



## Plainfield Township August 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.

In July and August, a series of 9 rains, totaling 7.76 inches at O'Hare, hatched floodwater mosquito populations across the Chicagoland area that increased annoyance conditions. Despite a brief cool-down, August 2016 averaged 76.6° or 3.5° above normal. This hot temperature pattern has been 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 still primetime for WNV transmission. Operations will continue to focus on *Culex* larval development, and truck ULV adulticide applications will be recommended to suppress the adult mosquito population.

### MOSQUITO-BORNE DISEASE UPDATE

#### West Nile Virus (WNV)

As of August 16, 2016, a total of 42 states have reported West Nile virus infections in people, birds, or mosquitoes in 2016. Overall, 213 cases of West Nile virus disease in people have been reported to the Centers for Disease Control & Prevention (CDC). Of these, 101 (47%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 112 (53%) were classified as non-neuroinvasive disease.

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

- 5 WNV+ human cases in downstate Illinois
- 40 counties WNV+ for mosquito, bird, horse or humans
- 20 WNV+ positive birds
- 1,819 WNV+ mosquito samples



County	American Crow	Blue Jay	Other Birds	Mosquito Batches	Horse
COOK	0	1	0	1418	0
DEKALB	1	1	0	1	0
DUPAGE	0	0	0	114	0
GRUNDY	0	0	0	1	0
KANE	0	0	0	35	0
KANKAKEE	0	0	0	6	0
KENDALL	0	0	0	10	0
LAKE	0	0	0	75	0
MCHENRY	1	0	0	15	0
STEPHENSON	1	0	0	1	0
WILL	0	0	0	32	0
WINNEBAGO	1	0	0	5	0
<b>TOTAL</b>	<b>12</b>	<b>7</b>	<b>1</b>	<b>1819</b>	<b>1</b>

**Zika Virus (ZIKV)**

As of August 19<sup>th</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	2,260	8,035
Pregnant Women	529	691

As of August 22<sup>nd</sup>, the Illinois Department of Public Health reported 51 travel-associated human cases. Local transmission of ZIKV from mosquitoes to humans has been confirmed in Miami-Dade County, Florida. Thirty-six human cases have been documented requiring 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	Rainfall Date	Rain Amount (inches)	Brood Prediction Date
Will Co.	07/17/2016	0.76	08/01/2016
Will Co.	07/21/2016	1.36	08/06/2016
Will Co.	07/23/2016	1.12	08/07/2016
Will Co.	07/29/2016	1.10	08/13/2016
Will Co.	08/12/2016	3.50	08/28/2016
Will Co.	08/20/2016	0.40	09/07/2016
Will Co.	08/24/2016	0.60	09/07/2016
Will Co.	08/26/2016	0.85	09/09/2016

**New Jersey Light Trap Counts**

(\*Red numbers indicate an annoyance level)

Trap Location	Aug 01	Aug 03	Aug 05	Aug 08	Aug 10	Aug 12	Aug 15	Aug 17	Aug 19	Aug 22	Aug 24	Aug 26	Aug 29	Aug 31
24711 Easy St	44	84	94	39	52	43	48	67	37	25	204	75	64	83

\*Mal- Trap Malfunction

**Operation and Surveillance Reports:**

Below is a report outlining all services performed in the month of August. 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*



**Operation and Surveillance Reports (continued):**

- **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 August 2016:**

Service Item	Start Date
ROS1352 - Larval Site Service Call	08/05/2016
ROS1302 - Targeted Site Larval Insp Serv	08/10/2016
ROS2888 - Biomist 3+15 Truck ULV	08/10/2016
ROS2015 - Vectolex WSP Catch Basin Trtmt	08/11/2016
ROS1302 - Targeted Site Larval Insp Serv	08/25/2016