



# City of Geneva

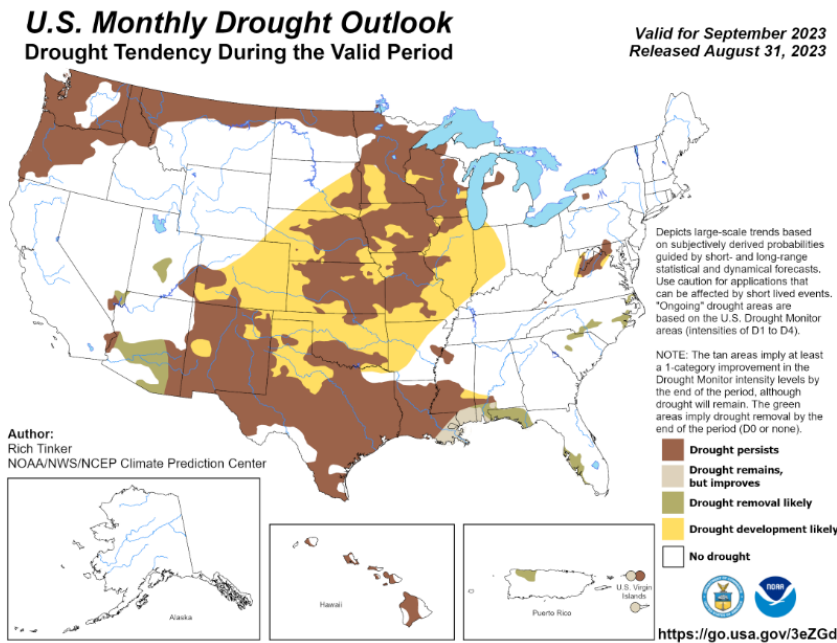
## September 2023 - Status Report

### 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.

### Drought conditions rebound in August as West Nile virus spikes.

After over 6 inches of rain in late June and July to improve soil moisture levels, persistent hot and dry August weather rebounded drought conditions. The following Drought Outlook map for September depicts the intensification of drought conditions in northern Illinois [monthly drought outlook](#):





As a result of 2023 drought conditions, the impact of predicted floodwater mosquito (*Aedes vexans*) broods and significant periods of mosquito annoyance was diminished.

By contrast, the *Culex* mosquito population thrived. WNV typically peaks in August and is expected to be a significant factor for the balance of the 2023 season. On August 23<sup>rd</sup>, the Illinois Department of Public Health issued the following news release:

**IDPH Reports First Illinois West Nile Virus Death of 2023**

News – Wednesday, August 23, 2023

[PRINT](#) [EMAIL](#)

**CHICAGO** – The Illinois Department of Public Health (IDPH) announced the first Illinois human West Nile virus (WNV)-related death in 2023. Testing by CDC confirmed the case was WNV-related. The individual, who was in their 90’s and lived in suburban Cook County, had an onset of symptoms of WNV in early August and died soon after. IDPH is also reporting 11 non-fatal cases of WNV confirmed to date this year.

Of the 12 human cases, seven were reported from Cook County, including two in Chicago. To date, Kane, Macon, Madison, Will and Woodford counties have each reported one human WNV case.

As of September 5<sup>th</sup>, the following chart summarizes the number of WNV-positive *Culex* mosquito samples in northern Illinois confirming the increase in WNV activity:

County	No. of WNV-positive <i>Culex</i> Samples
Boone	7
Cook	2,181
DuPage	121
Kane	24
Lake	115
McHenry	28
Will	53

Operations Plan. For the balance of the season, Clarke operations will focus on permanent water larval development habitats for the control of *Culex*. 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 \(cdc.gov\)](#)

**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
Elgin	07/22/2023	1.10	08/07/2023
Elgin	07/28/2023	2.25	08/15/2023
Elgin	08/14/2023	1.40	08/29/2023
Elgin	09/10/2023	0.42	09/24/2023

**New Jersey Light Trap Counts:**  
(\*Red numbers indicate an annoyance level)

Trap Location	8/2	8/4	8/7	8/9	8/11	8/14	8/16	8/18	8/21	8/23
Eastside Dr Fire Station	3	1	5	3	4	5	4	5	2	2
37W681 Kaneville Rd	40	55	9	50	55	22	20	12	17	39
Westhaven & Heartland well site	35	22	15	35	35	16	54	37	40	31
Wheeler Dr & Stevens St	21	19	21	30	26	20	22	29	45	41

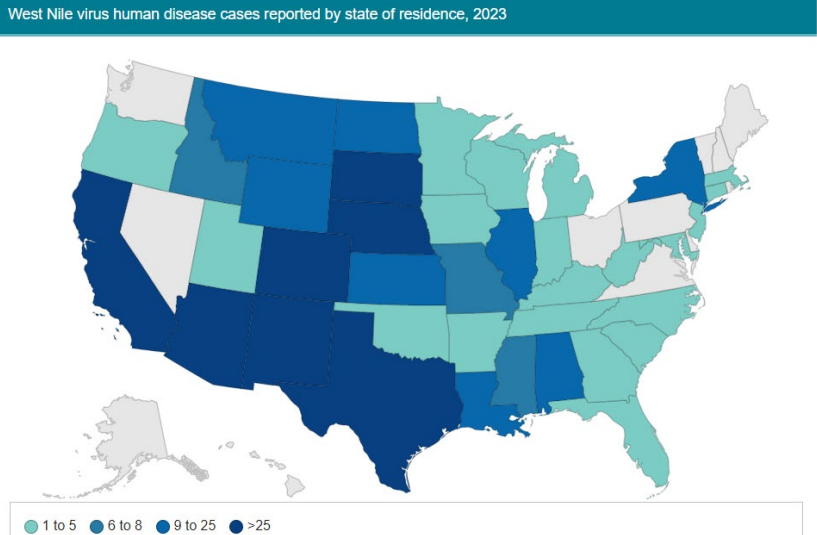
Trap Location	8/25	8/28	8/30
Eastside Dr Fire Station	1	3	2
37W681 Kaneville Rd	45	9	12
Westhaven & Heartland well site	29	16	1
Wheeler Dr & Stevens St	42	9	18



## MOSQUITO-BORNE DISEASE UPDATE

### West Nile Virus (WNV)

**2023 – USA.** As of August 29<sup>th</sup>, five hundred fifty-two (552) USA human WNV cases have been reported to the CDC in the following thirty-eight states as shown on the following map:



Colorado has the most diagnosed cases of 101.

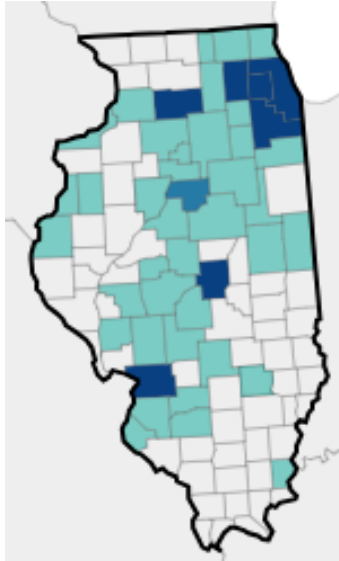
**2023 – Illinois.** To date, the Illinois Department of Public Health has reported 2,511 WNV-positive mosquito samples (19.7% positive) of the 12,751 samples tested from 53 counties. Twenty-five birds have tested positive for WNV this year. Twenty-one (21) WNV human cases including 1 fatality have been officially reported in Illinois so far, as of September 7<sup>th</sup>.

West Nile Virus Activity Comparison and Summary (as of August 31, 2023)

	Number Collected in all Counties	# WNV Positives	% WNV Positives	County	No. WNV Human Cases
<b>2023 Data as of August 31</b>					
2023 Mosquito Surveillance Samples	12,751	2,511	19.7%	Cook	14
2023 Bird Surveillance Samples	133	25	18.8%	DuPage	1
2023 WNV Positive Counties	53			Kane	1
2023 Human Cases as of August 31	18			Lee	1
<b>2022 Historical Data as of August 31 for Comparison</b>					
2022 Mosquito Surveillance Samples	13,581	1,942	14.3%	Macon	1
2022 Bird Surveillance Samples	151	12	7.9%	Madison	1
2022 WNV Positive Counties	36			Whiteside	1
2022 Total Human Cases	34			Will	1
<b>2012 Historical Data as of August 31 for Comparison</b>					
2012 Mosquito Surveillance Samples	16,147	4,425	27.4%	<b>TOTAL</b>	<b>21</b>
2012 Bird Surveillance Samples	514	104	20.2%		
2012 WNV Positive Counties	45				
2012 Total Human Cases	290				



As of September 7<sup>th</sup>, the following map shows the counties with WNV human cases:



● Non-human activity ● Human infections ● Human infections and non-human activity

**DUPAGE COUNTY HEALTH DEPARTMENT**  
*Everyone, Everywhere, Everyday*

**News Release**

111 N. County Farm Rd., Wheaton, IL 60187

September 1, 2023  
**For Immediate Release**

**First 2023 Human Case of West Nile Virus Reported in DuPage County**

**DuPage County** - The DuPage County Health Department (DCHD) is reporting the first human case of West Nile virus (WNV) in DuPage County in 2023. A Woodridge resident in their 60s became ill in August.

**Media Inquiries:**  
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media@dupagehealth.org

**DuPage County Board of Health**  
Sam Tornatore, J.D.  
President

### OPERATIONS UPDATE

#### Services Performed – August 2023

Service Item	Completion Date(s)
Natular G 5#/Acre Hand	08/03/2023
Targeted Site Larval Insp Serv	08/03/2023
Biomist 3+15 Truck ULV	08/21/2023
Natular G 5#/Acre Hand	08/22/2023
Targeted Site Larval Insp Serv	08/22/2023

#### Upcoming Operations September 2023

Service Item	
Biomist 3+15 Truck ULV	1
Targeted Site Larval Insp Serv	1