



# City of Oak Brook Terrace

## July 2023 - Status Report

### SEASON PERSPECTIVE

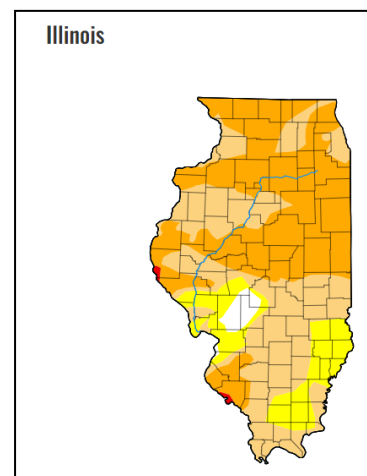
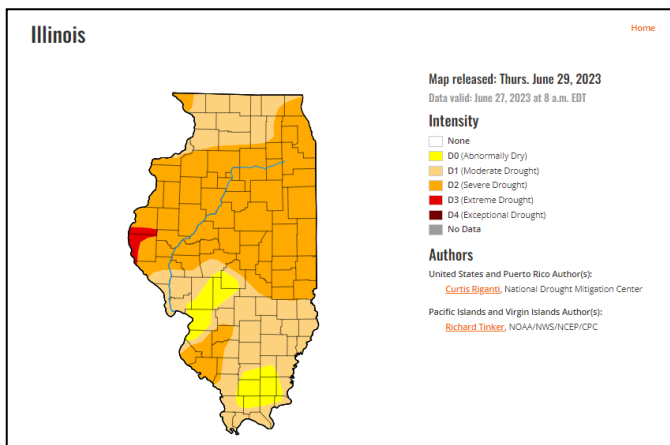
Introduction. Weather conditions critically affect the seasonal mosquito population. Excessive rainfall periods trigger hatches of floodwater mosquitoes (*Aedes vexans*), the dominant annoyance species in northern Illinois that has a flight range of 15 to 20 miles. The other target species is the northern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

### Drought Worsens in Illinois with spotty improvement after early July rainfalls.

On Sunday, July 2<sup>nd</sup>, a slow-moving system dumped up to 9 inches of rain that flooded portions of Cook County, with 3.35 inches officially reported at O’Hare. Outside of Cook County total rainfall amounts were spotty and variable in the collar counties.

Prior to the July, Dr. Trent Ford, Illinois State Climatologist said: “The northern half of the state has largely seen less than 50 percent of the normal rainfall since April 1<sup>st</sup>, and parts of the Chicagoland area have had less than 25 percent over that period. In fact, the period between April 1<sup>st</sup> and June 10<sup>th</sup> was the second driest on record statewide, **wetter only than 1988.**”

The Illinois Drought Monitor, June 27<sup>th</sup> versus July 4<sup>th</sup> maps show improving soil moisture conditions especially in Cook County after early July rain events.





Illinois Drought Conditions: 6/27 vs. 7/4

As a result of the persistent drought, the floodwater mosquito (*Aedes vexans*) has been a non-factor and annoyance conditions are at a very low level. Through June 2023:

- Only 4 floodwater mosquito brood hatches have occurred, compared to 12 through June of 2022.

On July 2<sup>nd</sup> and 5<sup>th</sup> at O’Hare, more rain fell on those two days than during the past two months of May and June. This will trigger an increase in floodwater mosquito (*Aedes vexans*) annoyance activity in July.

The dry and stagnant water conditions have produced early development of the northern house mosquito (*Culex pipiens*) and WNV in ten Illinois counties with recent reports in the Lake County communities of Bannockburn, Lake Villa and Vernon Hills. Clarke operations will focus on permanent water larval development habitats for the control of *Culex*, as well as floodwater mosquito sites because of early July rainfalls. Truck ULV adulticide applications will be recommended as warranted by adult mosquito population surveillance data to protect public health, especially when WNV-positive mosquitoes are regionally confirmed.

**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
DuPage Co. Airport	4/04	0.49	4/18
DuPage Co. Airport	4/20	0.49	5/16
DuPage Co. Airport	5/12	0.74	6/04
DuPage Co. Airport	6/24	0.83	7/08
DuPage Co. Airport	7/02	0.41	7/16
DuPage Co. Airport	7/05	1.0	7/19

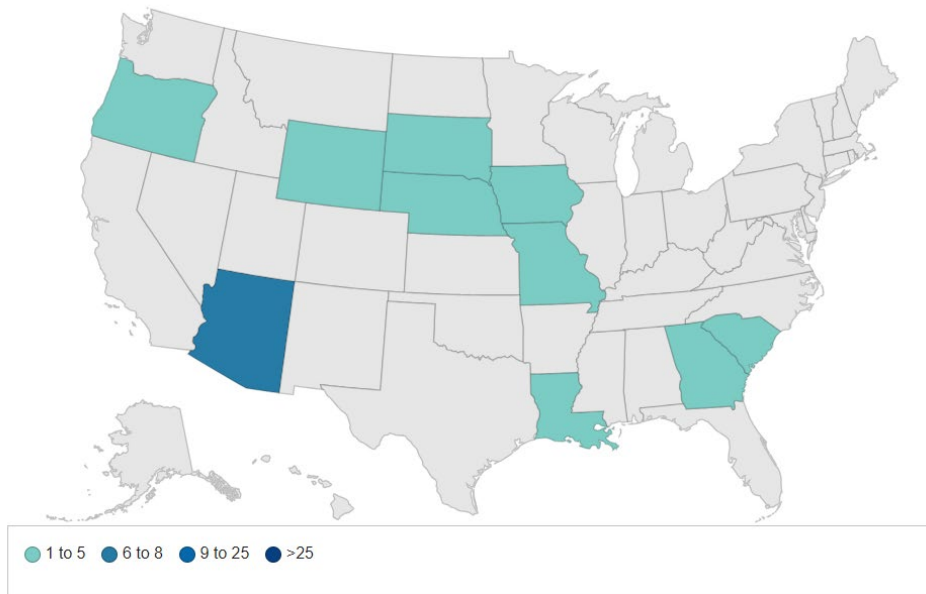


## MOSQUITO-BORNE DISEASE UPDATE

### West Nile Virus (WNV)

**2023 – USA.** As of June 30<sup>th</sup>, seventeen (17) USA human WNV cases have been reported to the CDC in the following ten states: AZ-GA-IA-LA-MO-NE-OR-SC-SD-WY, with seven (7) cases diagnosed in AZ.

West Nile virus human disease cases reported by state of residence, 2023



**2023 – Illinois.** To date, 58 WNV-positive mosquito samples have been reported to the Illinois Department of Public Health in ten counties, with 29 samples being from Cook County. No human cases of West Nile virus have been reported in Illinois so far this year.



West Nile Virus Activity Comparison and Summary (as of July 6, 2023)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2023 Data as of July 6			
2023 Mosquito Surveillance Samples	4,020	48	1.2%
2023 Bird Surveillance Samples	58	0	0%
2023 WNV Positive Counties	10		
2023 Human Cases as of July 6	0		
2022 Historical Data as of July 6 for Comparison			
2022 Mosquito Surveillance Samples	5,061	48	0.9%
2022 Bird Surveillance Samples	96	1	1.0%
2022 WNV Positive Counties	11		
2022 Total Human Cases	34		
2012 Historical Data as of July 6 for Comparison			
2012 Mosquito Surveillance Samples	6,130	298	4.9%
2012 Bird Surveillance Samples	300	18	6.0%
2012 WNV Positive Counties	22		
2012 Total Human Cases	290		

**2023 – DuPage County Surveillance Data & Personal Protection Index – July 1, 2023**

2023		
DUPAGE COUNTY WEST NILE VIRUS SURVEILLANCE DATA 2023	YTD 2023	WEEK: 26 6/25 - 7/1
Mosquitoes Tested	9,716	1,933
WNV Total Tests	275	52
WNV Positive Tests	0	0
Positive Mosquito Pool Rate %	0%	0%
Reported Human Cases onset	--	--
Communities with Human WNV Cases	--	--
Personal Protection Index	Risk Level >>>	1

**FIGHT THE BITE**

**TODAY'S PERSONAL PROTECTION INDEX**

**1**  
LOW

**Risk Level Recommendations**

**0: NONE**

**1: LOW**  
Drain items that collect standing water around home or business.  
Defend by using insect repellent containing DEET.

**2: MODERATE**  
Drain; Defend; Wear repellent outdoors during Dusk to Dawn.

**3: HIGH**  
Drain; Defend; Dusk to Dawn; Dress for the outdoors with long sleeves and pants.

**DCHD**

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

- DuPage County Information Technology Department, GIS Division
- City of Naperville
- Clarke Environmental Mosquito Management, Inc.
- Forest Preserve District of DuPage County
- Illinois Department of Public Health
- DuPage County Health Department Public Health Center and Health Promotions Staff



**OPERATIONS UPDATE**

**Services Performed - June & Early July 2023:**

Service Item	Start Date
Natular G 5#/Acre Hand	06/02/2023
Complete Site Larval Insp Serv	06/02/2023
NatularG30 Helicopter Prehatch	06/06/2023
Natular G 5#/Acre Hand	06/19/2023
Targeted Site Larval Insp Serv	06/19/2023
Merus Truck ULV	06/20/2023
Merus Truck ULV	06/29/2023
Natular T30 CB Bike	06/29/2023
Natular G 5#/Acre Hand	07/03/2023
Complete Site Larval Insp Serv	07/03/2023
NatularG30 Helicopter Prehatch	07/03/2023
Merus 4th of July Truck ULV	07/03/2023

**Upcoming July 2023 Operations**

Work Type	Number of Treatments
Complete Site Larval Insp Serv	1
NatularG30 Helicopter Prehatch	1
Merus 4th of July Truck ULV	1
Merus Truck ULV	1
Targeted Site Larval Insp Serv	2
Natular T30 CB Bike	1