

WEST CHICAGO MOSQUITO ABATEMENT DISTRICT

2017 MOSQUITO SEASON UPDATE

West Nile Virus Update

Since 1999, West Nile virus (WNV) has rapidly spread across the United States causing over 45,892 human cases, including 1,988 fatalities, during the past 18 years. Because WNV is so widespread in bird and mosquito populations, the virus has become well established as an annual mosquito-borne disease threat. In 2016, there were 2,038 human cases of WNV across the United States reported by the Centers for Disease Control & Prevention (CDC). The following are the top ten states that recorded the most WNV cases in 2016 in descending order: CA, TX, CO, IL, SD, NE, AZ, MN, ND and MS. These 10 states accounted for 77% of the 2016 human case count.

In 2016, the State of Illinois recorded 153 human WNV cases, including 5 fatalities, compared to a 2015 case count of 77, including 9 fatalities.

In 2016, DuPage County recorded 10 human WNV cases, compared to 9 in 2015, and 5 in 2014. Intensive mosquito population surveillance is performed by the State of Illinois Department of Health, DuPage County Health Department, the Forest Preserve District of DuPage County and Clarke Mosquito Control. Overall in 2016, surveillance confirmed 193 adult mosquito samples positive for WNV within DuPage County. This ongoing research continues to demonstrate the ongoing risk for significant WNV activity within DuPage County.

Clarke Mosquito Control will maintain close contact with the Centers for Disease Control, Illinois Department of Public Health, Forest Preserve District of DuPage County, and the DuPage County Health Department regarding West Nile virus data and trends during the 2017 season.

WNV symptoms are initially similar to the flu, with muscle weakness and disorientation. Though the majority of those infected will have mild symptoms or no symptoms at all, in some individuals, WNV can cause inflammation of the brain (encephalitis) and in severe cases, paralysis, coma or death. The disease is most serious – even fatal – in those with compromised immune systems and the elderly.

Zika Virus (ZIKV) Update

ZIKV was discovered in Uganda in 1947 and has since been detected in Africa, Southeast Asia, and the Pacific Islands. ZIKV was first recorded in the Western Hemisphere in 2014. Transmission was first reported in Brazil by the Pan American Health Organization (PAHO) in May 2015. In 2016, the range of ZIKV rapidly expanded to the United States and American Territories.

With all the recent news on the rapid spread of Zika virus (ZIKV), there are, of course, many questions regarding the chance of this virus being spread in Illinois. According to the Illinois Department of Public Health (IDPH), the establishment and local (endemic) transmission of ZIKV in the State of Illinois is unlikely. As of February of 2017, IDPH has reported 94 ZIKV travel cases in Illinois. The Centers for Disease Control and Prevention (CDC) reports that the only state with ZIKV acquired from local mosquitoes are Florida and Texas. The following chart summarizes the number of ZIKV cases reported to CDC in United States and American Territories:

NUMBER OF HUMAN ZIKA CASES – As of February 2017				
Area	Acquired by Travel	Locally Acquired	Laboratory Acquired	Total
United States	4,780	220	1	5,001
Florida	855	214		1,075
Texas	298	6		304
Am. Samoa	1	119		120
Puerto Rico	137	35,421		35,558
U.S. Virgin Islands	2	958		960

ZIKV is primarily transmitted from person to person by the bite of an infected mosquito, *Aedes aegypti* (the yellow fever mosquito), a species native to tropical areas, including the deep south of the United States. *Aedes aegypti* is rare to absent in most of Illinois because it cannot survive freezing temperatures. *Aedes albopictus* (Asian tiger mosquito), a species found south of I-80, is believed to be a secondary (less efficient) vector of ZIKV.

According to the Centers for Disease Control and Prevention (CDC), about 20% of people infected with ZIKV will manifest clinical symptoms of fever, rash, and joint pain. The other 80% of the population will not exhibit any symptoms or ever know they have the disease. The highest risk population is pregnant women and women of child bearing age. The CDC has stated ZIKV can be transmitted to the fetus and also through breast milk. Therefore, pregnant women are recommended to avoid travel to areas of active ZIKV transmission. Sexual transmission of ZIKV is another confirmed path that this disease will be spread.

West Chicago M.A.D. Program Overview

The Village of Winfield is within the boundary of the twenty-seven (27) square mile, West Chicago Mosquito Abatement District (WCMAD). The objectives of the WCMAD are to control nuisance mosquitoes, reduce the potential of mosquito-borne disease transmission, and provide a comfortable and healthy atmosphere for district residents. The primary targets of the program are the floodwater mosquito (*Aedes vexans*) – the dominant nuisance species, and the northern house mosquito (*Culex pipiens*) – the potential disease carrier.

Environmentally sensitive and effective mosquito control is accomplished within the WCMAD utilizing Integrated Pest Management (IPM), an approach that includes the following components: larval site monitoring, biological control, and the careful and strategic use of U.S. Environmental Protection Agency labeled and registered pesticide products.

In WCMAD's IPM approach, potential and historical larval sites are frequently inspected, biological control agents (fish, insect growth regulators, and *Bacillus* bacteria byproducts) are utilized whenever possible. The adult mosquito population is scientifically monitored; pesticides are strategically applied only when necessary. The key is to concentrate on larval control within the district boundary, scientifically assess the adult population, and perform adulticiding only on an as needed basis.

What Can Residents Do?

According to Clarke Mosquito Control, our partners in mosquito control, individuals can take the following steps to protect themselves against infection and assist in the fight against West Nile Virus:

- If outdoors when mosquitoes are active, dress in light-colored, long-sleeved clothing, long pants and socks when outdoors during prime mosquito hours. Apply mosquito repellent with DEET to clothing and exposed skin in accordance with label directions.
- Neglected swimming pools can be ideal sources for larval development to the mosquito species that transmits WNV and a public health hazard. Residents should report neglected pools to the *MOSQUITO HOTLINE @ 1-800-942-2555*. Technicians would be dispatched to inspect and treat the pool, as necessary to eliminate the risk.
- Discard any outdoor container that might hold water, or empty water from wading pools and birdbaths once a week.
- Keep grass cut short and shrubbery well trimmed around the house so adult mosquitoes will not hide there.
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- Do not dump grass clippings into low lying areas that collect water after rainfalls to prevent mosquito larvae development. The use of mulching lawnmowers is encouraged to eliminate grass clipping disposal.

- Report dead birds on your property to the DuPage County Health Department. Dead birds (crows, blue jays and raptors) can be the first indicators of the presence of West Nile Virus in the area.

For the latest information on WNV, consult the Illinois Department of Health website at <http://www.idph.state.il.us/envhealth/wnv.htm>, or the DuPage County Health Department website at <http://www.dupagehealth.org/ftb> .

Mosquito Hotline

District residents are encouraged to report standing water areas that could develop larvae, and excessive mosquito annoyance conditions. The calls should be made to WCMAD's contractor, Clarke Environmental Mosquito Management, Inc. of St. Charles, on the *MOSQUITO HOTLINE* @ 1-800-942-2555.