



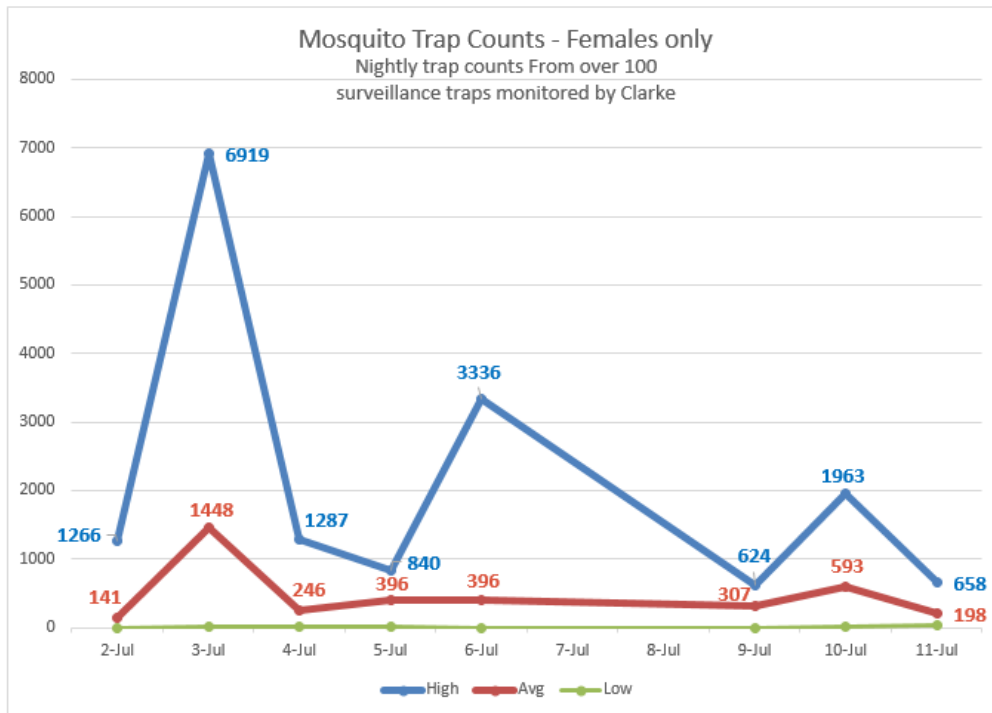
# Plainfield Township July 2018 - Status Report

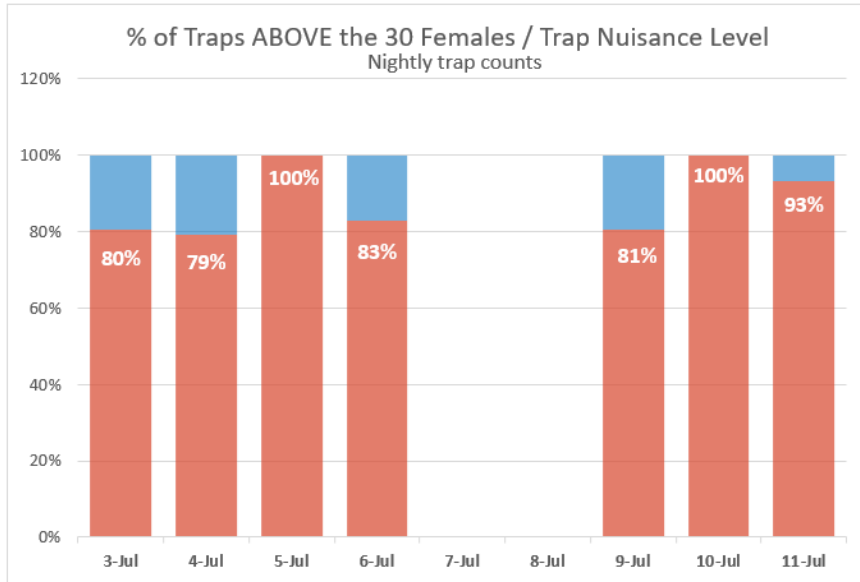
## SEASON PERSPECTIVE

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 and drought conditions.

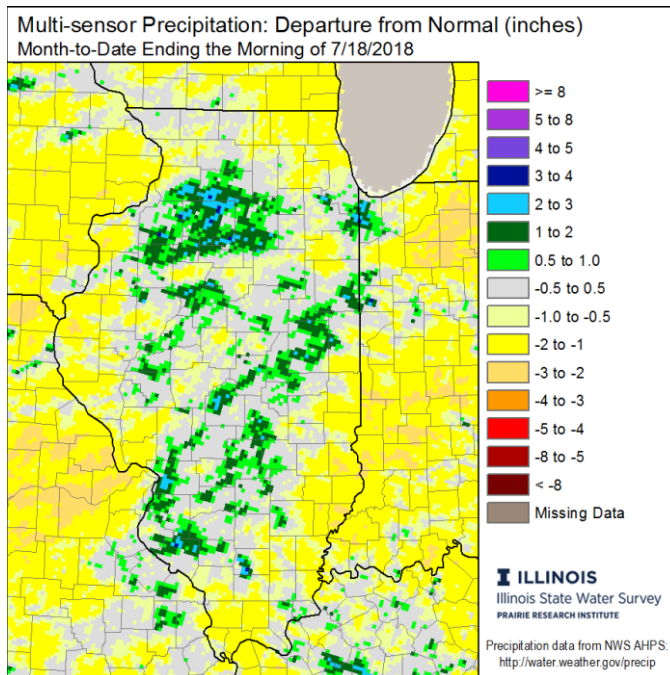
June was the 14<sup>th</sup> wettest June on record in Illinois and the statewide temperature was above normal too. **This combination of record precipitation, periods of high temperatures, and high humidity triggered one of the heaviest floodwater mosquito populations in the past 30 years!**

A series of 7 June rainfalls triggered the hatching of back-to-back floodwater mosquito (*Aedes vexans*) broods to hit by mid-July. Clarke operates a network of 100 New Jersey light traps to monitor the seasonal adult mosquito population. A count of 30 female mosquitoes is considered to be “the annoyance level.” The following graphs show the intensity and record trap counts during the first 11 days of July:





By contrast to June, the first half of July precipitation was much below normal in northeastern Illinois while temperatures remained above normal. The following Illinois State Water Survey map shows the 1 to 2 inch rainfall deficit in the Chicagoland area through July 18<sup>th</sup>:



The last significant June rainfall at O'Hare was on 6/26. After a 24 day dry spell, the first major July rainfall occurred on 7/20 that will cause the next floodwater mosquito brood to impact the area on August 3<sup>rd</sup>. July rainfall throughout most of northern Illinois was less than 3 inches, well below average. July 2018 was the 7<sup>th</sup> driest on record, creating conditions conducive to *Culex* and WNV development.



**Strategy and Recommendations.** While the July dry spell curtailed floodwater mosquito activity, *Culex* development increased across the Chicagoland area triggering a significant spike in WNV activity. There were many Chicagoland area reports of WNV+ mosquitoes and two announced human cases in late July. Because of the WNV activity spike, Clarke operations will focus on *Culex* mosquito larval development, including the booster treatment of street catch basins, a primary habitat for this species. Following Centers for Disease Control & Prevention (CDC) guidelines: “*Adult mosquito control is also intended to reduce the abundance of biting, infected adult mosquitoes in order to prevent them from transmitting WNV to humans and to break the mosquito-bird transmission cycle.*” Therefore, cyclic truck ultra-low volume (ULV) adulticide applications will be recommended to suppress the adult mosquito population and protect the public health from WNV. . The Clarke Mosquito Hotline (800-942-2555) is available to citizens to report standing water situations and excessive biting annoyance.

**Floodwater Mosquito 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 a weather station in your area.

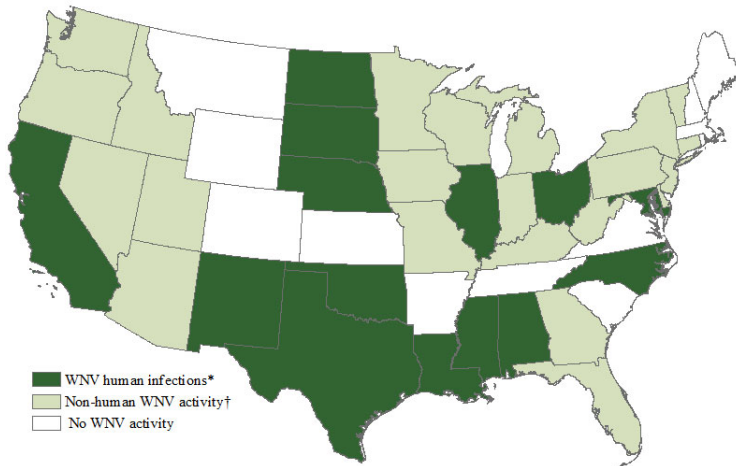
Weather Station Name	Rainfall Date	Rain Amount	Brood Prediction Date
Will Co.	06/18/2018	0.59	07/03/2018
Will Co.	06/20/2018	0.48	07/05/2018
Will Co.	06/21/2018	2.00	07/06/2018
Will Co.	07/04/2018	1.75	07/19/2018
Will Co.	07/05/2018	0.81	07/20/2018
Will Co.	07/20/2018	0.70	08/07/2018



## MOSQUITO-BORNE DISEASE UPDATE

### West Nile Virus (WNV)

2018 - USA. As of July 24, 2018, a total of 36 states have reported West Nile virus infections in people, birds, or mosquitoes in 2018. Overall, 39 cases of West Nile virus disease in people have been reported to CDC. Of these, 23 (59%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 16 (41%) were classified as non-neuroinvasive disease. (<https://www.cdc.gov/westnile/statsmaps/index.html>). The following map shows current WNV activity across the United States:



2018 – ILLINOIS. To date, the Illinois Department of Public Health (IDPH) has reported two WNV human cases in DuPage County (Wheaton) and Will County (Aurora). Overall, thirty-eight (38) Illinois counties have reported WNV activity in mosquitoes, including most counties in northern Illinois.

The following chart compares 2018 year-to-date IDPH WNV surveillance data to 2017 and the 2012, the year in which 290 human cases were diagnosed in the State of Illinois:

County	American Crow	Blue Jay	Other Birds	Mosquito Batches	Horse
COOK	0	0	1	501	0
DEKALB	1	0	0	2	0
DUPAGE	0	0	0	60	0
KANE	0	0	0	11	0
LAKE	1	0	1	18	0
MCHENRY	0	0	0	5	0
WILL	0	0	0	22	0
WINNEBAGO	1	0	0	13	0
<b>TOTAL</b>	<b>6</b>	<b>0</b>	<b>2</b>	<b>742</b>	<b>0</b>



**Zika virus (ZIKV)**

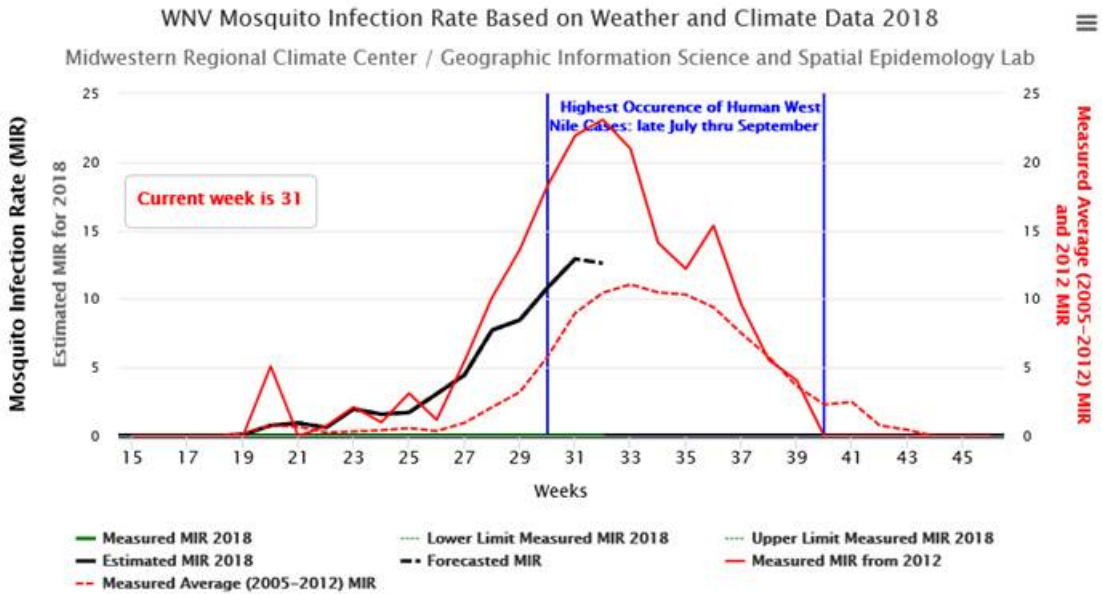
In 2016, the continental United States endured a major ZIKV outbreak with more than 5,100 travel-related nationwide and 139 locally transmitted cases in areas of south Florida. In 2017, the ZIKV human case count was dramatically diminished in the continental United States with the CDC reporting 407 cases with the following breakdown:

- 398 – travelers returning from affected areas
- 4 – through presumed local transmission in Florida and Texas
- 5 – through sexual transmission

Provisional ZIKV Data as of July 3, 2018.

Zika Case Origin	Human Case Count	
	USA	US Territories
Travelers from affected areas	28	0
Presumed local transmission	0	67
Acquired via sexual transmission	0	0
<b>YTD TOTAL</b>	<b>21</b>	<b>45</b>

**Midwest Regional Climatic Center (MRCC) WNV Prediction Model – Week 31 – 8/2/18**





**New Jersey Light Trap Counts**

(\*Red numbers indicate an annoyance level)

Trap Location	Jul 02	Jul 04	Jul 06	Jul 09	Jul 11	Jul 13	Jul 16	Jul 18	Jul 20	Jul 23	Jul 25	Jul 27	Jul 30
24711 Easy St	121	332	185	67	78	82	80	6	Mal	18	22	12	24

\*Mal - trap malfunction

**Upcoming August 2018 Operations**

Work Type	Number of Treatments
Targeted Inspection	2
Catch Basin Treatment	1

**Services Performed July 2018:**

Service Item	Start Date
ROS2015 - Vectolex WSP Catch Basin Trtmt	07/05/2018
ROS1302 - Targeted Site Larval Insp Serv	07/16/2018
ROS2888 - Biomist 3+15 Truck ULV	07/17/2018
ROS1302 - Targeted Site Larval Insp Serv	07/25/2018