



Oswego Township

October 2024 - Status Report

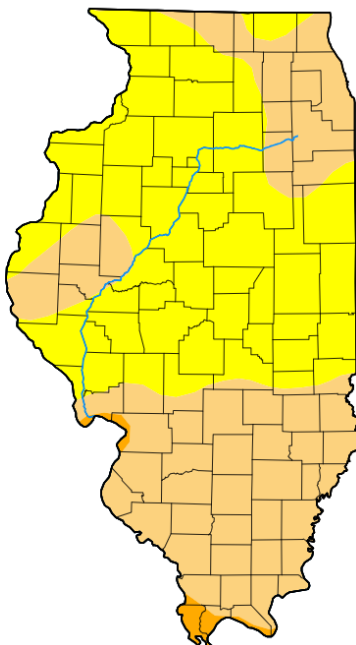
SEASON PERSPECTIVE

Introduction. The objectives of the WMAD program are to protect the public health by controlling nuisance mosquitoes, reducing the potential of mosquito-borne disease transmission, and providing a comfortable and healthy atmosphere for district residents.

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.

Chicagoland Drought Conditions Intensify & West Nile Virus Increases Across Illinois

Chicagoland area soil moisture has evolved from “abnormally dry” in August to “moderate drought” in September, as shown by the following National Weather Service Drought Monitor Map and rainfall deficit data for O’Hare Airport:



Map released: Thurs. September 19, 2024
 Data valid: September 17, 2024 at 8 a.m. EDT

Intensity

- None
- D0 (Abnormally Dry)
- D1 (Moderate Drought)
- D2 (Severe Drought)
- D3 (Extreme Drought)
- D4 (Exceptional Drought)
- No Data

<https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?IL>



The moderate drought conditions, coupled with the second warmest September on record, have been conducive to *Culex* development in stagnant water habitats triggering an increase in WNV activity. Surveillance of the *Culex* mosquito population provides an early warning system of a WNV outbreak. As of September 27th, the following chart summarizes the number of WNV-positive *Culex* mosquito samples and human cases in northern Illinois, confirming the late summer WNV activity surge:

County	No. of WNV-positive <i>Culex</i> Samples	No. WNV Human Cases
Boone	2	0
Cook	2,356	18
DuPage	155	8
Kane	19	2
Lake	150	5
McHenry	26	1
Will	35	3
Winnebago	1	4

As of September 27th, the total number of WNV-positive *Culex* samples was 2,990 across 67 Illinois counties with 79% 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 *Culex* habitats, including the completion of catch basin applications and monitoring of wastewater treatment plants, and stagnant water areas. **To protect public health, truck ULV adulticide applications were recommended, as warranted by surveillance data, to proactively suppress the potential of WNV transmission to the human population per the following CDC guidelines:**

“The objective of the adult mosquito control component of an IVM (Integrated Vector Management) program is to complement the larval management program by reducing the abundance of adult mosquitoes in an area, thereby reducing the number of eggs laid in breeding sites. Adult mosquito control is also intended to reduce the abundance of biting, infected adult mosquitoes in order to prevent them from transmitting WNV to humans and to break the mosquito-bird transmission cycle.” (West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control. Page 35. June 2013); [wnvGuidelines.pdf \(cdc.gov\)](http://www.cdc.gov/wnvGuidelines.pdf)

There will be a risk of disease transmission until the first killer frost, usually by mid-October.



Floodwater Mosquito Brood Prediction

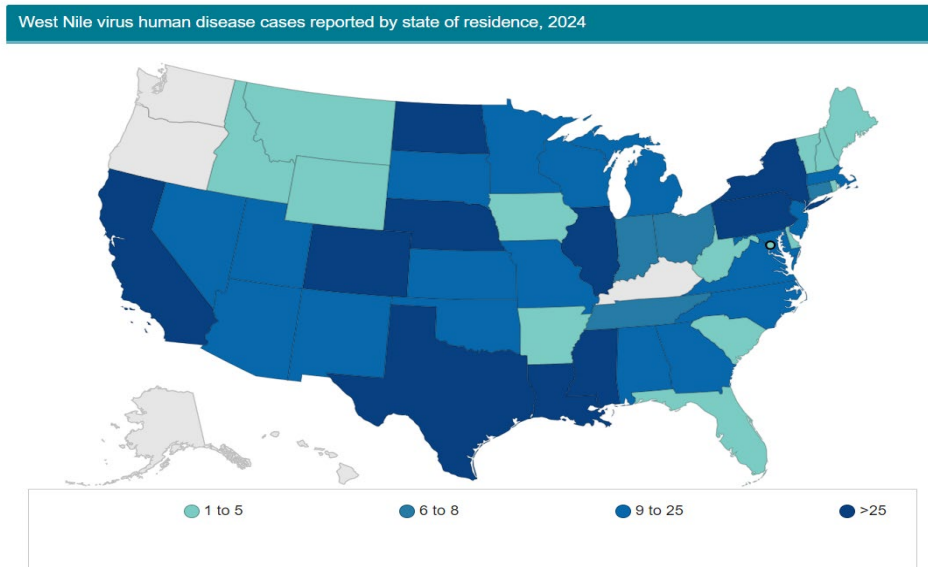
The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Floodwater mosquito population hatches, or broods, are triggered by significant rainfall events. The Clarke Brood Prediction Model calculates peak annoyance periods based on rainfall and temperature data collected from weather stations in your area.

Weather Station Name	Rain Date	Rain Amount	Brood Prediction Date
Will Co.	08/28/2024	0.47	09/11/2024
Will Co.	09/22/2024	0.90	10/06/2024
Will Co.	09/24/2024	0.79	10/08/2024
Because of moderate drought conditions, brood impacts were diminished			

MOSQUITO-BORNE DISEASE UPDATE

West Nile Virus (WNV)

2024 – USA. As of October 1, 880 USA human WNV cases have been reported to the CDC in forty-six states. The following are the top 10 states with the most cases in descending order (NE-NY-TX-CA-CO-PA-MS-IL-ND-NV).





2024 – Illinois. As of September 27th, the Illinois Department of Public Health has reported 2,989 WNV-positive mosquito samples (25.8% positive) of the 15,892 samples tested from 68 of Illinois' 102 counties. Forty-three (43) WNV human cases have been reported in Illinois.

West Nile Virus Activity Comparison and Summary (as of September 27, 2024)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2024 Data as of September 27			
2024 Mosquito Surveillance Samples	15,892	2,989	18.8%
2024 Bird Surveillance Samples	182	47	25.8%
2024 WNV Positive Counties	68		
2024 Human Cases as of September 27	43		
2023 Historical Data as of September 27 for Comparison			
2023 Mosquito Surveillance Samples	16,277	3,366	20.7%
2023 Bird Surveillance Samples	178	45	25.3%
2023 WNV Positive Counties	66		
2023 Total Human Cases	119		
2012 Historical Data as of September 27 for Comparison			
2012 Mosquito Surveillance Samples	19,253	4,998	26.0%
2012 Bird Surveillance Samples	565	124	21.9%
2012 WNV Positive Counties	50		
2012 Total Human Cases	290		