



City of Geneva

September 2013 - Status Report

Season Perspective

Weather conditions critically affect the seasonal mosquito population and risk of mosquito-borne disease transmission. Excessive rainfall periods trigger hatches of floodwater mosquitoes (*Aedes vexans*), the dominant annoyance species in northern Illinois that has a flight range of 15 to 20 miles. On-the-other hand, drought conditions provide the classic pattern for the northern house mosquito (*Culex pipiens*) to flourish in stagnant water habitats and increase the potential of West Nile virus (WNV).

September temperatures in the Chicago area fluctuated, but overall the month averaged nearly 3 degrees warmer than a year ago. The lack of precipitation in July and August made the floodwater mosquito a non-factor during the second half of the season. However, the dry conditions established the classic pattern for the *Culex* population to flourish in stagnant water habitats. In September, the number of WNV positive *Culex* mosquito samples spiked and several WNV human cases were reported in the Chicago area. Late summer is prime time for WNV activity and the National Weather Service predicts a warmer than normal September. WNV will be a threat until the first killer frost occurs.

Mosquito-Borne Disease Update

As of September 24, 2013, 45 states and the District of Columbia have reported West Nile virus infections in people, birds, or mosquitoes, as shown on the map below. A total of 1,135 cases of West Nile virus disease in people, including 44 deaths, have been reported to CDC. Of these, 529 (47%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 606 (53%) were classified as non-neuroinvasive disease, including four deaths, have been reported to CDC.





According to the Illinois Department of Public Health as of September 25th, there have been 2,468 WNV-positive mosquito samples reported throughout the state. A total of 27 WNV human cases have been reported in 16 counties, 8 of which occurring in Cook County.

Illinois Department of Public Health West Nile virus data summary (as of 9-25-2013)

County	American Crow	Blue Jay	Other Birds	Mosquito Batches	Horse	Human Cases
Cook	2	1	7	1,673	0	8
DeKalb	0	0	0	6	0	0
DuPage	0	0	0	152	0	1
Kane	3	0	1	29	0	0
Kendall	0	0	0	7	0	0
Lake	1	0	1	32	0	2
McHenry	4	1	4	29	0	2
Stephenson	2	0	0	0	0	1
Will	1	0	0	77	1	0
Winnebago	9	0	0	12	0	0
TOTAL (54 Counties)	46	9	22	2,468	4	27

Brood Prediction

The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Distinct hatches of floodwater mosquito populations, or broods, are triggered by significant rainfall events. The Clarke Brood Prediction Model calculates peak annoyance periods based on rainfall and temperature data collected from weather stations in your area.

Weather Station Name	Rainfall Date	Rain Amount	Brood Prediction Date
Elgin	08/21/2013	0.40	09/10/2013
Elgin	08/22/2013	0.65	09/11/2013
Elgin	08/30/2013	1.00	09/15/2013
Elgin	08/31/2013	0.43	09/22/2013
Elgin	09/01/2013	1.24	09/23/2013
Elgin	09/28/2013	0.48	10/12/2013

Recommendations

The CDC currently shows a risk category 2. Increase larval control, source reduction, and public education emphasizing personal protection measures, particularly among the elderly. Intensify adult mosquito control in areas where surveillance indicates human risk, initiate adult mosquito control if not already in progress, initiate visible activities in community to increase attention to WNV transmission risk. Work with collaborators to reduce risks to the elderly.