

VECTOR SURVEILLANCE IN NEW JERSEY
EEE, WNV, SLE and LAC
CDC WEEK 24: June 13 to June 19, 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	2.43	0.12	37	3	0	0
Corbin City (Atlantic County)	Coastal	1.25	1.44	139	3	0	0
Dennisville (Cape May County)	Coastal	5.04	3.54	27	2	0	0
Winslow (Camden County)	Inland	No history this week	7.98	569	12	0	0
Centerton (Salem County)	Inland	1.53	5.62	99	3	0	0
Turkey Swamp (Monmouth County)	Inland	0.54	0.48	58	9	0	0
Glassboro (Gloucester County)	Inland	0.5 [†]	1.09	105	3	0	0

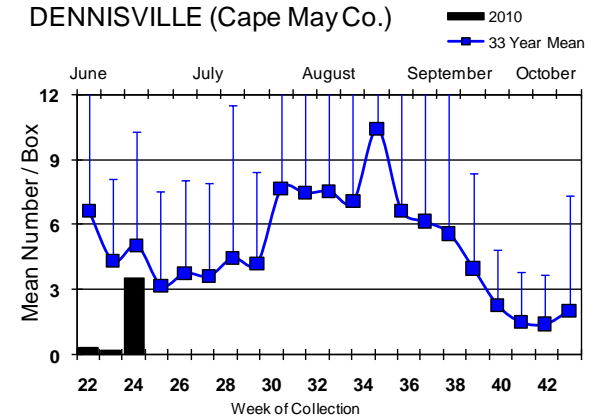
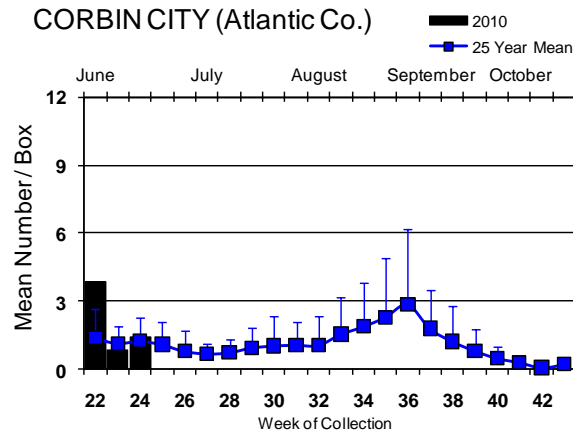
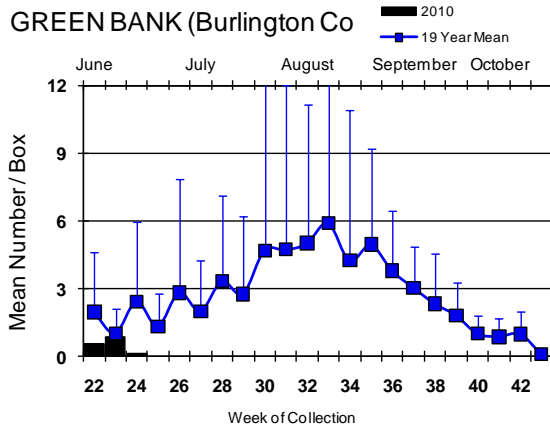
*Including trial run last week in May. † mean from location < 1 mile away.

Remarks: There are no positive EEE pools to report at this time. To date, 1034 *Culiseta melanura* mosquitoes forming 35 pools from the seven traditional resting box sites have been tested. An additional 245 *Cs. melanura* have been tested from 5 sites in Gloucester, 4 sites in Ocean and 7 sites in Sussex counties, all negative. Other ornithophilic species tested were *Culex* spp. from the Corbin City site, *Culex pipiens* and *restuans* from the Turkey Swamp site and *Culiseta minnesotae* from Sussex County, which tested negative as well. *Cs. minnesotae*, like *Cs. melanura* is primarily a bird-feeder and have been found positive for EEE elsewhere.

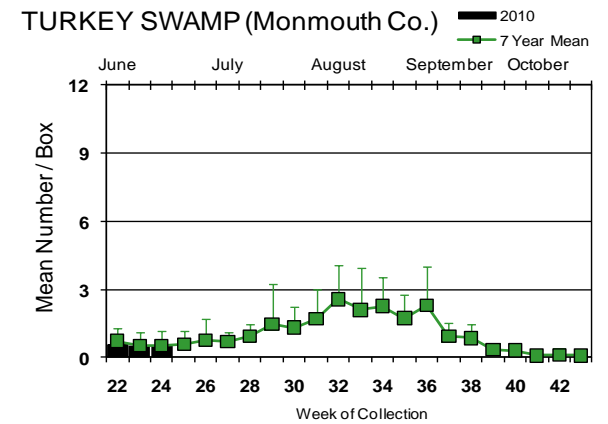
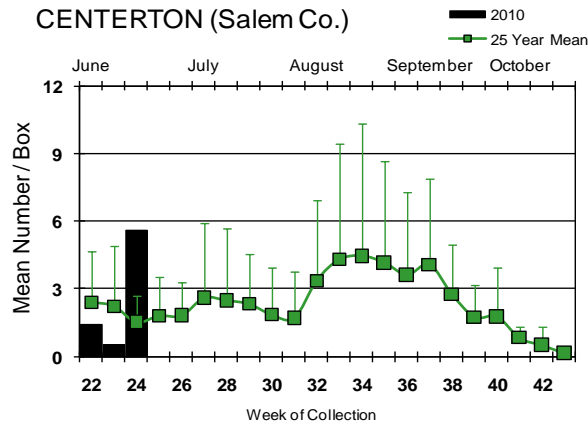
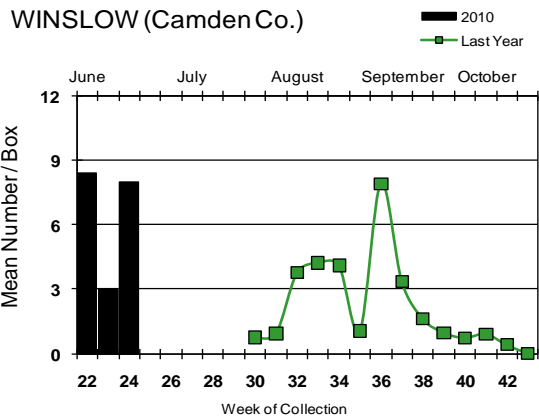
Horses and Vaccinations: The fate of unvaccinated equids reinforces the necessity of maintaining a vaccination schedule for arboviruses. For vaccination schedules recommended by the American Association of Equine Practices, see: http://www.aaep.org/vaccination_guidelines.htm

Culiseta melanura Population Graphs

Coastal

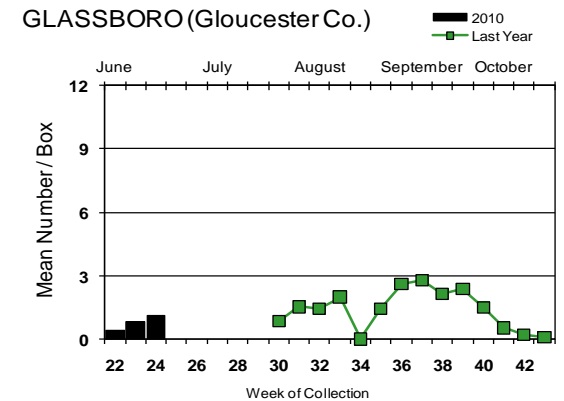


Inland



Cs. melanura populations in resting boxes at the seven monitoring sites have increased from the previous week at all but two sites (Green Bank and Turkey Swamp). Large increases were seen at Dennisville, Winslow and Centerton, reflecting the activity seen in light trap data of the adult mosquito surveillance program. Centerton (and possibly Winslow) appear to have significantly higher abundances than historical trends. The Glassboro site was reported as somewhat dry, possibly contributing to the lower numbers seen there.

↓ = Zero positive pool(s) detected.



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

- equine: 6(FL)
- mosquito: 2(FL)
- sentinel: 19/13(FL)

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					
Alaska					
Arizona		5/19			
Arkansas					
California	18/24	6			
Colorado					
Connecticut					
Delaware					
DC					
Florida			40		
Georgia					
Hawaii					
Idaho					
Illinois	8	3			
Indiana					
Iowa					
Kansas					
Kentucky					
Louisiana					
Maine					
Maryland					
Mass.					
Michigan					
Minnesota					
Mississippi					2/1
Missouri					
Montana					
Nebraska					

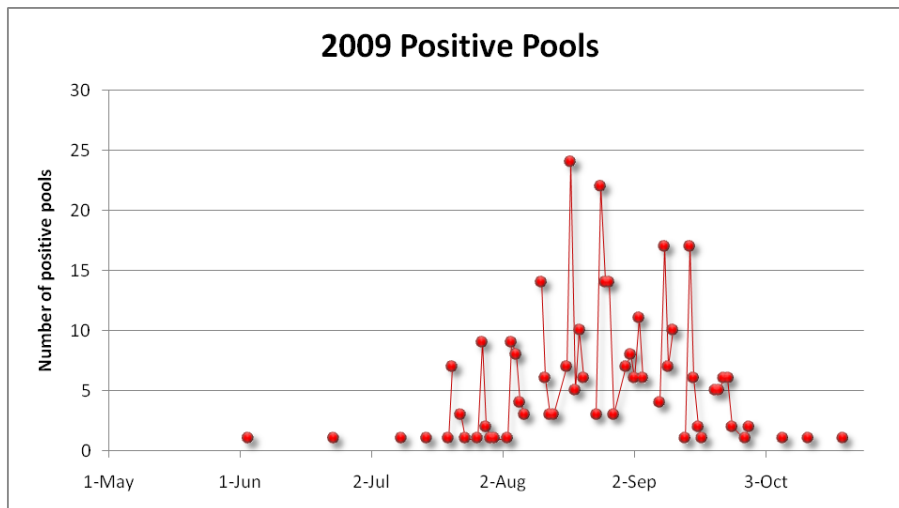
	Birds	Mosquito Pools	Sentinels	Horses	Humans
Nevada					
New Hampshire					
New Jersey	0	1	0	0	0
New Mexico					
New York					
North Carolina					
North Dakota					
Ohio					
Oklahoma					
Oregon					
Pennsylvania		2/6			
Rhode Island					
South Carolina					
South Dakota					
Tennessee		1			
Texas		1/2			
Utah					
Vermont					
Virginia					
Washington					
West Virginia		7			
Wisconsin					
Wyoming					

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 21 June 2010

Species	Pools	Mosquitoes	Positives	MFIR
<i>Aedes albopictus</i>	10	19		
<i>Aedes canadensis canadensis</i>	12	198		
<i>Aedes cantator</i>	4	9		
<i>Aedes japonicus</i>	24	124		
<i>Aedes sticticus</i>	1	1		
<i>Aedes triseriatus</i>	7	33		
<i>Aedes trivittatus</i>	1	1		
<i>Aedes vexans</i>	3	37		
<i>Anopheles punctipennis</i>	3	113		
<i>Anopheles quadrimaculatus</i>	1	1		
<i>Coquillettidia perturbans</i>	14	390		
<i>Culex pipiens</i>	26	415		
<i>Culex restuans</i>	34	280		
<i>Culex salinarius</i>	3	4		
<i>Culex spp.</i>	135	3858	1	0.259
<i>Culiseta melanura</i>	61	878		
<i>Culiseta minnesotae</i>	1	1		
<i>Orthopodomyia signifera</i>	1	1		
State Total	341	6363	1	0.157

Remarks: The number of positive WNV mosquito pools to date continues to be 1, found in a single *Culex* spp. from Camden County. In 2009, it took a few weeks for the next positive pool to appear (graph below). Multiple positive were found early in 2008, but testing did not begin until July.



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>

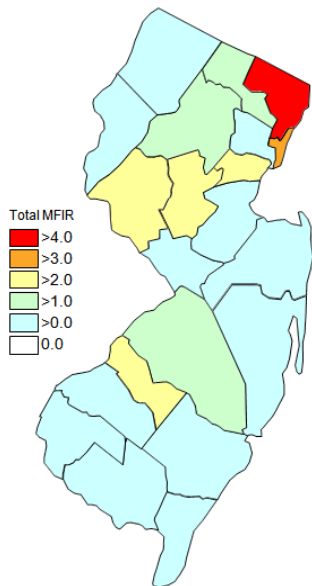
Seventeen birds have been tested and found negative for WNV. These include 6 *Corvus* (American, Fish and unidentified Crows), 4 Blue Jays (*Cyanocitta cristata*), 1 Hawk (unknown species) and 8 unknown species.

2010 Positive Mosquito pools to date / Total Mosquito Pools Submitted	This time last year
1 / 341 (0.003%)	1 / 956 (0.001%)
2010 Positive Birds to date / Total Birds Submitted	This time last year
0 / 19 (0%)	0 / 21 (0%)

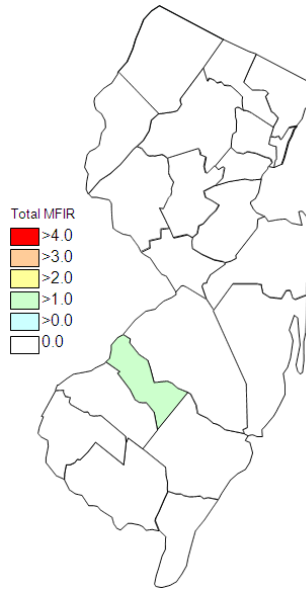
WNV Results by County through 21 June 2010

County	Species	Pools	Mosquitoes	Positives	MFIR
Atlantic		14	239		
	<i>Aedes canadensis canadensis</i>	1	2		
	<i>Aedes cantator</i>	1	3		
	<i>Aedes trivittatus</i>	1	1		
	<i>Aedes vexans</i>	1	31		
	<i>Anopheles punctipennis</i>	1	37		
	<i>Coquillettidia perturbans</i>	1	2		
	<i>Culex</i> spp.	3	7		
	<i>Culiseta melanura</i>	4	155		
	<i>Orthopodomyia signifera</i>	1	1		
Burlington		3	37		
	<i>Culiseta melanura</i>	3	37		
Camden		16	557	1	1.795
	<i>Aedes canadensis canadensis</i>	1	1		
	<i>Aedes japonicus</i>	2	2		
	<i>Culex</i> spp.	13	554	1.000	1.805
Cape May		88	1205		
	<i>Aedes triseriatus</i>	1	10		
	<i>Culex pipiens</i>	22	390		
	<i>Culex restuans</i>	26	187		
	<i>Culex</i> spp.	18	240		
	<i>Culiseta melanura</i>	21	378		
Gloucester		5	197		
	<i>Culiseta melanura</i>	5	197		
Hudson		13	234		
	<i>Culex</i> spp.	13	234		
Hunterdon		15	750		
	<i>Culex</i> spp.	15	750		
Middlesex		21	933		
	<i>Aedes japonicus</i>	3	21		
	<i>Aedes triseriatus</i>	1	6		
	<i>Culex</i> spp.	17	906		
Monmouth		61	302		

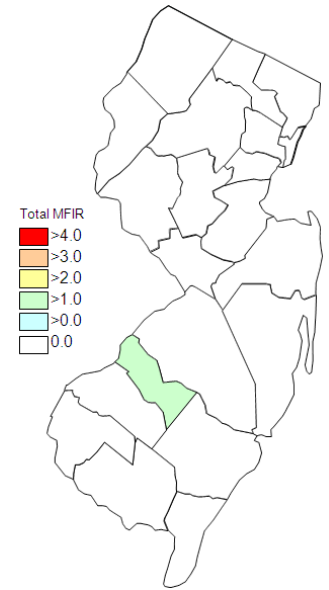
	<i>Aedes albopictus</i>	6	13		
	<i>Aedes canadensis canadensis</i>	6	22		
	<i>Aedes cantator</i>	3	6		
	<i>Aedes japonicus</i>	11	41		
	<i>Aedes triseriatus</i>	2	2		
	<i>Anopheles punctipennis</i>	1	1		
	<i>Anopheles quadrimaculatus</i>	1	1		
	<i>Coquillettidia perturbans</i>	2	2		
	<i>Culex pipiens</i>	1	1		
	<i>Culex restuans</i>	1	1		
	<i>Culex salinarius</i>	2	2		
	<i>Culex spp.</i>	13	147		
	<i>Culiseta melanura</i>	12	63		
Ocean		33	520		
	<i>Aedes albopictus</i>	3	5		
	<i>Aedes canadensis canadensis</i>	4	173		
	<i>Aedes japonicus</i>	4	36		
	<i>Aedes sticticus</i>	1	1		
	<i>Aedes triseriatus</i>	2	10		
	<i>Aedes vexans</i>	2	6		
	<i>Coquillettidia perturbans</i>	1	1		
	<i>Culex spp.</i>	12	257		
	<i>Culiseta melanura</i>	4	31		
Passaic		15	176		
	<i>Aedes albopictus</i>	1	1		
	<i>Aedes japonicus</i>	3	16		
	<i>Aedes triseriatus</i>	1	5		
	<i>Coquillettidia perturbans</i>	1	14		
	<i>Culex spp.</i>	9	140		
Sussex		30	207		
	<i>Culex pipiens</i>	3	24		
	<i>Culex restuans</i>	7	92		
	<i>Culex salinarius</i>	1	2		
	<i>Culex spp.</i>	6	71		
	<i>Culiseta melanura</i>	12	17		
	<i>Culiseta minnesotae</i>	1	1		
Union		12	443		
	<i>Aedes japonicus</i>	1	8		
	<i>Coquillettidia perturbans</i>	1	9		
	<i>Culex spp.</i>	10	426		
Warren		15	563		
	<i>Anopheles punctipennis</i>	1	75		
	<i>Coquillettidia perturbans</i>	8	362		
	<i>Culex spp.</i>	6	126		
Grand Total		341	6363	1	0.157



Cumulative WNV activity in 2009.



WNV activity to 21 June, 2010.



WNV activity last week, 2010.

Saint Louis Encephalitis (SLE) through 21 June 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
Camden		16	557		
	<i>Aedes canadensis canadensis</i>	1	1		
	<i>Aedes cantator</i>	2	2		
	<i>Aedes trivittatus</i>	13	554		
Hudson		13	234		
	<i>Culex</i> spp.	13	234		
Grand Total		29	791		

La Crosse Encephalitis (LAC) through 21 June 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 to date, 2010.