



## Plainfield Township September 2016 - Status Report

### Season Perspective

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.

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Summer precipitation at O'Hare was 13.34 inches, 11% above normal. From late June through August, a series of twelve significant rainfalls hatched floodwater mosquito populations across Chicagoland, creating periods of excessive annoyance. The September temperature averaged about 5° above normal. This hot temperature pattern was classic for WNV activity. There was a sharp increase in the DuPage County Model mosquito infection rate, and many WNV-positive mosquito pools were reported by Chicagoland agencies performing surveillance trapping. The DuPage Health Department increased their Personal Protection Index from LOW to MODERATE in late August, confirming the concern over WNV activity.

Late summer is primetime for WNV transmission as indicated by several human cases being diagnosed in the Chicagoland area. Operations focused on *Culex* larval development, and truck ULV adulticide applications were recommended to suppress the adult mosquito population.

### MOSQUITO-BORNE DISEASE UPDATE

#### West Nile Virus (WNV)

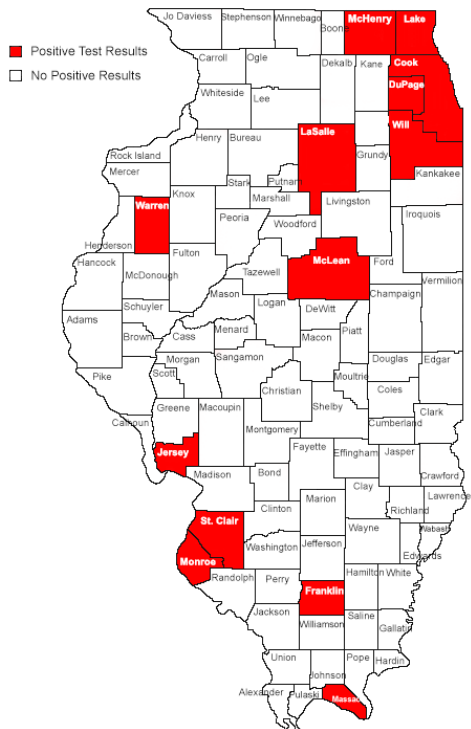
As of September 27, 2016, a total of 46 states and the District of Columbia have reported West Nile virus infections in people, birds, or mosquitoes in 2016. Overall, 956 cases of West Nile virus disease in people have been reported to CDC. Of these, 502 (53%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 454 (47%) were classified as non-neuroinvasive disease.



To date in 2016, the Illinois Department of Public Health (IDPH) reported the following WNV information:

- 64 WNV+ human cases
- 52 counties WNV+ for mosquito, bird, horse or humans
- 71 WNV+ positive birds
- 2,296 WNV+ mosquito samples

The following map shows Illinois counties with WNV human cases:





**Zika Virus (ZIKV)**

As of September 22<sup>nd</sup>, the following chart summaries the number of ZIKV human cases in the United States and Territories (Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Marshall Islands):

ZIKV CASE CATEGORY	UNITED STATES	TERRITORIES
Total	3,625	22,069
Pregnant Women	808	1,490

As of September 22<sup>nd</sup>, the Illinois Department of Public Health reported 70 travel-associated human cases. Local transmission of 59 ZIKV human cases from mosquitoes to humans has been confirmed and documented in Miami-Dade County, Florida. This ongoing situation has required the intensification of surveillance, aerial & ground, door-to-door larviciding and adulticiding efforts to control *Aedes aegypti*, the disease vector.

**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	Inch Date	Rain Amount	Brood Prediction Date
Will Co.	08/20/2016	0.40	09/07/2016
Will Co.	08/24/2016	0.60	09/09/2016
Will Co.	08/26/2016	0.85	09/10/2016
Will Co.	09/07/2016	0.56	09/25/2016
Will Co.	09/28/2016	0.42	10/12/2016
Will Co.	09/29/2016	0.46	10/13/2016

**New Jersey Light Trap Counts**

(\*Red numbers indicate an annoyance level)

Trap Location	Sep 02	Sep 05	Sep 07	Sep 09	Sep 12	Sep 14	Sep 16
24711 Easy St	12	38	106	162	25	93	74

\*Mal- Trap Malfunction



**Operation and Surveillance Reports:**

Below is a report outlining all services performed in the month of September. These services could include the following:

- **0956 N.J. Light Trap (5 day/wk – WMAD)** - *Seasonal Light Trap Service for adult mosquito population monitoring.*
- **1252 Complete Site Larval Insp Serv:** *Inspection service of all potential mosquito larvae development sites.*
- **1302 Targeted Site Larval Insp Serv:** *Inspection of all targeted larval development sites.*
- **1352 Larval Site Service Call:** *Special inspection of standing water for mosquito breeding per hot line request.*
- **1752 Vectobac (B.T.I.) BP Larv:** *Backpack larviciding for biological control of mosquito larvae sites.*
- **2009 Natular XRT CB Bike:** *Catch Basin treatment for larval control.*
- **2010 Natular XRT BYCB Bike:** *Backyard catch basin treatment for larval control.*
- **2202 5% Abate Helicopter Prehatch:** *Helicopter prehatch application for larval control.*
- **2206 Natular T30 CB Bike:** *Catch Basin treatment for larval control.*
- **2552 Merus Truck ULV:** *Truck ULV application for adult mosquito control*
- **2888 Biomist 3+15 Truck ULV:** *Truck ULV application for adult mosquito control*
- **2902 0.5% FLIT (Permethrin) BP Barr:** *Backpack barrier strip application to reduce adult mosquito reinfestation.*
- **2922 0.5% FLIT (Permethrin) BP Barr:** *Backpack barrier strip application to reduce adult mosquito reinfestation.*

**Services Performed September 2016:**

Service Item	Start Date
ROS2402 - Vectobac G Heli Larviciding	09/02/2016
ROS2015 - Vectolex WSP Catch Basin Trtmt	09/16/2016