



Village of Hainesville August 2017 - Status Report

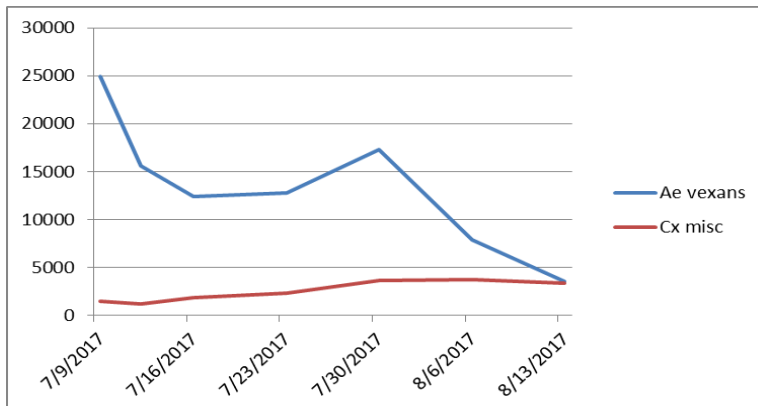
Season Perspective

Introduction: Weather conditions critically affect the seasonal mosquito population. 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. The other target species is the northern house mosquito (*Culex pipiens*), the primary vector of West Nile virus (WNV) that flourishes under stagnant water drought conditions.

Current Status: The 2017 mosquito season has been influenced greatly by wide swings in the weather pattern, including heat waves, cool spells, dry spells and flooding rains. According to the Illinois State Climatologist, Jim Angel:

“Chicago experienced an early summer heat wave in during the first two weeks of June with temperatures reaching up into the 90s, which was well above normal for that time of year. This was followed by cooler conditions in the second half of June. Periods of cooler and warmer than normal weather alternating throughout July; this is pretty common. August has been running cooler than normal so far. The lesson here is that early season heat waves do not necessarily set the tone for the rest of the summer (thank goodness). For Chicago, June was 3.5 degrees above normal, July was 0.6 degrees above normal, and August so far is 2.5 degrees below normal.”

As a result of the late June and July flooding rains, the floodwater mosquito population peaked in July. By far, the most intense mosquito annoyance conditions occurred across the following northern tier of Illinois counties due to historic flooding: Lake, McHenry, Boone and Winnebago. The following graph compares *Aedes vexans* vs. *Culex* mosquito population levels in the Clarke northern Illinois network of 105 New Jersey light traps. The data shows the *Aedes vexans* July peak and August decline, while the *Culex* levels remain relatively constant.





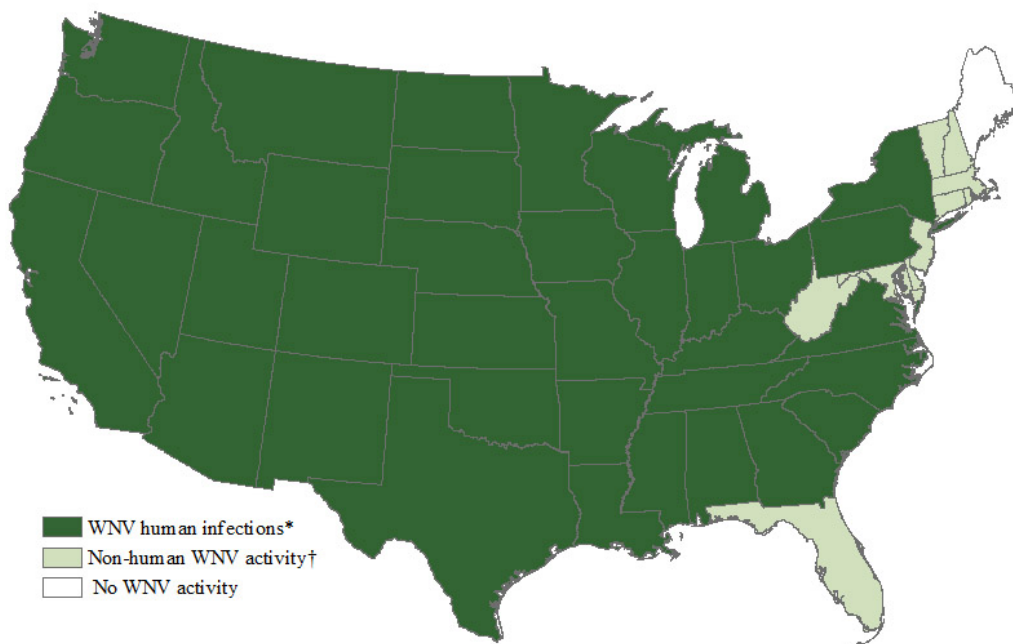
While the floodwater mosquito population peaked in July, dry conditions supported the constant development of the *Culex* population. To date, the Illinois Department of Public Health (IDPH) is reporting sixteen (16) human cases of West Nile virus (WNV) in Cook, DuPage, Kane, Kankakee, McHenry, Will, Winnebago and downstate Adams, Madison and Jackson Counties. Although the risk is well below the levels associated with the 2012 WNV outbreak, it remains at moderate levels and citizens should be advised to take precautions to avoid mosquito bite. IDPH has reported of 1,549 WNV-positive (WNV+) mosquitoes collected in 52 Illinois counties. The majority of the samples (1,279 of 1,549 – 82.5%) have been collected in the immediate Chicagoland area in Cook, DuPage, Kane, Lake, McHenry and Will Counties.

As we move into the home stretch of the season, surveillance and larval control activities will focus on the *Culex* population. To protect the public health, proactive truck ultra-low volume (ULV) adulticide applications will be recommended to reduce the potential of WNV transmission to the human population, as well as, to control spotty annoyance conditions.

MOSQUITO-BORNE DISEASE UPDATE

USA - West Nile Virus (WNV)

2017 Centers for Disease Control & Prevention (CDC) WNV Summary: As of September 5, 2017, a total of 43 states and the District of Columbia have reported West Nile virus infections in people, birds, or mosquitoes in 2017. Overall, 526 cases of West Nile virus disease in people have been reported to CDC. Of these, 303 were classified as neuroinvasive disease (such as meningitis or encephalitis) and 223 were classified as non-neuroinvasive disease.





Illinois – WNV Update

- Sixteen (16) human cases of West Nile virus (WNV) in Cook, DuPage, Kane, Kankakee, McHenry, Will, Winnebago and downstate Adams, Madison and Jackson Counties.
- IDPH reports the following WNV activity in northern Illinois counties:

County	Birds	Mosquito Batches
COOK	4	969
DEKALB	1	2
DUPAGE	0	145
GRUNDY	0	8
KANE	0	30
KANKAKEE	0	17
KENDALL	0	25
LAKE	1	62
MCHENRY	0	16
STEPHENSON	2	5
WILL	0	57
WINNEBAGO	0	5
TOTAL	14	1,549

Zika virus (ZIKV)

The CDC reports the following ZIKV human case summaries for 2016 compared to year-to-date in 2017, as of August 31, 2017:

ZIKV CASE TYPE	UNITED STATES		US TERRITORIES		NOTES
	2016	2017 - YTD	2016	2017 - YTD	
Travelers returning from affected areas	4,830	223	142	0	2016 breakdown: 49 states & DC; IL - 103
Acquired through presumed <u>local</u> mosquito-borne disease transmission	224	0	35,937	554	2016 breakdown: FL-218, TX-6. PR-34,963
Acquired through other routes (e.g. sexual, laboratory or blood-borne transmission)	48	2	0	0	
HUMAN CASE TOTALS	5,102	223	36,079	554	



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
Northlake	07/19/2017	0.77	08/02/2017
Northlake	07/20/2017	0.45	08/03/2017
Northlake	07/21/2017	1.38	08/04/2017
Northlake	07/23/2017	1.06	08/06/2017

Upcoming September Operations

1 Targeted Inspection

Services Performed 2017:

Service Item	Start Date
ROS1302 - Targeted Site Larval Insp Serv	08/01/2017
ROS2712 - Biomist ATV/ULV Appl. Nights	08/10/2017
ROS2888 - Biomist 3+15 Truck ULV	08/10/2017
ROS1252 - Complete Site Larval Insp Serv	08/14/2017
ROS2222 - Vectolex Heli Prehatch (5#/A)	08/22/2017