



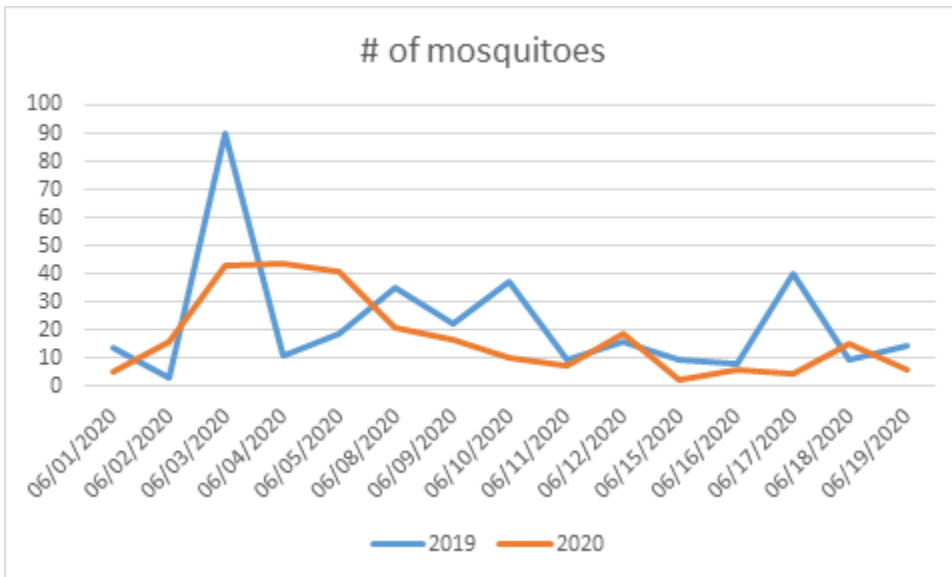
Plainfield Township June 2020 - Status Report

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.

May 2020 was the wettest May on record with 9.51 inches of rain recorded at O'Hare. However, the conditions quickly reversed to a mini-drought like period with less than an inch of rain falling during the first 21 days of June. So far this season, seven (7) floodwater mosquito brood hatches have impacted the Chicagoland area, three of which, hit during the first week of June. Heavy rainfalls in late June hatched the next brood to hit the week of July 6th.

The following chart compares 2020 & 2019 mosquito population levels from our network of 100 New Jersey light traps, both years showing early June peaks:



Due to the dryer weather pattern, Clarke operations will shift from a focus on floodwater mosquito larval development to *Culex* habitats, including completion of catch basin applications and monitoring of wastewater treatment plants, and stagnant water areas. Early July temperatures in the 90°s are conducive to WNV enhancement.



Truck ULV adulticide applications will very likely be recommended, as warranted by surveillance data, to suppress the adult mosquito population in early July for residual floodwater broods, and as the potential for WNV activity increases.

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 weather stations in your area.

Weather Station Name	Rainfall Date	Rain Amount	Brood Prediction Date
Will Co.	05/14/2020	1.95	06/01/2020
Will Co.	05/16/2020	0.59	06/06/2020
Will Co.	05/17/2020	2.64	06/07/2020
Will Co.	06/09/2020	0.43	06/25/2020
Will Co.	06/20/2020	0.45	07/04/2020
Will Co.	06/22/2020	1.15	07/06/2020
Will Co.	06/26/2020	1.54	07/10/2020

MOSQUITO-BORNE DISEASE UPDATE

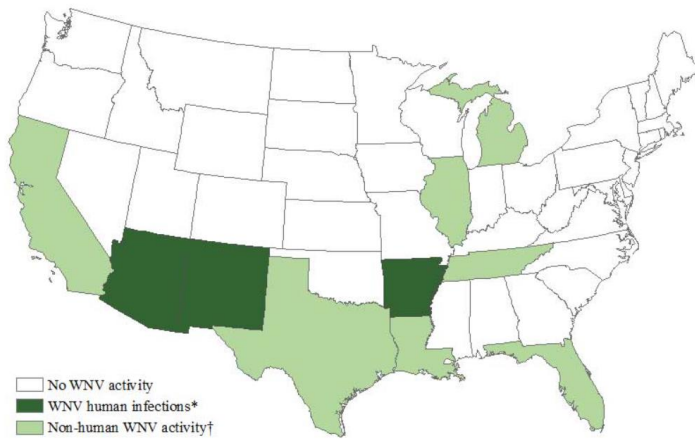
West Nile Virus (WNV)

2019 – USA. Since 1999, West Nile virus (WNV) has rapidly spread across the United States causing over 50,981 human cases, including over 2,334 fatalities, during the past 20 years. Because WNV is so widespread in bird and mosquito populations, the virus has become well established as an annual mosquito-borne disease threat. In 2019, there were 917 human cases of WNV across the United States reported by the Centers for Disease Control & Prevention (CDC). The following are the top ten states that recorded the most WNV cases in 2019 in descending order: CA-AZ-CO-NV-NM-NE-IL-LA-MS and MI. These 10 states accounted for 76% of the 2019 human case count.

2020 – USA. As of June 16, 2020, a total of 10 states have officially reported West Nile virus , infections in people, birds, or mosquitoes in 2020, as shown by the map (below). Overall, five cases of West Nile virus disease in people have been reported to CDC. Of these, four (80%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and one (20%) was classified as non-neuroinvasive disease. **NOTE:** In late June there is a report of a WNV outbreak in Miami-Dade County, FL with 14 human cases being reported.



West Nile Virus Activity by State – United States, 2020 (as of June 16, 2020)



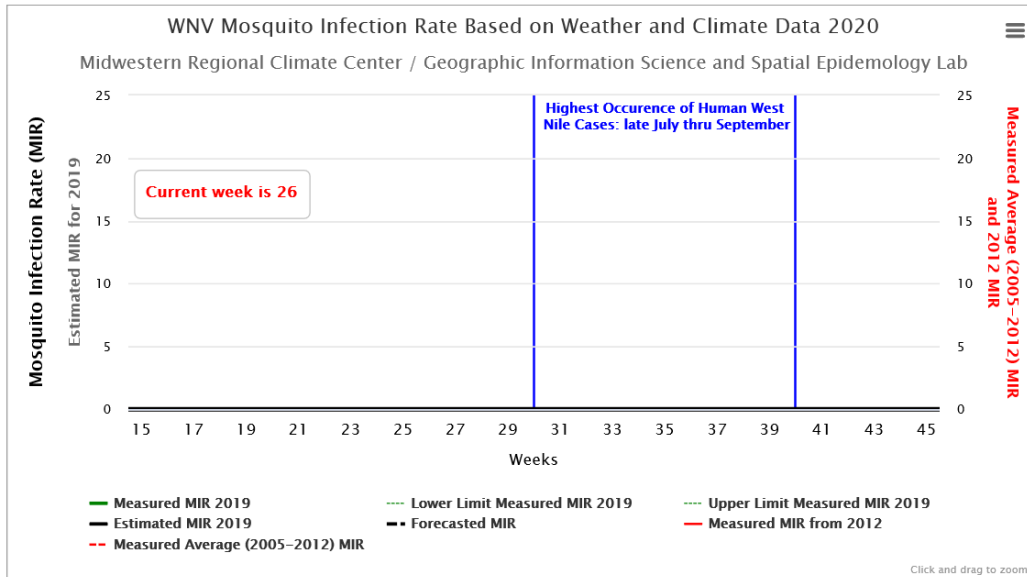
2019 – Illinois. In 2019, the State of Illinois recorded 28 human WNV cases, including 1 fatality, compared to 174 in 2018, and 90 in 2017.

2020 – Illinois. In 2020, the State of Illinois recorded zero human WNV cases, and eight WNV+ mosquito samples in Cook Co. (7) and Lake Co. (1).





Midwest Regional Climatic Center (MRCC) WNV Prediction Model – Week 22– 5/29/20



New Jersey Light Trap Counts

(*Red numbers indicate an annoyance level)

Trap Location	Jun 01	Jun 03	Jun 05	Jun 08	Jun 10	Jun 12	Jun 15	Jun 17	Jun 19	Jun 22	Jun 24	Jun 26	Jun 29
24711 Easy St	18	47	63	60	8	21	8	19	18	49	11	9	15

*Mal - trap malfunction

Services Performed June 2020:

Service Item	Start Date
ROS1302 - Targeted Site Larval Insp Serv	06/01/2020
ROS2009 - Natular XRT CB Bike	06/04/2020
ROS1302 - Targeted Site Larval Insp Serv	06/15/2020
ROS2888 - Biomist 3+15 Truck ULV	06/27/2020
ROS1302 - Targeted Site Larval Insp Serv	06/29/2020