



Joliet Township

June 2017 - Status Report

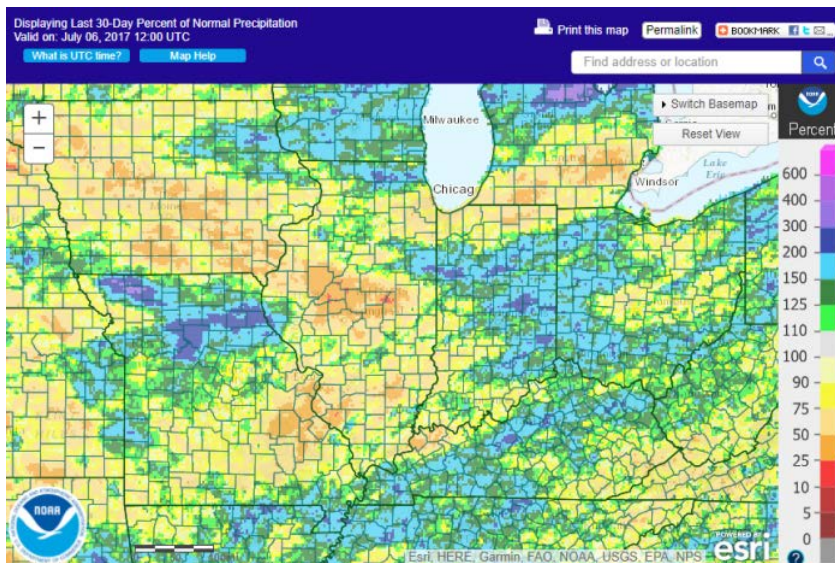
Season Perspective

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 drought conditions.

Current Status - The National Weather Service reported that the month of June 2017 at O'Hare International Airport was the 17th warmest on record with an average temperature of 72.4°, 3.5° above normal. The hot weather was confined to the first half of the month, in which there were six 90-degree days, including a 95° high temperature on June 12th, the hottest reading in the city since 2013.

The hot weather during the first half of June occurred with virtually no significant rainfall. This combination of high temperatures and minimal rain is termed by the Illinois State Water Survey as a “flash drought” due to the rapid depletion of soil moisture. These conditions diminished the impact of several floodwater mosquito broods that were projected to hit before the 4th of July holiday.

The following National Weather Service map shows the percent of normal rainfall over the past 30 days: areas in green and blue are above normal while areas in beige and brown are below normal.





Most of the rain fell on three days during the last half of June (6/14, 22 and 28) to begin the replenishment of soil moisture. Lake, McHenry, Boone and Winnebago counties were particularly hard hit with rain totals over 150% above normal. As a result, the floodwater mosquito population in July is projected to increase with the arrival of several brood migrations.

With floodwater mosquitoes rebounding, conditions are conducive to accelerating the development of the *Culex* population. Already, there have been reports of West Nile virus – positive (WNV+) mosquitoes collected in 10 Illinois counties, including, Cook DuPage, Kane and Will in the immediate Chicagoland area. As the season progresses through July and into August, surveillance and larval control activities will focus on the *Culex* and floodwater mosquito populations. To protect the public health, proactive truck ultra-low volume (ULV) adulticide applications will be recommended for the following reasons:

- The increased risk of WNV; and
- The increase of mosquito annoyance conditions.

MOSQUITO-BORNE DISEASE UPDATE

West Nile Virus (WNV)

2016 Centers for Disease Control & Prevention (CDC) WNV Summary - In 2016, a total of 47 states and the District of Columbia have reported WNV infections in people, birds, or mosquitoes in 2016. Overall, 2,038 cases of WNV disease in people have been reported to CDC. Of these, 1,140 (56%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 898 (44%) were classified as non-neuroinvasive disease.

2016 Illinois Department of Public Health (IDPH) Summary - In 2016, IDPH reported 152 human WNV cases in 26 counties. The majority of cases occurred in Cook (90), DuPage (10), Kane (6), and Will (9) Counties.

2017 Illinois WNV Update – as of July 6, there are no reported human cases in Illinois..

- On May 30th, the Illinois Department of Public Health (IDPH) reported the first WNV+ mosquitoes in downstate Madison County.
- On June 1st, the DuPage County Health Department reported the first WNV+ mosquitoes in Wheaton and Wayne
- The week of June 26th, DuPage County reported a spike in WNV+ mosquito activity with 9% of samples testing positive.
- DuPage County Personal Protection Index – current risk level as of July 5, 2017:
- Cook County: The North Shore Mosquito Abatement District reported four (4) WNV+ mosquitoes in their District during the week of June 26th and a total of 19 positives, year-to-date.



Zika virus (ZIKV)

The CDC reports the following ZIKV human case summaries for 2016 and year-to-date in 2017, as of July 6, 2017:

ZIKV CASE TYPE	UNITED STATES		US TERRITORIES		NOTES
	2016	2017 - YTD	2016	2017 - YTD	
Travelers returning from affected areas	4,830	147	142	0	2016 breakdown: 49 states & DC; IL - 103
Acquired through presumed local mosquito-borne disease transmission	224	0	35,937	515	2016 breakdown: FL-218, TX-6. PR-34,963
Acquired through other routes (e.g. sexual, laboratory or blood-borne transmission)	48	1	0	0	
HUMAN CASE TOTALS	5,102	148	36,079	515	

Brood Prediction

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	Rainfall Date	Rain Amount	Brood Prediction Date
Will Co.	04/10/2017	0.51	05/08/2017
Will Co.	05/08/2017	0.90	06/01/2017
Will Co.	05/10/2017	0.87	06/01/2017
Will Co.	05/17/2017	0.51	06/07/2017
Will Co.	05/20/2017	0.61	06/08/2017
Will Co.	05/23/2017	0.48	06/13/2017

Upcoming July Operations

1 Targeted Inspection

Services Performed 2017:

Service Item	Start Date
ROS2752 - Anvil Truck ULV Service Call	06/05/2017
ROS2008 - Natular XRT CB Truck	06/14/2017
ROS1302 - Targeted Site Larval Insp Serv	06/27/2017