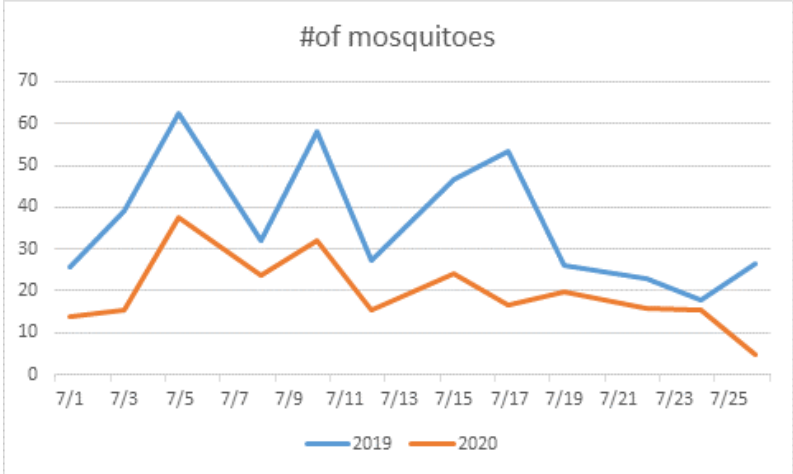
Plainfield Township
July 2020 - Status Report

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.

Since the start of the 2020 mosquito season, rainfalls have hatched a total of 12 floodwater mosquito broods at O'Hare. The 2020 record-setting May rainfall of 9.51 inches surpassed the 2019 May's previous record total. The following chart compares July 2020 versus 2019 mosquito population levels from our network of 100 New Jersey light traps, showing a lower 2020 population:



The impact of the predicted floodwater mosquito broods this season has not materialized. The lower populations could possibly have been diminished by the flushing of eggs and larvae from habitats. As a result, adult mosquito trap counts have been lower than anticipated, and most citizen feedback on the Clarke hotline portal has been for standing water, rather than widespread reports of significant mosquito annoyance.

2020 has been the third warmest summer on record and therefore, ideal for WNV development. The Clarke surveillance team has reported seventeen (17) WNV-positive *Culex* mosquito samples. As of July 29th, the Illinois Department of Public Health database reported 82 statewide WNV-positive mosquito samples, with a major July surge, especially in Cook County.

Due to the dryer weather pattern, Clarke operations has shifted 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. **Late July and August is the critical time to protect the public health from WNV.** Truck ULV adulticide applications will very likely be recommended, as warranted by surveillance data, to proactively suppress the potential of WNV transmission to the human population.

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.

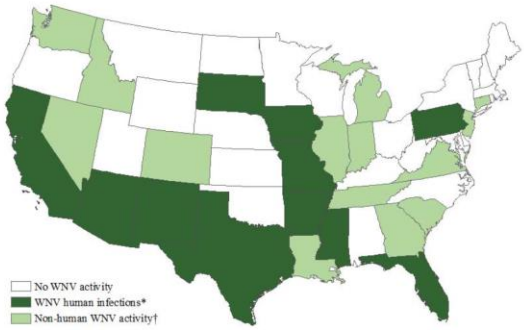
Weather Station Name	Rainfall Date	Rain Amount	Brood Prediction Date
Will Co.	07/09/2020	0.86	07/24/2020
Will Co.	07/11/2020	0.62	07/27/2020
Will Co.	07/15/2020	0.62	07/30/2020
Will Co.	07/19/2020	1.31	08/02/2020

MOSQUITO-BORNE DISEASE UPDATE

West Nile Virus (WNV)

2020 – USA. As of July 28, 2020, a total of 25 states have reported West Nile virus infections in people, birds, or mosquitoes in 2020. Overall, 17 cases of West Nile virus disease in people have been reported to CDC. Of these, 12 (71%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and five (29%) were classified as non-neuroinvasive disease.

West Nile Virus Activity by State – United States, 2020 (as of July 28, 2020)



2020 – Illinois. In 2020, the State of Illinois recorded zero human WNV cases, and twelve WNV+ mosquito samples in Boone Co. (1), Brown Co. (1-bird), Cook Co. (71 & 1 bird), DuPage Co. (5), Lake Co. (3), Ogle Co, (2), and Winnebago (1-bird).

New Jersey Light Trap Counts

(*Red numbers indicate an annoyance level)

Trap Location	Jul 01	Jul 03	Jul 07	Jul 08	Jul 10	Jul 13	Jul 15	Jul 17	Jul 20	Jul 22	Jul 24	Jul 27	Jul 29	Jul 31
24711 Easy St	6	8	38	12	39	15	36	8	9	5	8	18	4	4

*Mal - trap malfunction

OPERATIONS UPDATE

Services Performed July 2020:

Service Item	Start Date
ROS1302 - Targeted Site Larval Insp Serv	07/15/2020
ROS2888 - Biomist 3+15 Truck ULV	07/22/2020
ROS1302 - Targeted Site Larval Insp Serv	07/27/2020