Oswego Township

July 2024 - Status Report

SEASON PERSPECTIVE

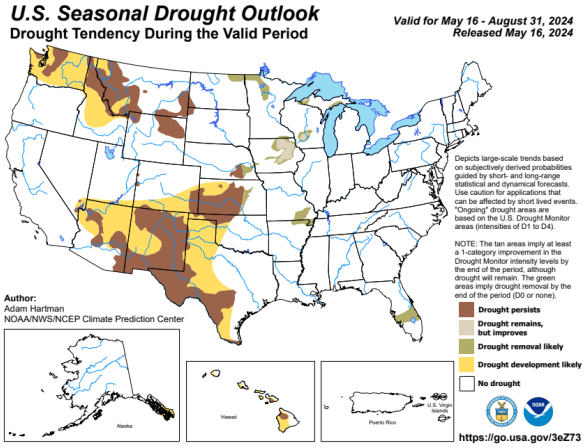
Introduction. The objectives of the program are to protect the public health by controlling nuisance mosquitoes, reducing the potential of mosquito-borne disease transmission, and providing a comfortable and healthy atmosphere for district residents.

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.

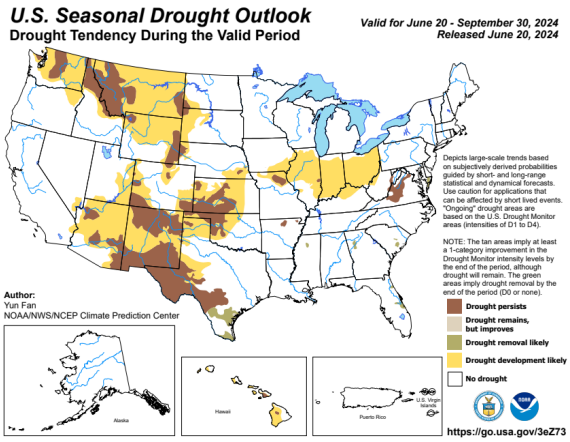
2024 Northern Illinois Drought Development Likely

The comparison of the following United States Drought Monitor maps shows the northern Illinois soil moisture has shifted to a "drought development likely" trend:

May 16, 2024



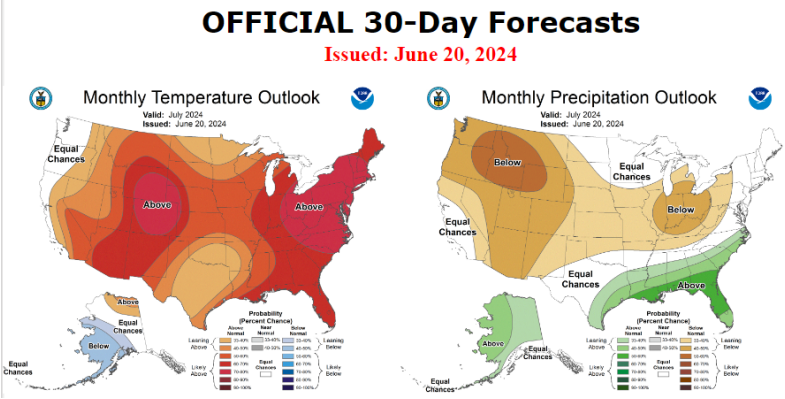
June 20, 2024



May rainfall at O'Hare Airport was close to the normal amount of 4 inches. Between May 2nd and June 5th there were six key rainfalls that triggered floodwater mosquito brood hatches that peaked during the week of June 17th. The Clarke network of 100 New Jersey light traps collected the largest catches of mosquitoes seen in many years.

Between June 5th and June 22nd, the weather pattern reversed to excessively were hot and dry conditions for those 18 days, as summarized by the following statistics:

- Average temperature was 73.6°, 5° above normal
- Warmest June in 3 years, since 2021
- 9th warmest June on record, since records began in 1871



The 30-day outlook for July from the National Weather Service is for continued above normal temperatures and below normal rainfall.

On Saturday, June 23rd, the largest storm in a month moved through the Chicagoland area with the following rainfall amounts received:

Location	Rainfall Amount Received (inches)
O'Hare	0.91
Midway	1.55
Downers Grove	1.70
Wheaton	1.92
Mundelein	4.91
McHenry	5.78
Libertyville	6.86

Source: ABC7 Chicago, AccuWeather

An additional brood-triggering rains occurred on June 25th and July 3rd.

Operations plan. As a result of this weather pattern, a shift from floodwater mosquitoes (*Aedes vexans*) to the northern house mosquito (*Culex pipiens*) is anticipated and the increased risk of West Nile virus (WNV) to develop**.** The Clarke surveillance team reported a spike of June WNV-positives *Culex* samples in DuPage. Kane and Lake Counties. These reports are in addition to other agency reports of WNV-positives in Cook and Winnebago Counties in northern Illinois. **In addition, heavy rainfall in late June will cause an *Ae. vexans* brood to hatch and impact in mid-July.** Accordingly, Clarke operations will focus on permanent and stagnant larval development habitats for the control of *Culex pipiens* and proceed with the second round of catch basins and helicopter prehatch applications. Truck ULV adulticide applications will be recommended as warranted by surveillance data for nuisance and potential risk of WNV transmission.

Floodwater Mosquito Brood Prediction

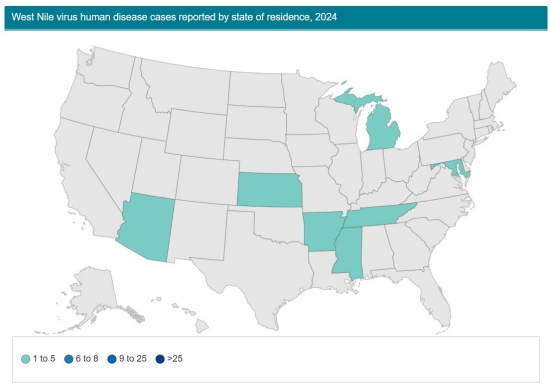
The floodwater mosquito (*Aedes vexans*) is the key nuisance species in the Chicagoland area. Floodwater mosquito population hatches, or broods, are triggered by significant rainfall events. The Clarke Brood Prediction Model calculates peak annoyance periods based on rainfall and temperature data collected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

Weather Station Name	Rain Date	Rain Amount	Brood Prediction Date
Will Co.	06/01/2024	0.69	06/15/2024
Will Co.	06/05/2024	0.49	06/19/2024
Will Co.	06/13/2024	0.40	06/27/2024
Will Co.	06/23/2024	0.97	07/07/2024
Will Co.	06/24/2024	1.27	07/08/2024
Will Co.	06/25/2024	1.56	07/09/2024
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

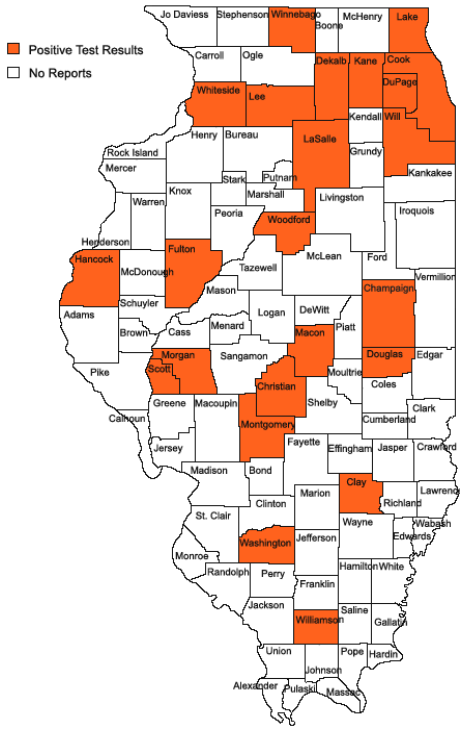
MOSQUITO-BORNE DISEASE UPDATE

West Nile Virus (WNV)

2024 – USA. As of June 25th, the nine (9) human WNV case have been reported to the Centers for Disease Control (CDC) in the following seven (7) states:



2024 – Illinois. As of July 1st, the Illinois Department of Public Health (IDPH) has confirmed the batches of mosquitoes to test positive for West Nile virus in Illinois in the following highlighted counties:



West Nile Virus Activity Comparison and Summary (as of June 14, 2024)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2024 Data as of June 14			
2024 Mosquito Surveillance Samples	1,903	11	0.6%
2024 Bird Surveillance Samples	43	10	23.3%
2024 WNV Positive Counties	13		
2024 Human Cases as of June 14	0		
2023 Historical Data as of June 14 for Comparison			
2023 Mosquito Surveillance Samples	2,367	20	0.8%
2023 Bird Surveillance Samples	52	0	0%
2023 WNV Positive Counties	4		
2023 Total Human Cases	119		
2012 Historical Data as of June 14 for Comparison			
2012 Mosquito Surveillance Samples	2,204	30	1.4%
2012 Bird Surveillance Samples	226	16	7.1%
2012 WNV Positive Counties	14		
2012 Total Human Cases	290		

OPERATIONS UPDATE

Services Performed - June & Early July 2024:

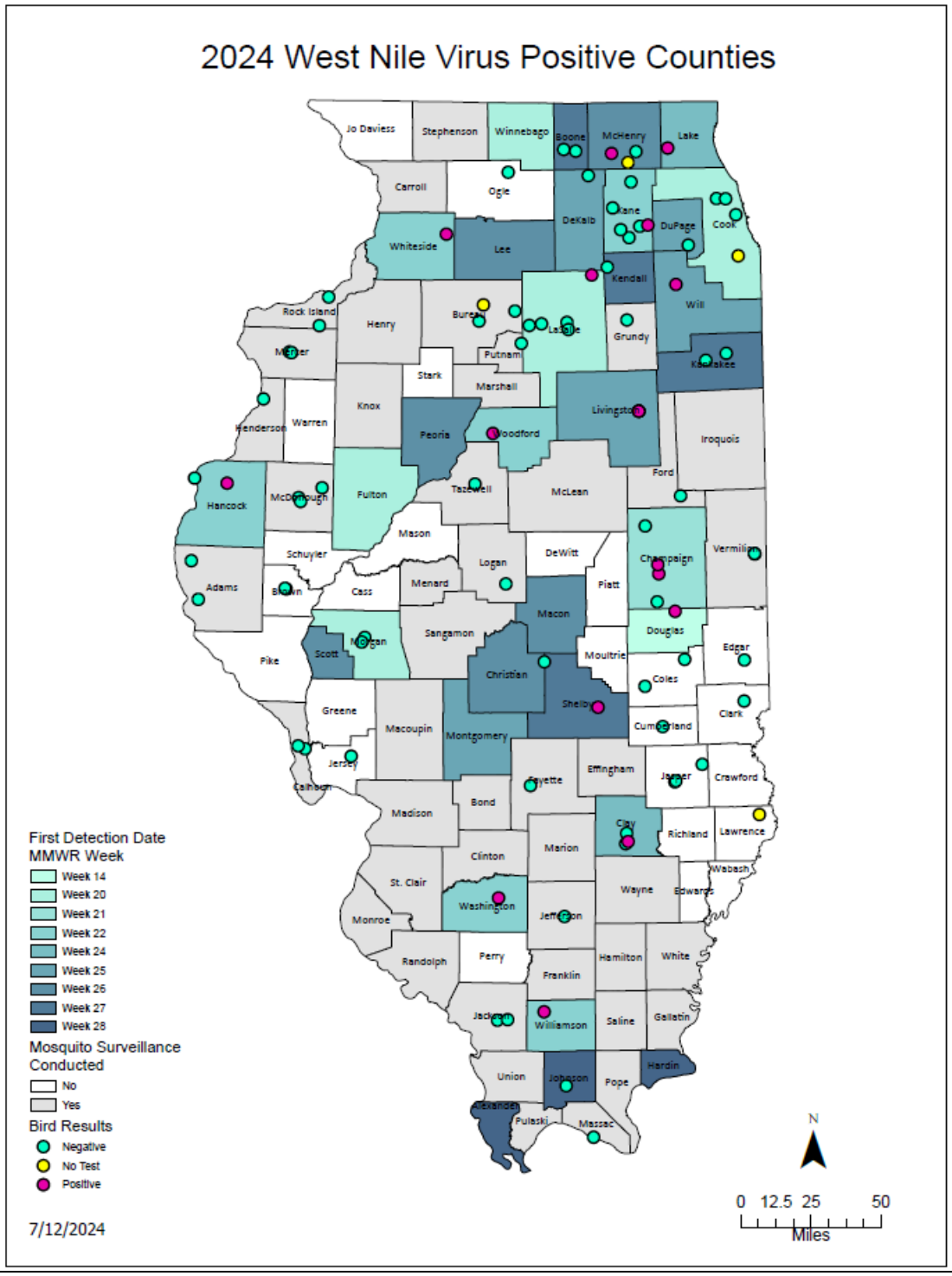
Service Item	Start Date
Biomist 3+15 Truck ULV	07/16/2024
Natular XRT CB Bike	07/17/2024

West Nile Virus Activity Comparison and Summary (as of July 12, 2024)

	Number Collected in all Counties	# WNV Positives	% WNV Positives
2024 Data as of July 12			
2024 Mosquito Surveillance Samples	5,621	253	4.5%
2024 Bird Surveillance Samples	90	16	17.8%
2024 WNV Positive Counties	33		
2024 Human Cases **as of July 12**	0		
2023 Historical Data as of July 12 for Comparison			
2023 Mosquito Surveillance Samples	6,331	180	2.8%
2023 Bird Surveillance Samples	75	0	0%
2023 WNV Positive Counties	20		
2023 **Total** Human Cases	119		
2012 Historical Data as of July 12 for Comparison			
2012 Mosquito Surveillance Samples	7,368	685	9.3%
2012 Bird Surveillance Samples	317	22	6.9%
2012 WNV Positive Counties	25		
2012 **Total** Human Cases	290		

The following are newly reported WNV positive counties:

1. McHenry County
2. Shelby County
3. Kankakee County
4. Livingston County
5. Hardin County
6. Johnson County
7. Alexander County
8. Boone County


2024 West Nile Virus Positive Counties
Jo Daviess
Stephenson
Winnebago
Boone
McHenry
Lake
Carroll
Ogle
DeKalb
Kane
DuPage
Cook
Whiteside
Lee
Kendall
Will
Rock Island
Henry
Bureau
LaSalle
Grundy
Mercer
Putnam
Stark
Marshall
Knox
Livingston
Henderson
Warren
Peoria
Woodford
Iroquois
Ford
Hancock
McDonough
Fulton
Tazewell
McLean
Mason
Schuyler
DeWitt
Champaign
Vermilion
Adams
Brown
Cass
Menard
Logan
Piatt
Macon
Douglas
Edgar
Pike
Scott
Morgan
Sangamon
Moultrie
Christian
Coles
Greene
Macoupin
Shelby
Clark
Montgomery
Cumberland
Jersey
Calhoun
Effingham
Jasper
Crawford
Fayette
Madison
Bond
Clay
Richland
Lawrence
Clinton
Marion
Wabash
St. Clair
Wayne
Edwards
Washington
Jefferson
Monroe
Randolph
Perry
Hamilton
White
Franklin
Jackson
Williamson
Saline
Gallatin
Union
Johnson
Pope
Hardin
Alexander
Pulaski
Massac
First Detection Date
MMWR Week
Week 14
Week 20
Week 21
Week 22
Week 24
Week 25
Week 26
Week 27
Week 28
Mosquito Surveillance Conducted
No
Yes
Bird Results
Negative
No Test
Positive
7/12/2024
N
0 12.5 25 50
Miles