



# Village of Lake in the Hills

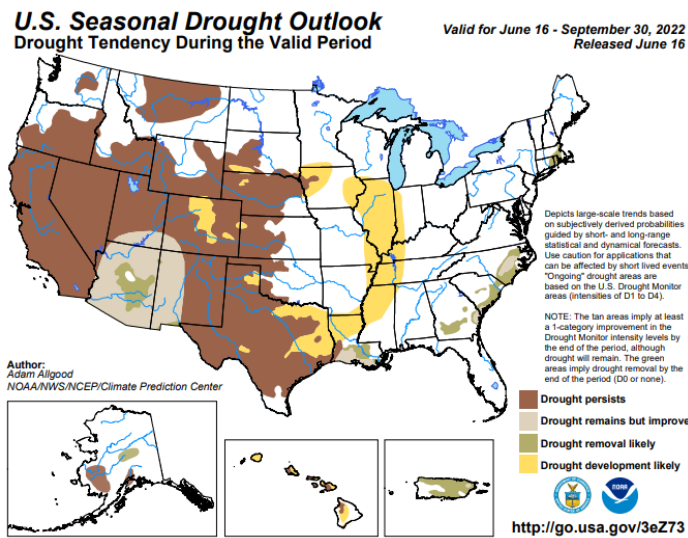
## June 2022 – Status Update

### 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.

### Abnormally Dry Soil Moisture Conditions Intensified Across Illinois

The following United States Drought Monitor map and O’Hare rainfall data show an abnormally weather pattern with drought development likely across Illinois:



2022 O'HARE RAINFALL			
Month	Actual	Normal	+ or - %
April	3.87	3.68	5.2%
May	4.93	3.38	45.9%
June	2.64	3.63	-27.3%

Source: Weather Underground

Following above normal rainfall amounts in April and May, June saw a significant shift to an abnormally dry pattern with rainfall **27.3%** below normal. The last O’Hare brood-hatching major rain was on June 13<sup>th</sup>. In addition, the temperature pattern has been above normal as shown by the number of year-to-date 90 degree days, compared to recent years:



90° Days Thru June 30 <sup>th</sup>	
Year	No. Days
2019	0
2020	7
2021	9
2022	9
Source: ABC7 Chicago Weather	

As a result, the floodwater mosquito (*Aedes vexans*) population has diminished with only spotty annoyance going into early July. Due to the persistent hot and dry pattern, *Culex* mosquitoes are expected to increase under stagnant water conditions. Accordingly, Clarke operations will focus on permanent larval development habitats for the control of the northern house mosquito, the WNV disease vector. Truck ULV adulticide applications will be recommended as warranted by surveillance data for WNV and annoyance levels.

**Floodwater Mosquito Brood Prediction – DuPage County Airport**

The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Distinct hatches of floodwater mosquito populations, 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
McHenry	05/18/2022	0.55	06/04/2022
McHenry	05/20/2022	0.54	06/11/2022
McHenry	05/25/2022	1.90	06/17/2022
McHenry	06/08/2022	0.46	06/25/2022
McHenry	06/15/2022	1.03	07/03/2022
McHenry	06/25/2022	0.44	07/09/2022



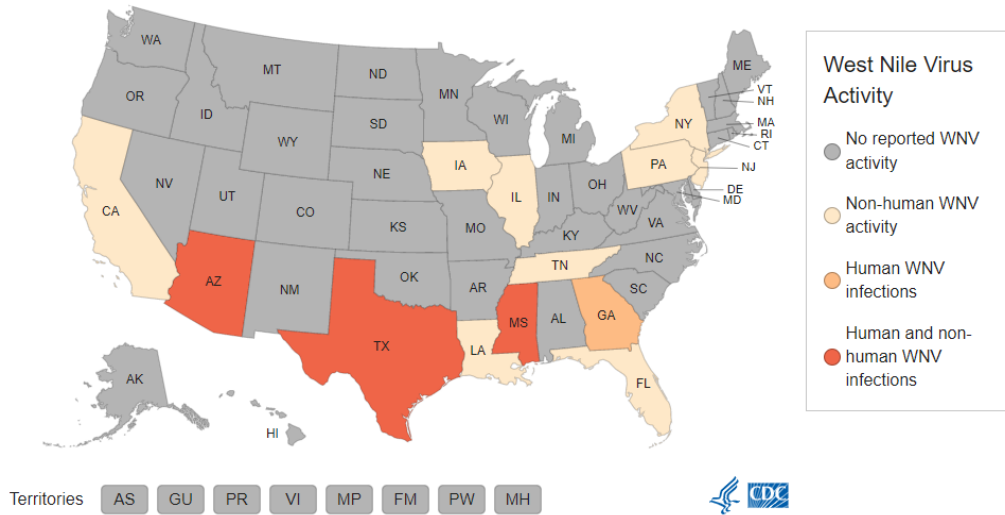
## MOSQUITO-BORNE DISEASE UPDATE

### West Nile Virus (WNV)

**2022 – USA.** As of June 28<sup>th</sup>, ten (10) USA human WNV cases have been reported to the CDC in AZ, GA, MS and TX.

### West Nile Virus Activity by State 2022

United States (as of June 28, 2022)



**2022 – Illinois.** As of June 29<sup>th</sup>, no Illinois human WNV cases have been reported to IDPH. The following chart compares 2022 to the same YTD periods in 2021 and 2012 (the last year of a major WNV outbreak):



West Nile Virus Activity Comparison and Summary (as of June 29, 2022)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2022 Data as of June 29			
2022 Mosquito Surveillance Samples	2,811	18	0.6%
2022 Bird Surveillance Samples	62	0	0%
2022 WNV Positive Counties	9		
2022 Human Cases as of June 29	0		
2021 Historical Data as of June 29 for Comparison			
2021 Mosquito Surveillance Samples	3,754	9	0.2%
2021 Bird Surveillance Samples	44	0	0%
2021 WNV Positive Counties	3		
2021 Total Human Cases	64		
2012 Historical Data as of June 29 for Comparison			
2012 Mosquito Surveillance Samples	4,711	128	2.7%
2012 Bird Surveillance Samples	289	18	6.2%
2012 WNV Positive Counties	19		
2012 Total Human Cases	290		

**OPERATIONS UPDATE**

**Services Performed - June 2022**

Service Item	Start Date
Targeted Site Larval Insp Serv	06/07/2022
Natular G 5#/Acre Hand	06/23/2022
Targeted Site Larval Insp Serv	06/23/2022
DUET Truck ULV	06/24/2022

**Upcoming July 2022 Operations**

Service Item	Number of Treatments
Complete Site Larval Insp Serv	1
DUET Truck ULV Festival Applic	3
Targeted Site Larval Insp Serv	1