



# Plainfield Township

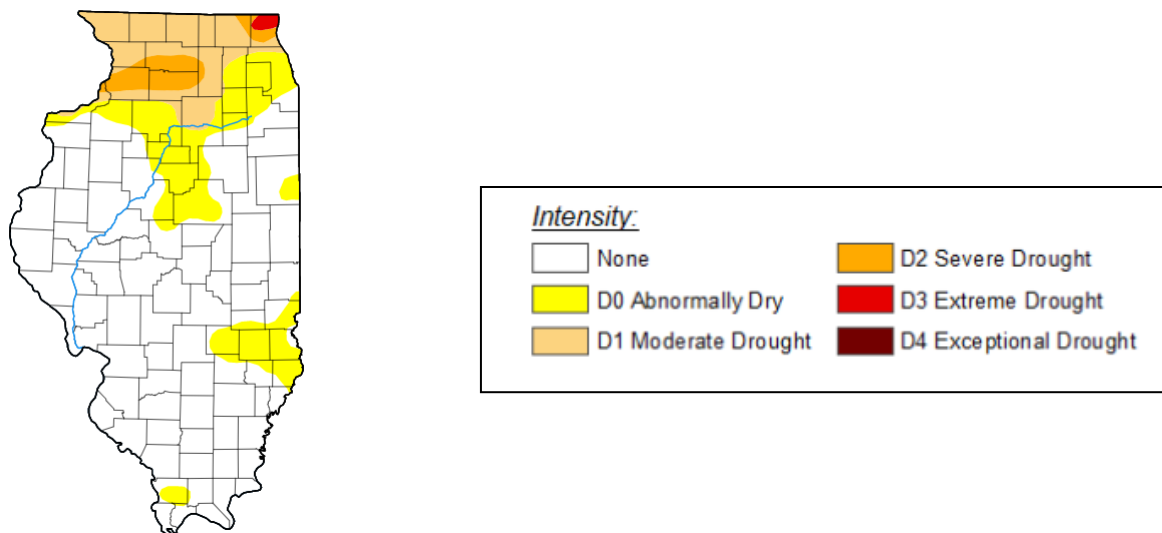
## September 2021 - Status Report

### SEASON PERSPECTIVE

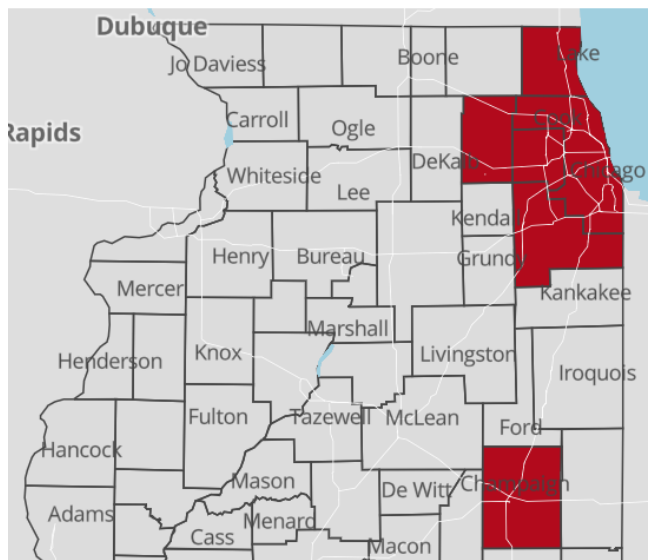
Introduction. Weather conditions critically affect the seasonal mosquito population. Excessive rainfall periods trigger hatches of floodwater mosquitoes (*Aedes vexans*), the dominant annoyance species in northern Illinois that has a flight range of 15 to 20 miles. The other target species is the northern house mosquito (*Culex pipiens*), the primary vector of West Nile virus (WNV) that flourishes under stagnant water and drought conditions.

### Northeastern Illinois drought conditions persist and WNV human cases are increasing

According to National Weather Service, 2021 Chicago O'Hare year-to-date rainfall is 21.37 inches, a deficit of 8.04 inches. Northeastern Illinois remains in an abnormally dry to severe drought condition, as shown by the following U.S. Drought Monitor Map (September 21, 2021):



The drought conditions have curtailed the impact of the floodwater mosquito in 2021. The last significant rainfall at O'Hare to trigger a theoretical floodwater hatch was on August 24<sup>th</sup>, but resulting annoyance was negated by the lack of soil moisture. On-the-other hand, the *Culex* mosquito, the disease vector of WNV, flourishes under stagnant water and drought conditions. As of September 29<sup>th</sup>, the Illinois Department of Public Health has reported a surge to 42 WNV human cases in six Illinois counties, as shown by the following map:



**Operations Plan.** Late July through September is the critical time to protect the public health from WNV. Due to the dryer weather pattern, Clarke operations were 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. Truck ULV adulticide applications were recommended, as warranted by surveillance data, to proactively suppress the potential of WNV transmission to the human population.

## **Floodwater Mosquito Brood Prediction – Will**

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 for September and October calculates peak annoyance periods based on rainfall and temperature data collected from weather stations in your area.

Weather Station Name	Rain Date	Rain Amount	Brood Prediction Date
Will Co.	08/25/2021	1.21	09/12/2021
Will Co.	09/20/2021	0.58	10/07/2021
Will Co.	10/07/2021	1.33	10/21/2021

## **New Jersey Light Trap Counts**

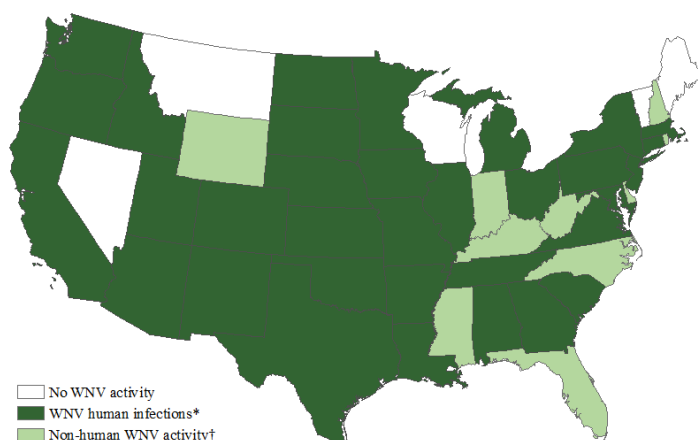
(\*Red numbers indicate an annoyance level)

Trap Location	9/01	9/03	9/07	9/08	9/10	9/13	9/15	9/17	9/20	9/22	9/24
24711 Easy St	32	4	21	24	21	44	23	26	32	5	3



## West Nile Virus (WNV)

West Nile Virus Activity by State – United States, 2021 (as of September 21, 2021)

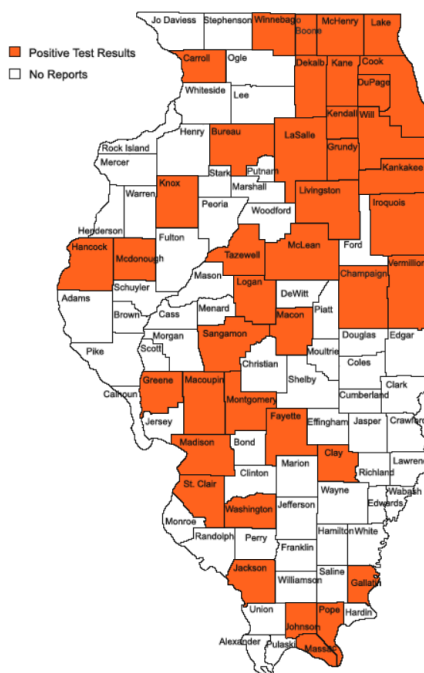


### West Nile Virus Activity Comparison and Summary (as of September 29, 2021)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2021 Data as of Sept 29			
2021 Mosquito Surveillance Samples	17,605	2,510	14.3%
2021 Bird Surveillance Samples	155	24	15.5%
2021 WNV Positive Counties	41		
2021 Human Cases as of Sept 29	33		
2020 Historical Data as of Sept 29 for Comparison			
2020 Mosquito Surveillance Samples	18,057	2,324	12.9%
2020 Bird Surveillance Samples	128	10	7.8%
2020 WNV Positive Counties	25		
2020 Total Human Cases	42		
2012 Historical Data as of Sept 29 for Comparison			
2012 Mosquito Surveillance Samples	16,066	3,938	24.5%
2012 Bird Surveillance Samples	588	124	21.1%
2012 WNV Positive Counties	50		
2012 Total Human Cases	290		



The following map shows the Illinois counties that have had WNV-positive activity in 2021:



## OPERATIONS UPDATE

### Services Performed September 2021

Service Item	Start Date
Biomist 3+15 Truck ULV	09/10/2021
Targeted Site Larval Insp Serv	09/13/2021