



Oswego Township

September 2024 - Status Report

SEASON PERSPECTIVE

Introduction. The objectives of the 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.

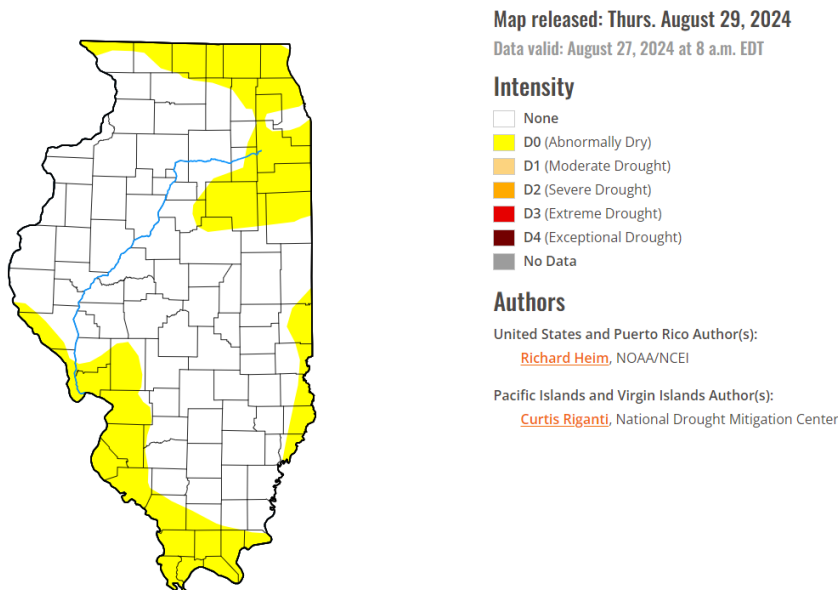
Weather conditions critically affect the seasonal mosquito population. Excessive rainfall periods trigger hatches of floodwater mosquitoes (*Aedes vexans*), the dominant annoyance species in northern Illinois that has a flight range of 15 to 20 miles. The other target species is the northern house mosquito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

Abnormally Dry Soil Conditions Rebound in Northern Illinois Triggering WNV Activity

At the end of August 2024, there have been nineteen (19) days at O’Hare over 90 degrees, compared to the average of 17 days. The hot weather depleted the soil moisture in northern Illinois from normal July levels, as shown by the following Drought Monitor map from the National Weather Service [Illinois | U.S. Drought Monitor \(unl.edu\)](https://www.weather.gov/illinois):

Illinois

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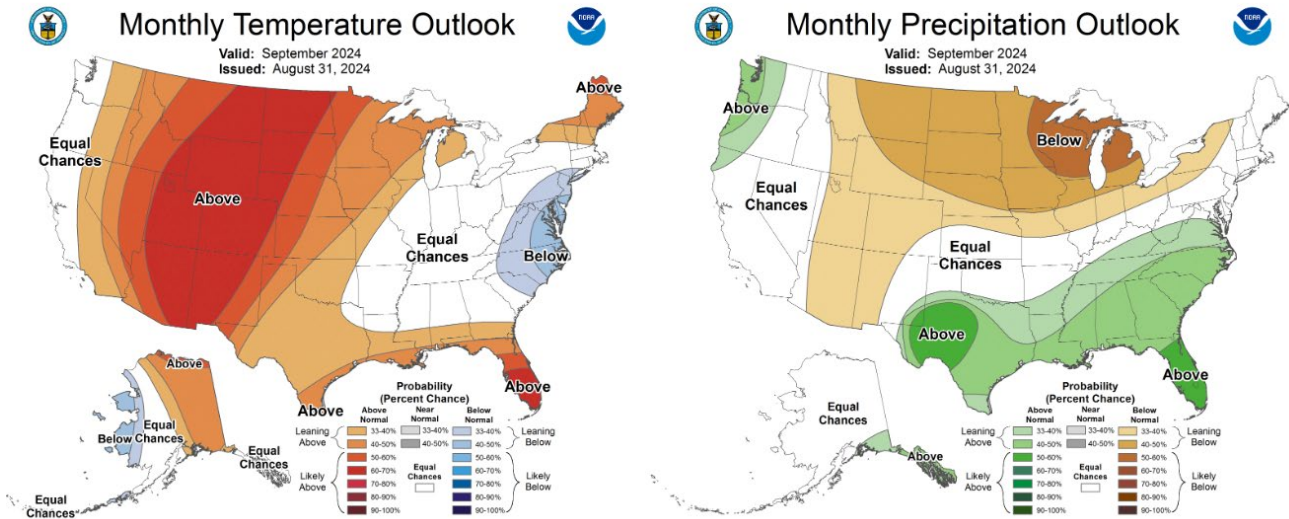


The hot and dry weather created ideal stagnant water conditions for *Culex* larval development and spike in WNV activity. As of September 9th, the Illinois Department of Public Health has reported 19 WNV human cases, with all but one in northern Illinois.

The following National Weather Service forecast for September predicts normal temperatures and below normal rainfall for northern Illinois:

Updated OFFICIAL 30-Day Forecasts

Issued: August 31, 2024



As a result of late August rainfalls, the floodwater mosquito (*Aedes vexans*) is expected to produce significant periods of mosquito annoyance in early September. In addition, WNV typically peaks in late August and is expected to be a significant factor for the balance of the 2024 season. As of August 31st, the following chart compares the number of WNV-positive *Culex* mosquito samples in northern Illinois in 2023 and through August 31, 2024:

County	WNV-Positive <i>Culex</i> Samples	
	2023	2024 – thru 8/31
Boone	10	1
Cook	2,602	1,826
DuPage	170	105
Kane	29	11
Lake	172	100
McHenry	56	13
Will	64	35



Operations Plan. Clarke operations will focus on permanent water larval development habitats for the control of *Culex*, as well as floodwater mosquito sites. To protect public health, truck ULV adulticide applications will be recommended as warranted by surveillance data for WNV and annoyance levels per the following Centers for Disease Control & Prevention (CDC) strategy 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)

Floodwater Mosquito Brood Prediction – DuPage Airport

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.

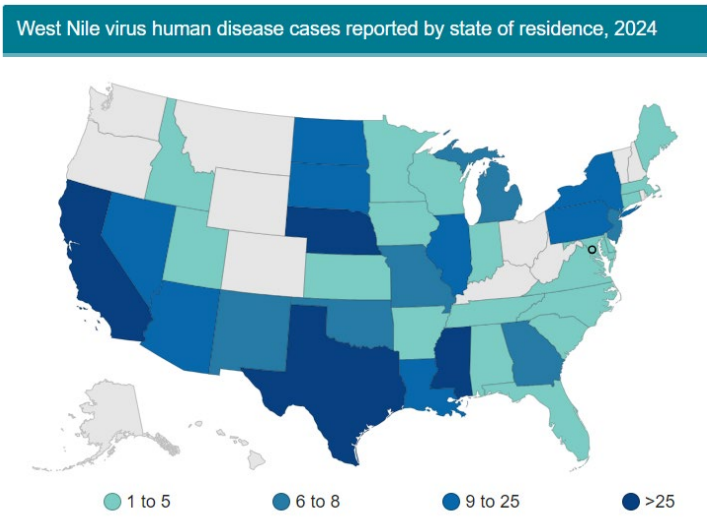
Weather Station Name	Rain Date	Rain Amount	Brood Prediction Date
Will Co.	07/09/2024	0.54	07/23/2024
Will Co.	07/14/2024	1.18	07/28/2024
Will Co.	07/15/2024	0.89	07/29/2024
Will Co.	08/05/2024	0.87	08/19/2024
Will Co.	08/16/2024	0.75	08/30/2024
Will Co.	08/27/2024	0.52	09/10/2024
Will Co.	08/28/2024	0.47	09/11/2024



MOSQUITO-BORNE DISEASE UPDATE

West Nile Virus (WNV)

2024 – USA. As of September 3rd, three hundred-seventy-seven (377) USA human WNV cases have been reported to the CDC in the following thirty-eight states. The following are the top 10 states with the most cases in descending order (TX-NE-MS-CA-NY-LA-NV-IL-AZ-SD).



2024 – Illinois. To date, the Illinois Department of Public Health has reported 2,523 WNV-positive mosquito samples (20.9% positive) of the 13,245 samples tested from 59 of Illinois' 102 counties. Nineteen (19) as of September 9th:



West Nile Virus Activity Comparison and Summary (as of September 5, 2024)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2024 Data as of September 5			
2024 Mosquito Surveillance Samples	13,245	2,523	19.0%
2024 Bird Surveillance Samples	153	32	20.9%
2024 WNV Positive Counties	59		
2024 Human Cases as of September 5	19		
2023 Historical Data as of September 5 for Comparison			
2023 Mosquito Surveillance Samples	14,360	2,979	20.7%
2023 Bird Surveillance Samples	161	42	26.1%
2023 WNV Positive Counties	61		
2023 Total Human Cases	119		
2012 Historical Data as of September 5 for Comparison			
2012 Mosquito Surveillance Samples	16,786	4,629	27.6%
2012 Bird Surveillance Samples	520	107	20.6%
2012 WNV Positive Counties	47		
2012 Total Human Cases	290		

Surveillance, testing, and analysis of Culex mosquitoes for West Nile virus is a collaboration of the following agencies:

- Clarke Environmental Mosquito Management, Inc.
- Illinois Department of Public Health

OPERATIONS UPDATE

Services Performed - August & Early September 2024:

Service Item	Completion Date(s)
Biomist 3+15 Truck ULV	08/23/2024