RUTGERS
New Jersey Agricultural Experiment Station

VECTOR SURVEILLANCE IN NEW JERSEY
EEE, WNV, SLE and LAC
CDC WEEK 43: October 25 to October 31, 2009

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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	0.1	0.04	1023	42	3	2.93
Corbin City (Atlantic County)	Coastal	0.3	0	310	25	1	3.23
Dennisville (Cape May County)	Coastal	0	0	1715	55	20	11.66
Winslow † (Camden County)	Inland	No history	0.02	1518	35	16	10.54
Centerton (Salem County)	Inland	0.1	0.32	571	36	2	3.50
Turkey Swamp (Monmouth County)	Inland	0	0.14	1430	127	11	7.69
Glassboro (Gloucester County)	Inland	No history	0.08	1125	44	4	2.80

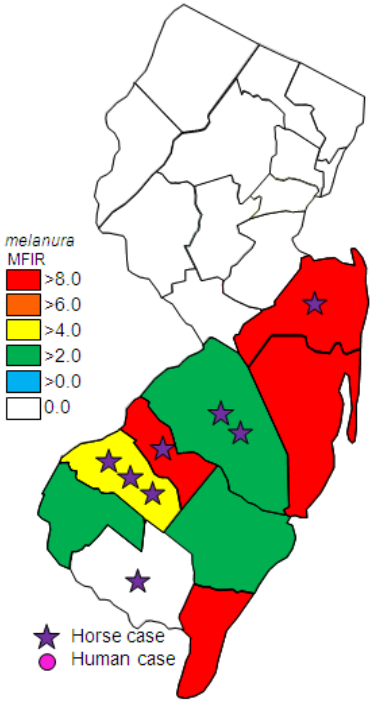
*Including trial run last week in May. † Date of site change-over occurred during Week 30.

Remarks: The total number of pools positive for eastern equine encephalitis remains at 118. Positive *Cs. melanura* pools from the traditional resting box sites remain at 57. Thirty-five positive *Cs. melanura* pools come from traps set by county agencies as well as 26 other positive species from those traps (see below). To date, 371 pools from 7714 *Cs. melanura* mosquitoes have been sent for EEE testing from the seven resting box collections, and a total of 791 pools from 14333 *Cs. melanura* from all trap sites. This is the last report of the season.

Positive species other than *Cs. melanura*	County(s)	Total Pools	Total Mosquitoes	Total Positive Pools	MFIR
Aedes canadensis	Burlington, Monmouth	52	834	3	3.597
Aedes japonicus	Ocean	74	243	1	4.115
Aedes vexans	Gloucester	49	841	1	1.189
Anopheles punctipennis	Monmouth	64	355	1	2.817

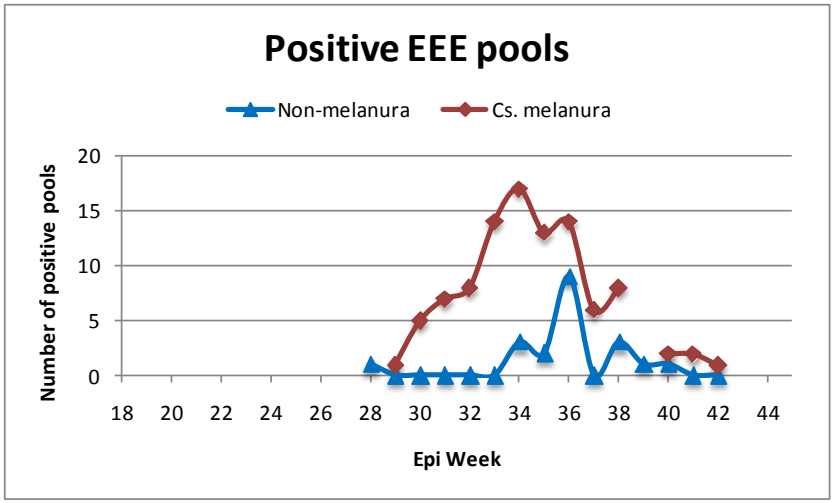
Positive species other than *Cs. melanura*	County(s)	Total Pools	Total Mosquitoes	Total Positive Pools	MFIR
Mixed *Culex* species	Atlantic, Monmouth	290	8282	3	0.362
Culex erraticus	Cape May Salem	183	7049	13	1.844
Culex pipiens	Cape May	76	505	2	3.960
Culex restuans	Cape May	115	512	1	1.953
Culex salinarius	Burlington	120	3202	1	0.312

Additional Species Pools: It should be noted that the last *Culex erraticus* found positive came from the Centerton resting box site. This positive species (detected positive for the first time in New Jersey this year) has been found initially in bird-dense habitat. This last site can also harbor birds, but they are more typically songbirds rather than waders of the initial site. Other species tested for EEE to date include *Aedes abserratus, Ae. albopictus, Ae. atlanticus, Ae. atropalpus, Ae. cantator, Ae. cinereus, Ae. sollicitans, Ae. sticticus, Ae. taeniorhynchus, Ae. thibaulti, Ae. triseriatus, Ae. trivittatus, Anopheles barberi, An. bradleyi, An. crucians, An. quadrimaculatus, An. walker, Coquillettidia perturbans, Cx. restuans, Cx. territans, Culiseta inornata, Cs. morsitans, Psorophora ciliate, Ps columbiae, Ps. ferox, Ps. howardii and Uranotaenia sapphirina.*



MFIR values: Figure to the right is the MFIR values of *Cs. melanura* for counties with positive pools, including non-resting box pools. Stars indicate only which counties have positive horses/alpacas, not location. There was no change from last week.

EEE Epicurve: The figure to the left illustrates the development of EEE pools in ornithophilic (*Cs. melanura, Cx. pipiens,* etc*)* and non-ornithophilic species over the season. As might be expected from an avian exploiting arbovirus, the ornithophilic species peaks prior to other species as amplification occurs. However, note that the first species detected with EEE infection was *Culex salinarius*.

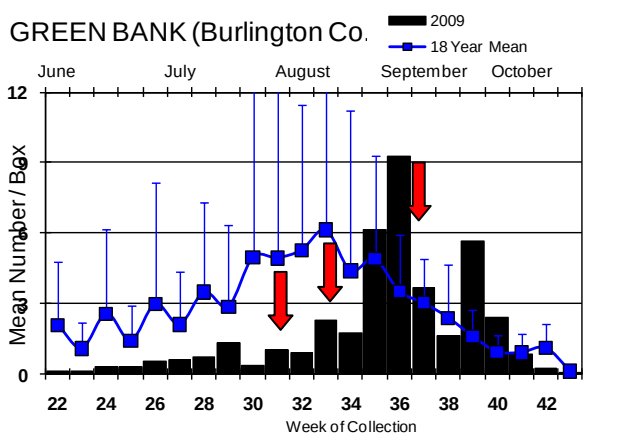


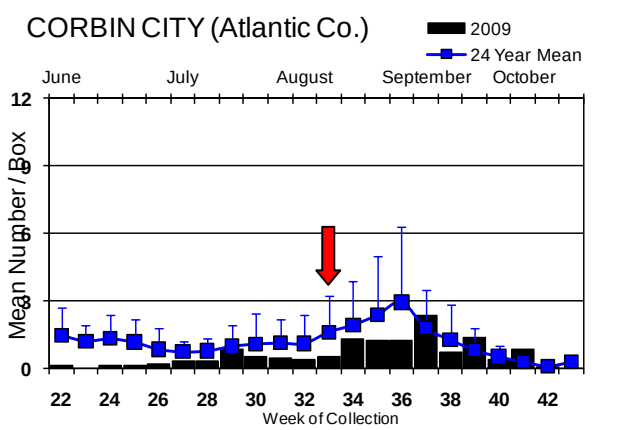
Horses and Humans: The number of EEE positive horses/alpaca remains at eight (Burlington-2, Camden-1, Cumberland-1, Gloucester-3 and Monmouth-1). Although the season is coming to an end, horse cases may continue to be detected into November (next week). The fate of these animals reinforces the necessity 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

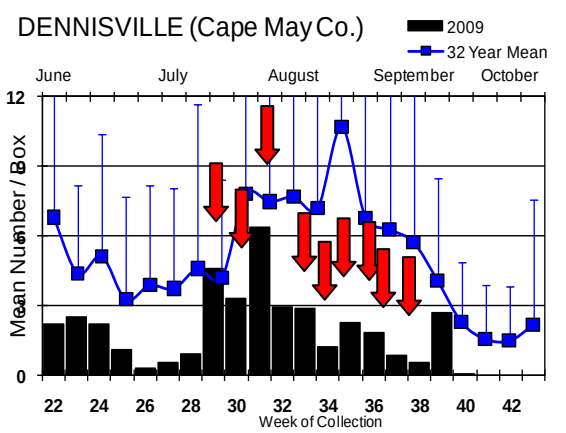
No human cases have been detected to date.

Culiseta melanura Population Graphs

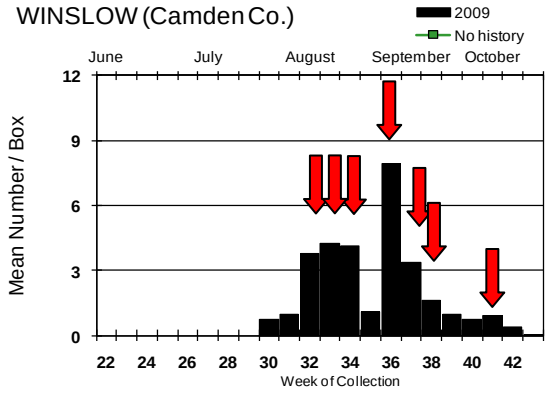
Coastal

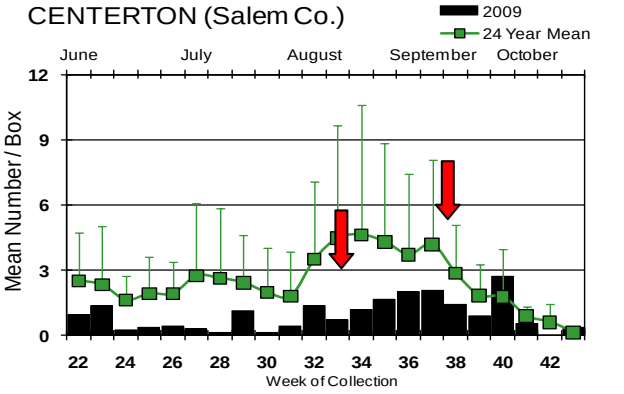


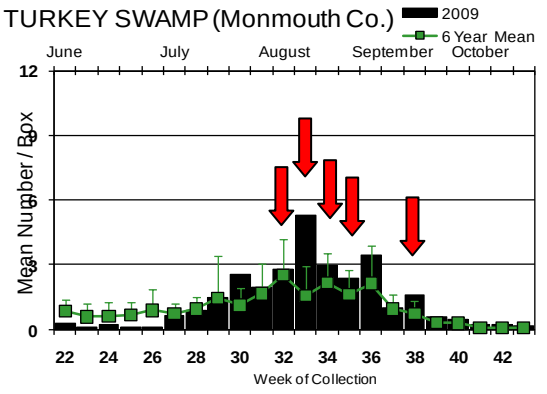




Inland

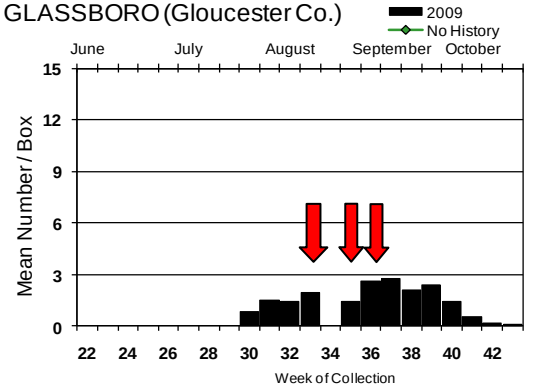






All mosquito species are experiencing significant drops in population levels as colder weather approaches.

↓ = positive pool(s) detected.



EEE in US (2009 cumulative cases): (Red = new reported cases occurring) [1 horse case Nova Scotia]

- equine: 19(AL) 1(AR) 69(FL) 44(GA) 21(LA) 2(MA) 1(MD) 16(ME) 1(MO) 43(MS) 17(NC) 7[1alpaca,1llama](NH) 8(1alpaca)(NJ) 7(NY) 2(RI) 12(SC) 4(TX) 11(1goat1alpaca)(VA)
- mosquito: 118(CT) 3(FL) 2(LA) 54(MA) 2(ME) 5(NC) 73(NH) 118(NJ) 59(NY) 4(RI) 141(VA)
- sentinel: 2(AL) 177/101wild(FL) 2(LA) 40(NC) 6(NH) 58[1emu,1fairybluebird(*Irena* sp)](VA)
- human: 1(LA) 1(NC) 1(NH) 1(NY)

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

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Alabama			1/2	1	
Alaska					
Arizona	1	87	5	0	17
Arkansas					3
California	497	1054/1059	442/463	17	91/98
Colorado		78		20/21	91
Connecticut	0	33	0	0	0
Delaware					
DC					
Florida	2/3 (flavi)		45/58	4/5	3
Georgia	0	24		2/3	4
Hawaii					
Idaho	3	9 co.		10	33
Illinois	26	404	0	6	5
Indiana	2	127		0	3
Iowa		9	6	2	5
Kansas		5			9/10
Kentucky	1	1		7	3
Louisiana		1034	20	5	14
Maine					
Maryland	0	9		0	2
Mass.		26		1	0
Michigan		3	0	0	0
Minnesota	1	4			3
Mississippi		7		4/9	50/53
Missouri		347/349 flavi		2	2/3
Montana		1		14	4
Nebraska	20/25	116/117		6	41

	Birds	Mosquito Pools	Sentinels	Horses	Humans
Nevada		18		3	12
New Hampshire		0		0	0
New Jersey	31	322	0	1	2/3
New Mexico		1		7	8
New York	66	100	0	0	6
North Carolina			1		
North Dakota	0	0		2 dogs	1
Ohio	0	243		0	2
Oklahoma	0	6	0	0	8
Oregon	15	266	0	5	7
Pennsylvania	10	279	0	2	0
Rhode Island		2/3			
South Carolina	2	17			3
South Dakota	0	18	0	4	17/19
Tennessee	1	488	0	0	6
Texas	10	377	0	9/17	96/98
Utah		284	1	6	2
Vermont	4	11/12	0	0	0
Virginia		41/119	14	3	3
Washington	22	341	0	71/72	34/36
West Virginia	3	141	0	1	0
Wisconsin	6		0	1	1
Wyoming		22		2	10/12

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 4 November 2009

Species	Pools	Mosquitoes	Positives	MFIR
Aedes abserratus	1	1		
Aedes albopictus	697	4541	3	0.661
Aedes atlanticus	17	52		
Aedes atropalpus	2	16		
Aedes canadensis canadensis	138	2881		
Aedes cantator	56	467		
Aedes cinereus	2	7		
Aedes grossbecki	3	35		
Aedes japonicus	854	5057	1	0.198
Aedes sollicitans	33	370		
Aedes sticticus	12	115		
Aedes taeniorhynchus	17	141		
Aedes thibaulti	6	9		
Aedes triseriatus	311	1181	1	0.847
Aedes trivittatus	41	609		
Aedes vexans	199	2863	1	0.349
Anopheles barberi	7	24		
Anopheles bradleyi	47	847	1	1.181
Anopheles crucians	6	36		
Anopheles punctipennis	175	647		
Anopheles quadrimaculatus	148	1557		
Anopheles walkeri	1	19		
Coquillettidia perturbans	65	622		
Culex erraticus	202	7221		
Culex pipiens	1037	21657	17	0.785
Culex restuans	649	6964	2	0.287
Culex salinarius	188	3900		
Culex spp.	3915	150780	294	1.950
Culex territans	33	119		
Culiseta inornata	1	2		
Culiseta melanura	722	10878	2	0.184
Culiseta morsitans	2	4		
Orthopodomyia signifera	3	3		
Psorophora ciliata	7	50		
Psorophora columbiae	10	239		
Psorophora ferox	48	495		
Psorophora howardii	1	6		
Uranotaenia sapphirina	9	26		
State Total	**9665**	**224441**	**322**	**1.435**

Remarks: The number of positive WNV pools remains at 322. Mosquito activity continues to drop.

Humans, Horses and Wild Birds: A third human has been reported potentially infected with West Nile virus. This 68 year old man had onset of symptoms on 25 September and resides on the border between Middlesex and Somerset counties. Confirmatory tests are being run. Two other human cases have been reported to PHEL. The first human was in Hunterdon County with symptom onset on 18 August. The second resided in Camden County, with onset of symptoms occurring on 28 August. 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

One horse with an uncertain vaccination history in Salem County was found positive earlier in the season. Positive dead birds remain at 31. Seventeen positive Blue Jays (*Cyanocitta cristata*) mostly in Ocean County, five American Crows (*Corvus brachyrhynchos*), seven unknown crow species (*Corvus*) and two unknown hawks have been detected with WNV infection to date. No Fish Crows (*Corvus ossifragus*) have been reported infected with WNV, although nearly as many Fish Crows as American Crows have been sent in to PHEL for testing.

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
322 / 9665 (3.3%)	621 / 8647 (7.2%)
2009 Positive Birds to date / Total Birds Submitted	This time last year* * 2008 started later (at least one month) last year than in 2009
31 / 126 (24.6%)	53 / 164 (32.3%)

WNV Results by County through 29 October 2009

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		**274**	**6376**	**3**	**0.471**
	Aedes albopictus	19	256		
	Aedes atlanticus	2	9		
	Aedes canadensis canadensis	8	99		
	Aedes cantator	8	148		
	Aedes grossbecki	1	8		
	Aedes japonicus	13	79		
	Aedes sollicitans	5	17		
	Aedes sticticus	2	18		
	Aedes taeniorhynchus	7	43		
	Aedes thibaulti	3	3		
	Aedes triseriatus	5	12		
	Aedes trivittatus	5	33		
	Aedes vexans	23	642		
	Anopheles bradleyi	9	60	1	16.667
	Anopheles punctipennis	7	13		
	Anopheles quadrimaculatus	5	9		
	Culex erraticus	5	20		
	Culex restuans	2	5		
	Culex salinarius	2	37		
	Culex spp.	103	4354	2	0.459
	Culex territans	1	1		
	Culiseta melanura	32	454		
	Psorophora columbiae	2	3		
	Psorophora ferox	5	53		
Bergen		**229**	**15096**	**80**	**5.299**
	Aedes albopictus	5	21		
	Aedes japonicus	12	42		
	Aedes triseriatus	1	1		
	Anopheles punctipennis	4	11		
	Culex spp.	207	15021	80	5.326

Burlington	**580**	**14981**	**25**	**1.669**
Aedes abserratus	1	1		
Aedes albopictus	45	316		
Aedes atlanticus	3	18		
Aedes atropalpus	2	16		
Aedes canadensis canadensis	37	1396		
Aedes cantator	7	71		
Aedes cinereus	1	6		
Aedes grossbecki	1	26		
Aedes japonicus	37	180		
Aedes sollicitans	5	71		
Aedes sticticus	2	85		
Aedes taeniorhynchus	4	57		
Aedes triseriatus	16	85		
Aedes trivittatus	2	9		
Aedes vexans	33	1037		
Anopheles barberi	1	1		
Anopheles bradleyi	12	491		
Anopheles crucians	2	11		
Anopheles punctipennis	12	47		
Anopheles quadrimaculatus	4	12		
Coquillettidia perturbans	21	288		
Culex erraticus	11	36		
Culex pipiens	1	75		
Culex restuans	4	6		
Culex salinarius	26	605		
Culex spp.	154	6479	25	3.859
Culex territans	3	13		
Culiseta inornata	1	2		
Culiseta melanura	118	3295		
Psorophora ciliate	2	34		
Psorophora columbiae	2	7		
Psorophora ferox	7	182		
Psorophora howardii	1	6		
Uranotaenia sapphirina	2	17		
Camden	**275**	**7201**	**20**	**2.777**
Aedes albopictus	31	154	2	12.987
Aedes japonicus	41	105	1	9.524
Aedes thibaulti	1	1		
Aedes triseriatus	5	5		
Aedes trivittatus	2	2		
Aedes vexans	1	1		
Anopheles punctipennis	3	8		
Anopheles quadrimaculatus	3	4		
Culex pipiens	3	107		
Culex restuans	3	3		
Culex spp.	171	6669	17	2.549
Culex territans	1	1		
Culiseta melanura	7	138		
Orthopodomyia signifera	3	3		

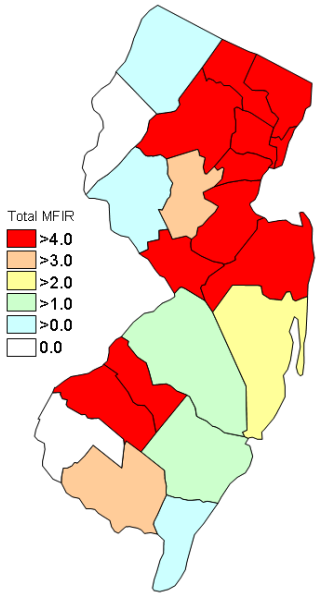
Cape May		**2372**	**38041**	**13**	**0.342**
	Aedes albopictus	149	535		
	Aedes canadensis canadensis	8	96		
	Aedes cantator	8	24		
	Aedes japonicus	209	744		
	Aedes sollicitans	10	111		
	Aedes taeniorhynchus	4	21		
	Aedes triseriatus	45	150		
	Aedes vexans	4	6		
	Anopheles bradleyi	13	198		
	Anopheles punctipennis	7	21		
	Anopheles quadrimaculatus	39	1084		
	Coquillettidia perturbans	3	30		
	Culex erraticus	115	6320		
	Culex pipiens	502	8434	6	0.711
	Culex restuans	409	4442	2	0.450
	Culex salinarius	98	2726		
	Culex spp.	514	9417	3	0.319
	Culex territans	7	29		
	Culiseta melanura	227	3648	2	0.548
	Psorophora ferox	1	5		
Cumberland		**140**	**2501**	**1**	**0.400**
	Aedes albopictus	12	131		
	Aedes atlanticus	2	12		
	Aedes cantator	1	15		
	Aedes japonicas	20	115		
	Aedes triseriatus	2	11		
	Aedes vexans	2	5		
	Anopheles punctipennis	1	1		
	Anopheles quadrimaculatus	2	5		
	Culex erraticus	12	104		
	Culex pipiens	22	588	1	1.701
	Culex restuans	6	22		
	Culex salinarius	1	5		
	Culex spp.	41	1345		
	Culex territans	1	1		
	Culiseta melanura	14	135		
	Psorophora ferox	1	6		
Essex		**280**	**3817**	**2**	**0.524**
	Aedes albopictus	22	130		
	Aedes japonicus	31	170		
	Aedes sticticus	1	1		
	Aedes triseriatus	20	34		
	Aedes trivittatus	4	28		
	Aedes vexans	19	74		
	Anopheles punctipennis	9	16		
	Anopheles quadrimaculatus	7	14		
	Coquillettidia perturbans	4	6		
	Culex spp.	157	3297	2	0.607
	Psorophora ciliata	1	3		
	Psorophora ferox	5	44		

Gloucester		**686**	**13632**	**3**	**0.220**
	Aedes albopictus	59	644		
	Aedes atlanticus	1	1		
	Aedes canadensis canadensis	2	2		
	Aedes japonicus	66	520		
	Aedes thibaulti	1	4		
	Aedes triseriatus	12	53		
	Aedes trivittatus	1	75		
	Aedes vexans	17	98		
	Anopheles barberi	3	20		
	Anopheles crucians	2	21		
	Anopheles punctipennis	39	212		
	Anopheles quadrimaculatus	43	194		
	Anopheles walkeri	1	19		
	Coquillettidia perturbans	7	31		
	Culex pipiens	326	10755	3	0.279
	Culex restuans	20	142		
	Culex salinarius	1	1		
	Culex territans	4	9		
	Culiseta melanura	78	821		
	Psorophora ciliata	2	9		
	Psorophora ferox	1	1		
Hudson		**238**	**11726**	**44**	**3.752**
	Culex spp.	238	11726	44	3.752
Hunterdon		**382**	**16487**	**39**	**2.366**
	Aedes albopictus	1	45		
	Culex erraticus	6	129		
	Culex spp.	375	16313	39	2.391
Mercer		**654**	**10191**	**20**	**1.963**
	Aedes albopictus	102	388		
	Aedes japonicus	110	298		
	Aedes triseriatus	18	31		
	Culex erraticus	4	4		
	Culex pipiens	130	1333	6	4.501
	Culex restuans	139	1908		
	Culex salinarius	8	38		
	Culex spp.	143	6191	14	2.261
Middlesex		**329**	**13833**	**13**	**0.940**
	Aedes albopictus	11	87		
	Aedes japonicus	29	357		
	Aedes triseriatus	1	6		
	Culex spp.	288	13383	13	0.971
Monmouth		**739**	**6428**	**2**	**0.311**
	Aedes albopictus	82	396		
	Aedes atlanticus	4	4		
	Aedes canadensis canadensis	39	309		

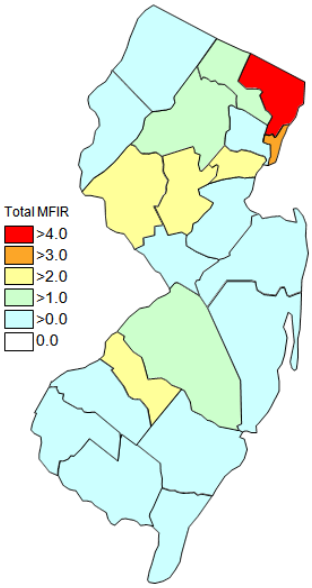
	Aedes cantator	11	52		
	Aedes japonicus	64	300		
	Aedes sollicitans	2	3		
	Aedes thibaulti	1	1		
	Aedes triseriatus	31	140		
	Aedes trivittatus	9	21		
	Aedes vexans	24	121		
	Anopheles barberi	3	3		
	Anopheles crucians	2	4		
	Anopheles punctipennis	36	160		
	Anopheles quadrimaculatus	17	40		
	Coquillettidia perturbans	6	15		
	Culex erraticus	16	145		
	Culex pipiens	24	64		
	Culex restuans	31	84		
	Culex salinarius	1	5		
	Culex spp.	166	2981	2	0.671
	Culex territans	14	63		
	Culiseta melanura	140	1470		
	Culiseta morsitans	1	1		
	Psorophora columbiae	1	3		
	Psorophora ferox	7	34		
	Uranotaenia sapphirina	7	9		
Morris		**215**	**8678**	**9**	**1.037**
	Aedes japonicus	30	421		
	Aedes triseriatus	5	39		
	Anopheles punctipennis	1	2		
	Culex spp.	179	8216	9	1.095
Ocean		**705**	**10812**	**6**	**0.555**
	Aedes albopictus	93	1206	1	0.829
	Aedes atlanticus	5	8		
	Aedes canadensis canadensis	41	951		
	Aedes cantator	21	157		
	Aedes cinereus	1	1		
	Aedes grossbecki	1	1		
	Aedes japonicus	85	446		
	Aedes sollicitans	8	133		
	Aedes sticticus	6	10		
	Aedes taeniorhynchus	2	20		
	Aedes triseriatus	35	99		
	Aedes trivittatus	5	15		
	Aedes vexans	53	224	1	4.464
	Anopheles bradleyi	13	98		
	Anopheles punctipennis	28	54		
	Anopheles quadrimaculatus	10	22		
	Coquillettidia perturbans	13	25		
	Culex erraticus	2	2		
	Culex pipiens	4	5		
	Culex restuans	20	39		
	Culex salinarius	24	89		
	Culex spp.	167	6844	4	0.584

	Culiseta melanura	51	283		
	Psorophora columbiae	2	2		
	Psorophora ferox	15	78		
Passaic		**120**	**2193**	**4**	**1.824**
	Aedes albopictus	10	76		
	Aedes canadensis canadensis	1	20		
	Aedes japonicus	28	450		
	Aedes triseriatus	14	67	1	14.925
	Anopheles punctipennis	2	5		
	Culex spp.	65	1575	3	1.905
Salem		**262**	**6661**	**3**	**0.450**
	Aedes albopictus	17	58		
	Aedes japonicus	8	37		
	Aedes triseriatus	9	25		
	Aedes trivittatus	1	4		
	Aedes vexans	12	521		
	Anopheles punctipennis	11	57		
	Anopheles quadrimaculatus	12	163		
	Coquillettidia perturbans	4	128		
	Culex erraticus	31	461		
	Culex pipiens	8	70	1	14.286
	Culex restuans	9	123		
	Culex salinarius	13	343		
	Culex spp.	77	3849	2	0.520
	Culex territans	2	2		
	Culiseta melanura	43	592		
	Psorohpora ciliate	2	4		
	Psorophora columbiae	3	224		
Somerset		**345**	**7075**	**16**	**2.261**
	Aedes albopictus	16	48		
	Aedes canadensis canadensis	2	8		
	Aedes japonicus	44	573		
	Aedes sticticus	1	1		
	Aedes triseriatus	40	153		
	Aedes trivittatus	12	422		
	Aedes vexans	3	25		
	Anopheles punctipennis	13	34		
	Anopheles quadrimaculatus	6	10		
	Coquillettidia perturbans	3	4		
	Culex spp.	202	5779	16	2.769
	Psorophora ferox	3	18		
Sussex		**380**	**9981**	**6**	**0.601**
	Aedes japonicus	6	36		
	Aedes triseriatus	47	259		
	Coquillettidia perturbans	3	94		
	Culex pipiens	17	226		
	Culex restuans	6	190		
	Culex salinarius	14	51		
	Culex spp.	274	9080	6	0.661

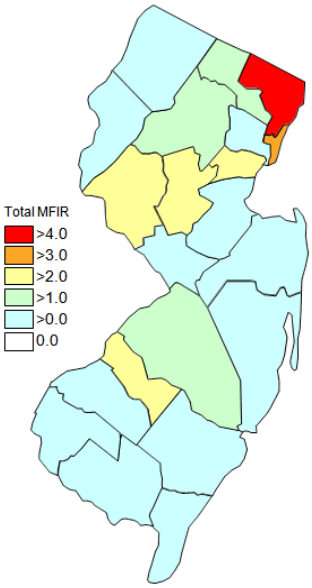
	Culiseta melanura	12	42		
	Culiseta morsitans	1	3		
Union		**169**	**4552**	**12**	**2.636**
	Aedes albopictus	24	95		
	Aedes japonicus	20	139		
	Aedes sollicitans	3	35		
	Aedes triseriatus	3	6		
	Aedes vexans	8	109		
	Anopheles punctipennis	2	6		
	Coquillettidia perturbans	1	1		
	Culex spp.	105	4087	12	2.936
	Psorophora ferox	3	74		
Warren		**291**	**14179**	**1**	**0.071**
	Aedes triseriatus	2	5		
	Culex spp.	289	14174	1	0.071
Grand Total		**9665**	**224441**	**322**	**1.435**



Cumulative activity in 2008



Activity this year to 4 Nov. 2009



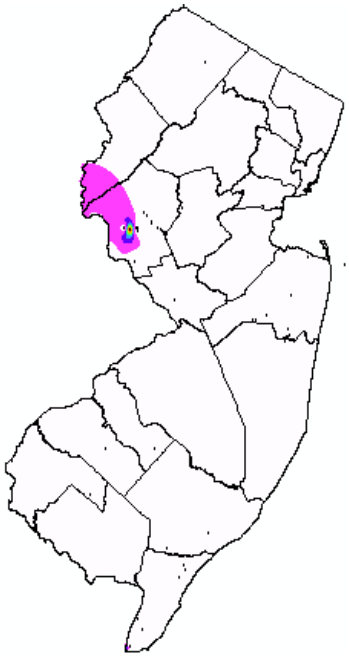
Activity last week, 2009.

WNV Risk Assessment

This multivariate model was developed using both climatic and biotic variables in predicting the number of weekly New Jersey human cases from 2002-2006 data. We began by using greater than 30 variables, eliminating those that did not have an explanatory value toward predicting risk of human cases. Five variables ultimately emerged, including Culex MFIR, Spring Rainfall, and temperature variations from average, non-Culex MFIR values and the percent of dead birds. We were able to account for greater than 75 percent of the variability. The model features variables that are lagged to include the time from being bitten by an infected mosquito to showing symptoms (i.e., incubation time up to 14 days).

GIS Application: Data for all five variables used in the model were retrieved and prepared for GIS use. Estimates of the 5 variables at pool collection points were obtained through interpolation of each variable and extraction. The extracted variables were then used in the multivariate equation to estimate human cases, and finally plotted through interpolation in ArcMap 9.2.

The model to the right indicates that risk is reduced throughout the state at this time. All calculated values were negative. The only components contributing to the y value were degree day accumulation, *Culex* MFIR and spring rainfall; other values were zero. MFIR values being restricted to one value from Hunterdon County (see the interpolated value in the map below). This is not unexpected as reduced activity should be reflected in the model.



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 always use personal protection to avoid mosquito bites.

Saint Louis Encephalitis (SLE) through 4 November 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		**499**	**12865**		
	Aedes abserratus	1	1		
	Aedes albopictus	45	316		
	Aedes atlanticus	3	18		
	Aedes atropalpus	2	16		
	Aedes canadensis canadensis	21	649		
	Aedes cantator	6	70		
	Aedes cinereus	1	6		
	Aedes japonicus	36	179		
	Aedes sollicitans	5	71		
	Aedes sticticus	1	41		
	Aedes taeniorhynchus	4	57		
	Aedes triseriatus	15	84		
	Aedes trivittatus	2	9		
	Aedes vexans	28	793		
	Anopheles barberi	1	1		
	Anopheles bradleyi	11	490		
	Anopheles crucians	2	11		
	Anopheles punctipennis	9	40		
	Anopheles quadrimaculatus	3	11		
	Coquillettidia perturbans	21	288		
	Culex erraticus	11	36		
	Culex pipiens	1	75		
	Culex restuans	2	4		
	Culex salinarius	24	603		
	Culex spp.	151	6469		
	Culex territans	2	7		
	Culiseta inornata	1	2		
	Culiseta melanura	76	2272		
	Psorophora ciliate	2	34		
	Psorophora columbiae	2	7		
	Psorophora ferox	7	182		
	Psorophora howardii	1	6		
	Uranotaenia sapphirina	2	17		
Camden		**191**	**4887**		
	Aedes albopictus	29	146		
	Aedes japonicus	29	82		
	Aedes triseriatus	5	5		
	Aedes vexans	1	1		
	Culex pipiens	2	95		
	Culex restuans	1	1		
	Culex spp.	121	4554		

	Orthopodomyia signifera	3	3		
Cape May		**974**	**17345**		
	Aedes albopictus	18	88		
	Aedes cantator	1	2		
	Aedes japonicus	6	34		
	Aedes triseriatus	3	14		
	Anopheles quadrimaculatus	1	1		
	Coquillettidia perturbans	2	22		
	Culex erraticus	2	78		
	Culex pipiens	350	6575		
	Culex restuans	178	1775		
	Culex salinarius	21	182		
	Culex spp.	379	8423		
	Culiseta melanura	13	151		
Essex		**216**	**3563**		
	Aedes albopictus	21	128		
	Aedes japonicus	17	107		
	Aedes sticticus	1	1		
	Aedes triseriatus	9	14		
	Aedes vexans	9	25		
	Anopheles punctipennis	1	1		
	Coquillettidia perturbans	1	1		
	Culex spp.	155	3283		
	Psorophora ferox	2	3		
Hunterdon		**66**	**3300**		
	Culex spp.	66	3300		
Mercer		**636**	**10089**		
	Aedes albopictus	102	388		
	Aedes japonicus	106	294		
	Aedes triseriatus	18	31		
	Aedes erraticus	3	3		
	Culex pipiens	127	1322		
	Culex restuans	135	1865		
	Culex salinarius	6	36		
	Culex spp.	139	6150		
Ocean		**2**	**3**		
	Aedes albopictus	1	1		
	Culex spp.	1	2		
Somerset		**22**	**557**		
	Aedes albopictus	1	4		
	Culex spp.	21	553		
Sussex		**30**	**187**		
	Aedes triseriatus	30	187		

Warren		**15**	**739**		
	Culex sp.	15	739		
Grand Total		**2651**	**53535**		

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

La Crosse Encephalitis (LAC) through 4 November 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		**322**	**1397**		
	Aedes albopictus	120	440		
	Aedes japonicus	146	577		
	Aedes sollicitans	1	2		
	Aedes triseriatus	42	138		
	Anopheles bradleyi	1	34		
	Culex pipiens	1	41		
	Culex restuans	1	8		
	Culex salinarius	2	77		
	Culex spp.	6	70		
	Culiseta melanura	2	10		
Passaic		**2**	**17**		
	Aedes triseriatus	2	17		
Sussex		**58**	**394**		
	Aedes japonicus	2	30		
	Aedes triseriatus	47	259		
	Culex pipiens	1	11		
	Culex spp.	8	94		
Warren		**2**	**5**		
	Aedes triseriatus	2	5		
Grand Total		**390**	**1835**		

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