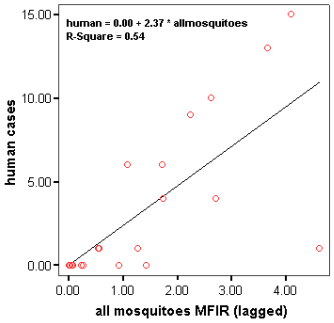


2009 Activity last week.



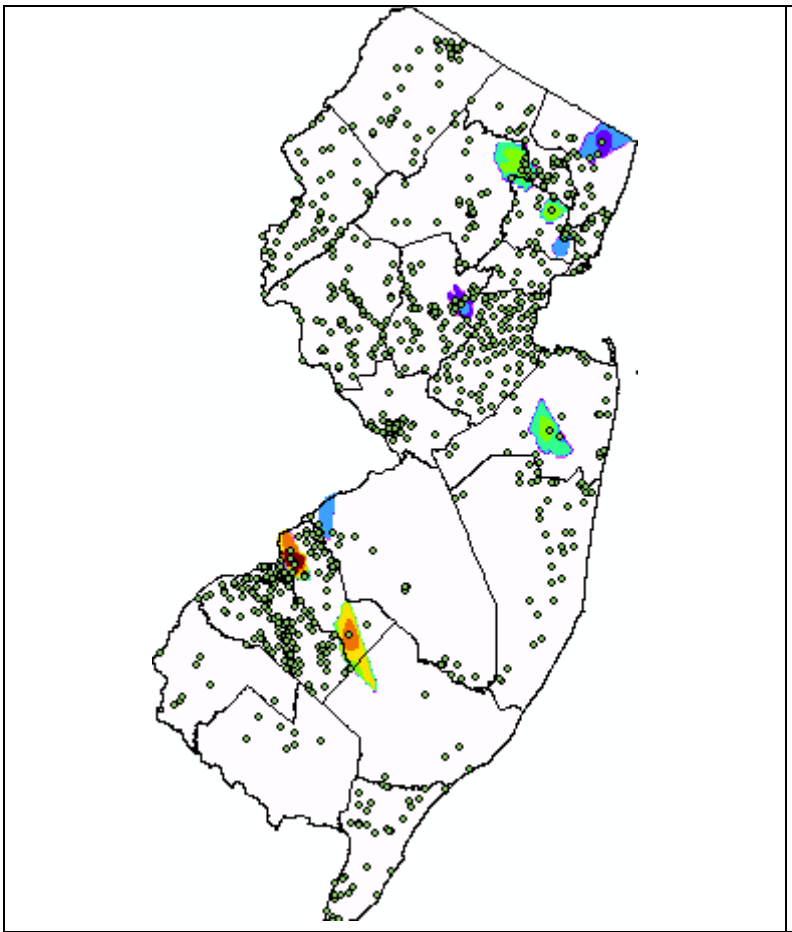
2009 Activity to 13 August 2009

WNV Risk of Exposure Model

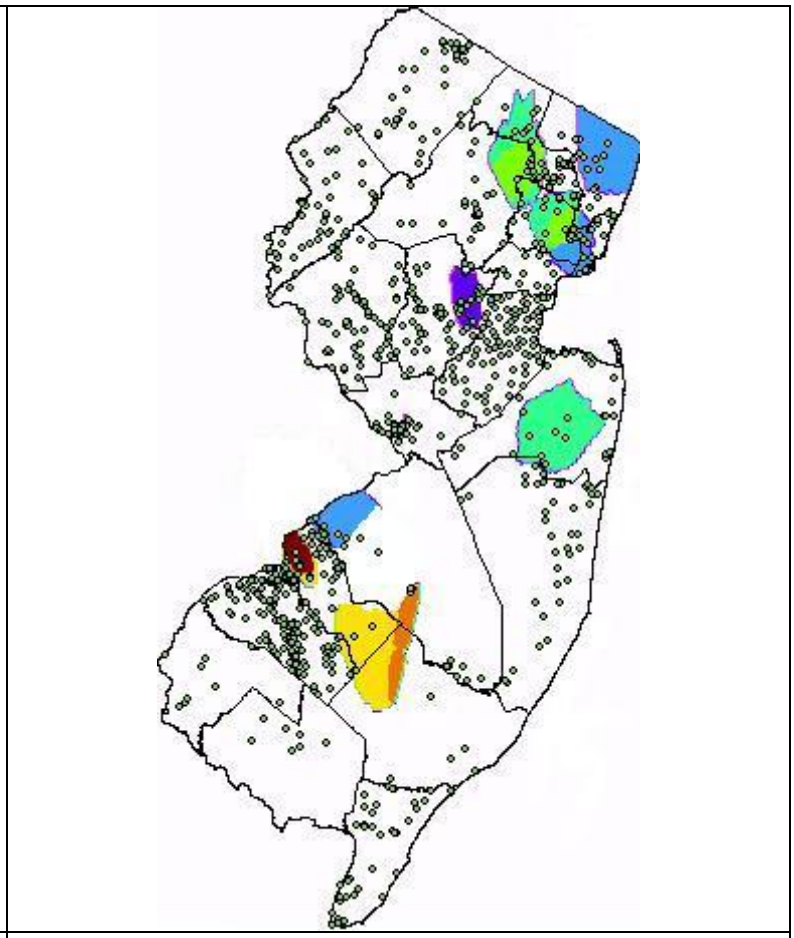


Risk Development: We are nearing the end of Phase 1 of our WNV Risk Exposure model presentation. Our WNV risk model begins with a simple linear relationship we have found between overall mosquito MFIR values and the number of human cases that appeared two weeks later. This relationship was developed using statewide values from 2002 to 2006. The regression model, graphed to the left, explains over 50% of the variation observed. We've continued to explore the variables that contribute to WNV cases, and will present more precise models on this page in the future.

Using ArcMap 9.2, we applied this linear relationship of overall mosquito MFIR values at the county level to calculate a "risk of exposure." Last risk map used county seats to map risk. This week, pool locations (green diamond symbols) were used. The values used in the linear regression were calculated from Week 29 (the two week lag) data values taken from the PHEL West Nile Virus database. Risk is rated from minimal exposure (no positive pools found) through to high risk (positive mosquitoes found) with several risk levels in between. It should be noted that minimal risk does not mean no risk and that high risk cannot be mediated by mosquito bite avoidance behavior.



1. Inverse distance weighted.



2. Kriging.

Summary: Areas of higher than minimal risk are seen to advance through the urban and suburban areas of New Jersey as additional WNV positive pools are detected. Understanding how values are interpolated between known points is important to interpreting the risk map. The first map (1) has been interpolated using inverse distance weighted, the technique used for previous maps. Unknown points (everything that is not a point with a calculated risk value) is given a given a value based upon how many points are involved, the distance between the points, characteristics of the known points distribution, how influential furthest points can be and how smooth the interpolation should be. The second map (2) has been interpolated using a kriging method ("ordinary, spherical semi-variogram model"). Kriging strives to achieve the smallest error model much like a least-squares regression model. Kriging was developed for geological processes. The assumptions include spatial dependence:

positive pools may develop near each other not only because counties tend to sample more vigorously around positive pools, finding more but also because positive pools may share a common source, such as birds with large territories or roaming flocks with positive individuals. Models that deviate from this can produce misleading maps. Both models provide pros and cons when mapping risk. Both models use a geometrical interval due to the high numbers of negative WNV pools in the database.

NOTE: These maps are presented as an additional early warning tool available for counties to use as part of their decision-making processes for controlling public-health mosquitoes. It should be understood that *minimal risk does not mean no risk* and that everyone should use personal protection to avoid mosquito bites.

Saint Louis Encephalitis (SLE) through 13 August 2009.

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.

County	Species	Pools	Mosquitoes	Positives	MFIR
Burlington		**238**	**5932**		
	Aedes abserratus	1	1		
	Aedes albopictus	24	138		
	Aedes atlanticus	1	1		
	Aedes atropalpus	1	15		
	Aedes canadensis canadensis	8	217		
	Aedes cantator	4	41		
	Aedes cinereus	1	6		
	Aedes japonicus	21	113		
	Aedes sollicitans	2	22		
	Aedes sticticus	1	41		
	Aedes taeniorhynchus	2	48		
	Aedes triseriatus	10	51		
	Aedes trivittatus	2	9		
	Aedes vexans	14	330		
	Anopheles barberi	1	1		
	Anopheles bradleyi	2	18		
	Anopheles crucians	1	5		
	Anopheles punctipennis	6	19		
	Anopheles quadrimaculatus	1	6		
	Coquillettidia perturbans	16	244		
	Culex erraticus	1	4		
	Culex pipiens	1	75		
	Culex restuans	1	3		
	Culex salinarius	4	74		
	Culex spp.	82	3699		
	Culex territans	2	7		
	Culiseta inornata	1	2		
	Culiseta melanura	23	719		
	Psorophora ciliata	1	1		
	Psorophora columbiae	1	4		
	Psorophora ferox	1	4		
	Uranotaenia sapphirina	1	14		
Camden		**93**	**3123**		
	Aedes albopictus	7	16		
	Aedes japonicus	10	32		
	Aedes triseriatus	1	1		
	Aedes vexans	1	1		

	Culex pipiens	2	95		
	Culex spp.	72	2978		
Cape May		**467**	**10064**		
	Aedes cantator	1	2		
	Aedes japonicus	2	22		
	Aedes triseriatus	2	11		
	Anopheles quadrimaculatus	1	1		
	Coquillettidia perturbans	1	19		
	Culex erraticus	2	78		
	Culex pipiens	129	2679		
	Culex restuans	115	1401		
	Culex salinarius	4	25		
	Culex spp.	207	5815		
	Culiseta melanura	3	11		
Essex		**169**	**3162**		
	Aedes albopictus	11	32		
	Aedes japonicus	16	75		
	Aedes sticticus	1	1		
	Aedes triseriatus	9	14		
	Aedes vexans	9	25		
	Anopheles punctipennis	1	1		
	Coquillettidia perturbans	1	1		
	Culex spp.	119	3010		
	Psorophora ferox	2	3		
Hunterdon		**34**	**1700**		
	Culex spp.	34	1700		
Mercer		**343**	**6003**		
	Aedes albopictus	29	73		
	Aedes japonicus	43	105		
	Aedes triseriatus	7	9		
	Culex pipiens	80	585		
	Culex restuans	113	1533		
	Culex salinarius	3	3		
	Culex spp.	68	3695		
Somerset		**16**	**432**		
	Culex spp.	16	432		
Grand Total		**1360**	**30416**		

Specimens submitted by the counties continue to be negative for SLE.

La Crosse Encephalitis (LAC) through 13 August 2009.

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).

County	Species	Pools	Mosquitoes	Positives	MFIR
Cape May		**127**	**505**		
	Aedes albopictus	15	41		
	Aedes japonicus	78	351		
	Aedes triseriatus	33	105		
	Culex restuans	1	8		
Passaic		**2**	**17**		
	Aedes triseriatus	2	17		
Grand Total		**129**	**522**		