

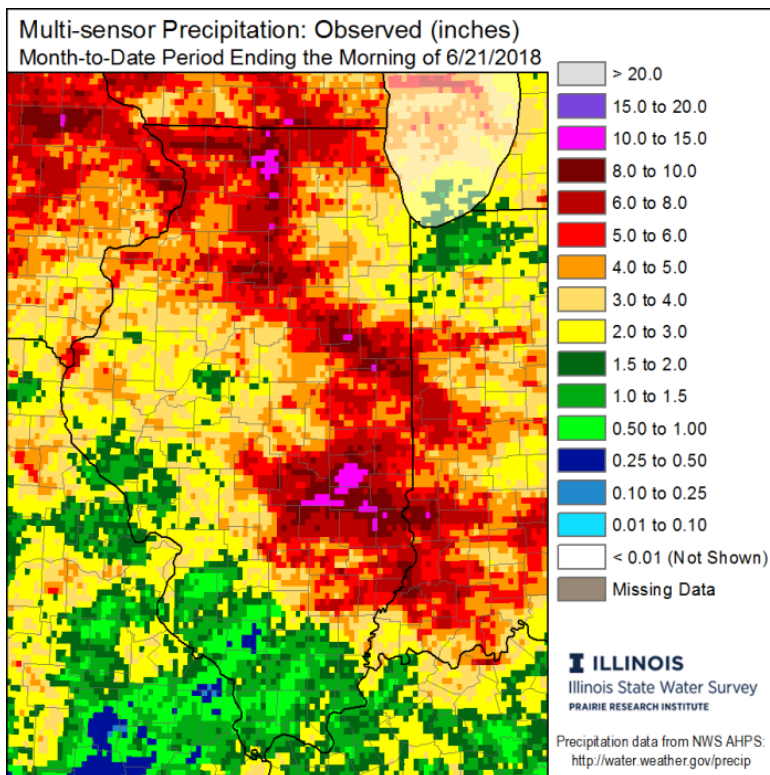


Plainfield Township June 2018 - Status Report

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.

Rainfall in May and June of 2018 ranks as the second on record for that period. Over 15 inches of rain was received at O'Hare International Airport. The series of rains triggered the hatching of ten (10) floodwater mosquito (*Aedes vexans*) broods to hit by early July. June 2018 was the third wettest in the past 148 years. The Rockford area received over 14 inches in June, the most ever in its history. The following Illinois State Water Survey map depicts the rainfall amounts between June 1st and 21st, noting that most areas in Northeastern Illinois received over 4 inches:





Excessive temperatures and humidity will stimulate active mosquito annoyance conditions as the floodwater broods impact the area. Clarke operations will focus on floodwater mosquito larval development habitats for the control of these back-to-back hatches. Truck ULV adulticide applications will be recommended, as warranted by surveillance data, to suppress the adult mosquito population. 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.	05/21/2018	0.75	06/08/2018
Will Co.	05/31/2018	0.68	06/19/2018
Will Co.	06/08/2018	0.85	06/23/2018
Will Co.	06/09/2018	1.12	06/27/2018

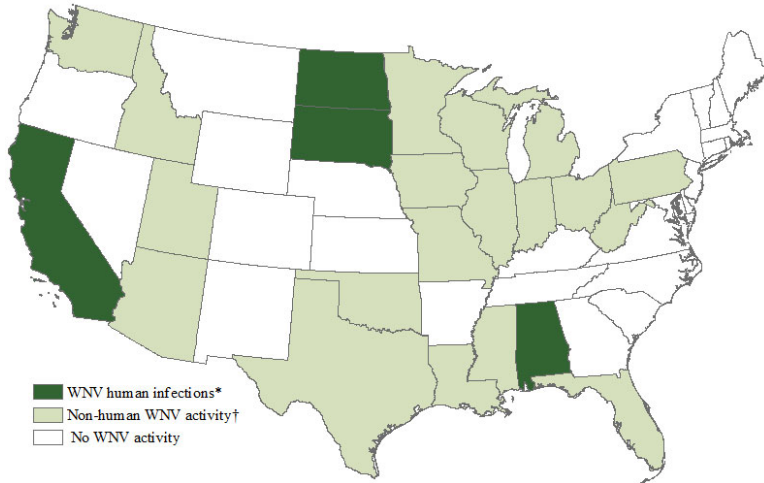
MOSQUITO-BORNE DISEASE UPDATE

West Nile Virus (WNV)

In 2017, there were 2,002 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 2017 in descending order: CA, TX, AZ, IL, SD, CO, NE, MS, ND, and UT. These 10 states accounted for 62% of the 2017 human case count. In 2017, the State of Illinois recorded 87 human WNV cases, including 1 fatality, compared to a 2016 case count of 154, including 5 fatalities.



2018 - USA. As of June 26, 2018, a total of 23 states have reported West Nile virus infections in people, birds, or mosquitoes in 2018. Overall, 10 cases of West Nile virus disease in people have been reported to CDC. Of these five (50%) were neuroinvasive disease (such as meningitis or encephalitis, and five (50%) 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. On June 21st, the Illinois Department of Public Health (IDPH) announced the first confirmed human case of West Nile virus in Illinois for 2018. A Chicago resident in her 60s became ill in mid-May. The case was reported earlier in the season than normal. Last year, the first human case was reported on July 20, 2017, and a total of 90 cases, including 8 deaths were reported.

To date, nineteen (19) Illinois counties have reported WNV activity in mosquitoes, including Cook, DuPage, Kane, Kendall, McHenry and Will in Northeastern Illinois.

County	American Crow	Blue Jay	Other Birds	Mosquito Batches	Horse	Other Mammals
COOK	0	0	0	54	0	0
DUPAGE	0	0	0	4	0	0
KANE	0	0	0	4	0	0
KENDALL	0	0	0	2	0	0
LAKE	0	0	0	1	0	0
MCHENRY	0	0	0	1	0	0
WILL	0	0	0	1	0	0
TOTAL	0	0	0	90	0	0



West Nile Virus Activity Comparison and Summary (as of July 3, 2018)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2018 Data as of July 3			
2018 Mosquito Surveillance Samples	3,915	73	1.9%
2018 Bird Surveillance Samples	72	0	0%
2018 WNV Positive Counties	18		
2018 Human Cases as of July 3	1		
2017 Historical Data as of July 3 for Comparison			
2017 Mosquito Surveillance Samples	3,723	124	3.3%
2017 Bird Surveillance Samples	109	6	5.5%
2017 WNV Positive Counties	22		
2017 Total Human Cases	90		
2012 Historical Data as of July 3 for Comparison			
2012 Mosquito Surveillance Samples	4,547	154	3.4%
2012 Bird Surveillance Samples	311	18	5.8%
2012 WNV Positive Counties	18		
2012 Total Human Cases	290		

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:

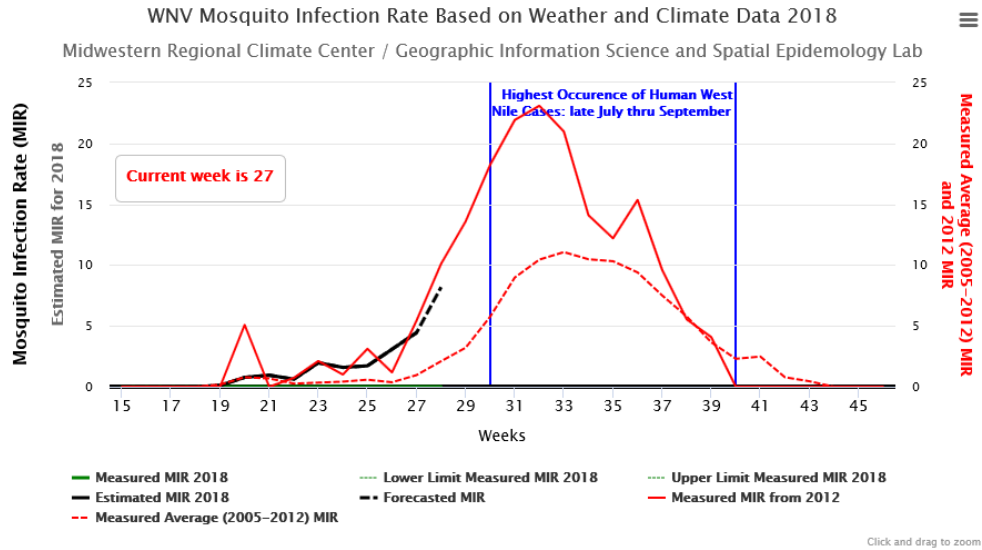
- 398 – travelers returning from affected areas
- 4 – through presumed local transmission in Florida and Texas
- 5 – through sexual transmission

Provisional ZIKV Data as of June 6, 2018.

Zika Case Origin	Human Case Count	
	USA	US Territories
Travelers from affected areas	20	0
Presumed local transmission	0	62
Acquired via sexual transmission	0	0
YTD TOTAL	21	45



Midwest Regional Climatic Center (MRCC) WNV Prediction Model – Week 26 – 6/26/18



New Jersey Light Trap Counts

(*Red numbers indicate an annoyance level)

Trap Location	Jun 01	Jun 04	Jun 06	Jun 08	Jun 11	Jun 13	Jun 15	Jun 18	Jun 20	Jun 22	Jun 25	Jun 27	Jun 29
24711 Easy St	117	23	17	43	34	171	50	40	66	17	22	16	232

*Mal - trap malfunction

Services Performed June 2018

Service Item	Start Date
ROS1302 - Targeted Site Larval Insp Serv	06/11/2018
ROS1302 - Targeted Site Larval Insp Serv	06/26/2018
ROS2888 - Biomist 3+15 Truck ULV	06/29/2018

Upcoming July Operations

- 2 Targeted Inspections
- 2 Catch Basin Treatments