Plainfield Township

October 2023 - Status Report

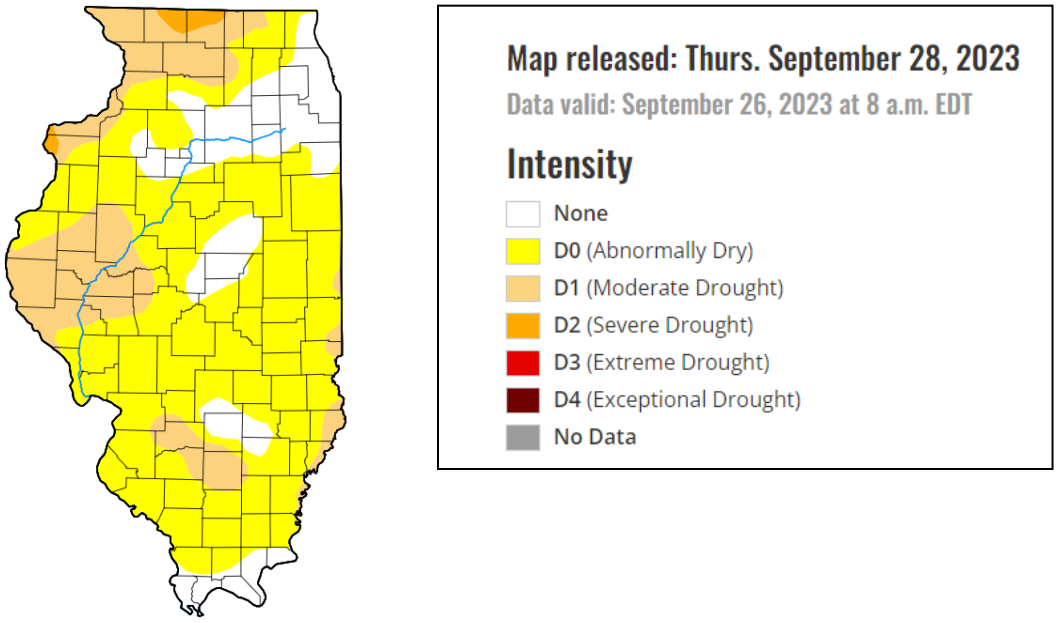
SEASON PERSPECTIVE

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.

West Nile Virus Surges Across Illinois in September

Significant rainfalls between mid-August and mid-September improved the soil moisture deficit across northern Illinois, as shown by the map below. Predominant dry conditions throughout the summer curtailed the impact of the 2023 floodwater mosquito population**. On the other hand, according to the Centers for Disease Control, as of October 4th, the stealth-like *Culex* mosquito surged causing ninety-four (94) human cases in Illinois.** For reference, 32 WNV human cases were diagnosed in Illinois in 2022.

Illinois



Surveillance of the *Culex* mosquito population provides an early warning system of a WNV outbreak. As of October 4th, the following chart summarizes the number of WNV-positive *Culex* mosquito samples in northern Illinois confirming the late summer WNV activity surge:

County	No. of WNV-positive *Culex* Samples
Boone	10
Cook	2,575
DuPage	165
Kane	29
Lake	172
McHenry	56
Will	64

The total number of WNV-positive samples was 3,343 across 64 Illinois counties with 77% collected in Cook County.

Operations Plan. **Late July through September is the critical time to protect the public health from WNV.** Due to the dry weather pattern, Clarke operations focused on floodwater on *Culex* habitats, including the 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.** There will be a risk of disease transmission until the first killer frost, usually by mid-October.

Floodwater Mosquito Brood Prediction

The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Floodwater mosquito population hatches, 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	Rain Date	Rain Amount	Brood Prediction Date
Will Co	**9/11**	**0.76**	**10/1**
Will Co	**9/16**	**0.71**	**10/6**
Will Co	**9/17**	**0.91**	**10/6**
Will Co	**9/22**	**0.52**	**10/8**

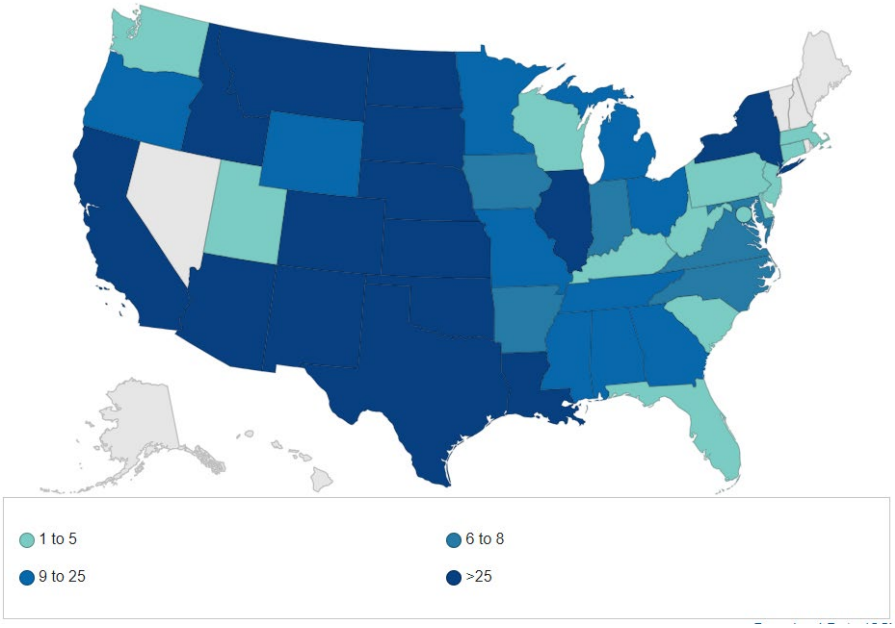
New Jersey Light Trap Counts

(*Red numbers indicate an annoyance level)

Trap Location	9/1	9/4	9/5	9/6	9/8	9/11	9/13	9/15
24711 Easy Street	8	4	14	4	12	8	1	0

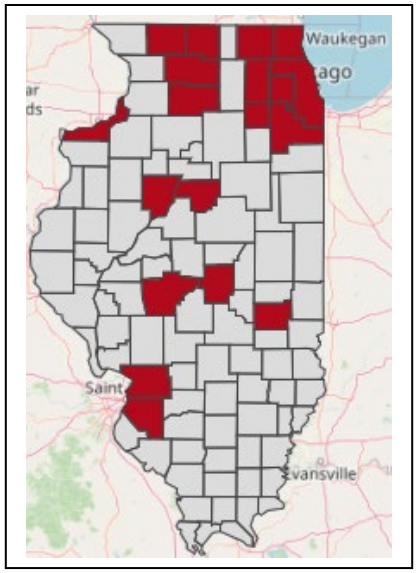
West Nile Virus (WNV)

2023 – USA. As of October 4th, 1,645 USA human WNV cases have been reported to the CDC in the following 44 states as shown on the following map:



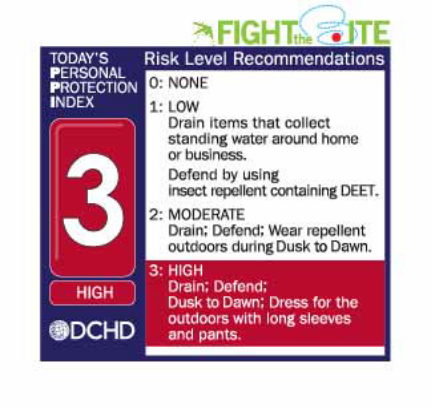
Colorado has the most diagnosed cases of 542. In 2022, a total of 1,035 WNV human cases were diagnosed in the USA.

2023 – Illinois. To date, the Illinois Department of Public Health has reported 3,343 WNV-positive mosquito samples tested from 64 counties. Forty-five (45) birds have tested positive for WNV this year. Ninety-four (94) WNV human cases including 5 fatalities have been officially reported in Illinois as of October 4th.



2023 ILLINOIS WNV HUMAN CASES	
Coles	1
Cook	59
DuPage	12
Kane	3
Kendall	1
Lake	1
Lee	1
Macon	1
Madison	2
McHenry	1
Ogle	1
Peoria	1
Rock Island	1
Sangamon	1
St. Clair	1
Stephenson	1
Will	3
Winnebago	2
Woodford	1
TOTAL (as of 10/04/23)	94

In 2022, thirty-two (32) WNV human cases were diagnosed in the State of Illinois.



OPERATIONS UPDATE

Final Services Performed – September 2023:

Service Item	Completion Date(s)
Targeted Site Larval Insp Serv	09/11/2023