

Environmental Committee
June 24, 2019
7:00 p.m. – City Hall Conference Room

1. Call to Order
2. Public Comment
3. Introduction
4. Committee Items
 - a. Clarke Mosquito Abatement
5. New Business/Old Business
6. Next Meeting
7. Adjournment

City of Darien

TO: Environmental Committee Members

FROM: Lisa Klemm, Liaison Environmental Committee

DATE: June 20, 2019

RE: Environmental Mosquito Management (EMM) Program

Clarke Environmental Mosquito Management, Inc. began its third and final year of their contract extension (2017-2019). The outline of services to be provided by Clarke during this period are detailed in the attached and include the following: General Service, Surveillance and Monitoring, Larval Control and Adult Control. Further, upon completion of these services, the City of Darien receives notification via email from Clarke.

In addition, the first report of 2019 is included and has been posted on the City's website.



**Clarke Environmental Mosquito Management, Inc.,
Professional Services Outline for
The 2017 City of Darien EarthRight
Environmental Mosquito Management (EMM) Program**

Part I. General Service

- A. Aerial Survey and Geographic Information System (GIS) Mapping
- B. Computer System and Record Keeping Database
- C. Public Relations and Educational Brochures
- D. Mosquito Hotline Citizen Response – (800) 942-2555
- E. Comprehensive Insurance Coverage naming the City of Darien additionally insured
- F. Program Consulting and Quality Control Staff
- G. Monthly Operational Reports, Periodic Advisories, and Annual Report
- H. Regulatory compliance on local, state, and federal levels

Part II. Surveillance and Monitoring

- A. Floodwater Mosquito Migration Model:
The use of weather data and computer model to predict the arrival of *Aedes vexans* brood (hatch) and peak annoyance periods. (Clarke will contact the City of Darien representative and inform him/her of the impending brood arrival.
- B. Arbovirus Surveillance:
 - 1. Clarke New Jersey Light Trap Network to monitor and evaluate adult mosquito activity.
- C. Weather Monitoring – Operational Forecasts

Part III. Larval Control

- A. Targeted Mosquito Management System (TMMS™) computer database and site management.
- B. Larval Site Monitoring: 12 inspections
 - 1. Four (4) complete inspections of up to 76 sites as outlined by most recent Clarke GIS Survey.
 - 2. Five (5) targeted inspections of up to 38 breeding areas as determined by the computerized Clarke Targeted Mosquito Management System™.
 - 3. Three (3) targeted inspections of up to 33 known *Culex spp.* breeding areas as determined by the computerized Clarke Targeted Mosquito Management System™.
 - 4. Inspections of sites called in by residents on the Mosquito Hotline.
- C. Prescription Larval Control will be performed with Natular™ mosquito larvicide as described in the following sections.
 - 1. Larval Control: The program provides for up to 73 acres of single brood or 30 day residual product with backpack or hand equipment or with helicopter.
 - 2. Larval Control: The program provides for 3 backpack pre-hatch treatments of up to 1.0 acres using a 30 day residual product in the “Dale Basin” area.



EarthRight™

3. Larval Control: The program provides for treatment of 3 backpack pre-hatch treatments of up to 0.5 acres using a 30 day residual product in the "Chestnut Detention Basin" area near Lemont Road and 75th Street.
4. Helicopter Prehatch: Three (3) treatments using a 30 day residual product of up to 15.0 acres for floodwater mosquito control.
5. Larval Control: Stocking of 2,000 mosquito fish (*Gambusia affinis*) for biological control.
6. Catch Basins: Back Yard Catch Basins: One (1) treatment of up to 6 known backyard catch basins using Natular™ XRT extended residual slow release insecticide for control of up to 180 days. As new backyard catch basins are identified via citizen feedback and City referrals, treatments will be performed and the locations added to the master list for future residents.
7. Catch Basins: One treatment of up to 2,000 catch basins, inlets and manholes using Natular™ XRT extended residual slow release insecticide for up to 180 day control.
 - a. GPS DataMaster® technology will be used to record treated catch basin locations. Post-treatment application maps depicting the catch basin locations will be provided to the City as part of the monthly operational reports.

Part IV. Adult Control

- A. Adulticiding in mosquito harborage areas:
 1. Upon City authorization, backpack barrier treatments using a synthetic pyrethroid insecticide of festival and concession stand areas for residual control of adult mosquitoes.
- B. Adulticiding in Residential Areas:
 1. Upon City authorization, community-wide truck ULV treatments of up to 89.4 miles of streets using Merus™ a botanical insecticide. Any additional authorized community ULV treatments will be priced at \$8,800.00 per treatment.
- C. Adulticiding Operational Procedures
 1. Notification of community contact.
 2. Weather limit monitoring and compliance.
 3. Notification of residents on Clarke Call Notification List.
 4. ULV particle size evaluation.
 5. Insecticide dosage and quality control analysis.

2017 EarthRight Payment Total Price for Parts I, II, III, IV**

\$40,887.00

****NPDES Permit:** A National Pollutant Discharge Elimination System (NPDES) permit is necessary for the execution of the work for mosquito control effective October 31, 2011. Any additional costs associated with activities and/or services that may be required by Clarke in order to comply with an NPDES permit are not included in this proposal.



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**Clarke Environmental Mosquito Management, Inc.,
Client Agreement Authorization for
The 2017 City of Darien EarthRight
Environmental Mosquito Management (EMM) Program**

I. **Program Payment Plan:** For Parts I, II, III, and IV as specified in the 2017 Professional Services Price Outline, the total for the 2017 program is \$40,887.00. The payments will be due according to the payment schedule below. Any additional treatments beyond the core program will be invoiced when the treatment is completed. City of Darien has the option to extend this program for 2018 and 2019, holding 2017 pricing - or - to extend this program for 2018 only at rates not to exceed a (3%) annual increase.

PROGRAM PAYMENT PLAN (2017-2019)

Month	2017	2018	2019
May 1	\$10,221.75	\$10,221.75	\$10,221.75
June 1	\$10,221.75	\$10,221.75	\$10,221.75
July 1	\$10,221.75	\$10,221.75	\$10,221.75
August 1	\$10,221.75	\$10,221.75	\$10,221.75
TOTAL	\$40,887.00	\$40,887.00	\$40,887.00

PROGRAM PAYMENT PLAN (2017-2018)

Month	2017	2018
May 1	\$10,221.75	\$10,527.50
June 1	\$10,221.75	\$10,527.50
July 1	\$10,221.75	\$10,527.50
August 1	\$10,221.75	\$10,527.50
TOTAL	\$40,887.00	\$42,110.00

II. **Approved Contract Period and Agreement:**

Please check one of the following contract periods:

2017 thru 2019 Season

2017 thru 2018 Season

(New areas to be covered in 2018 - 2019 will be pro-rated to the program cost at the rates in effect at the time.)

For City of Darien:

Sign Name: Bob

Title: City Administrator

Date: 5/1/17

For Clarke Environmental Mosquito Management, Inc.:

Name: Emily Glasberg

Title: Key Accounts Manager

Date: 11/17/2016

Emily Glasberg



Proposal

**Clarke Environmental Mosquito Management, Inc.,
Client Authorization for 2017
City of Darien
Environmental Mosquito Management (EMM) Program**

Administrative Information:

Invoices should be sent to:

Name: City of Darien
Address: 1702 Plainfield Road
City: Darien State: IL Zip 60561
Office Phone: ⁶³⁰852-5000 Fax: ⁶³⁰852-4709 P.O. # _____
E-mail: lklemm@darienil.gov County: DuPage

****In an effort to be more sustainable, we ask that you provide us with an Email address that the invoices should be sent to.****

Treatment Address (if different from above):

County: DuPage

Address: _____
City: _____ State: _____ Zip _____

Contact Person for City of Darien:

Name: Lisa Klemm Title: Admin Asst to CA
Office Phone: ⁽⁶³⁰⁾353-8105 Fax: ⁽⁶³⁰⁾852-4709 E-Mail: lklemm@darienil.gov
Home Phone: _____ Cell: ⁽⁶³⁰⁾915-8696 Pager: _____

Alternate Contact Person for City of Darien:

Name: Bryon Vana Title: City Admin.
Office Phone: ⁽⁶³⁰⁾353-8114 Fax: ⁽⁶³⁰⁾852-4709 E-Mail: bvana@darienil.gov
Home Phone: _____ Cell: ⁽⁶³⁰⁾514-1251 Pager: _____

Please sign and return a copy of the complete contract for our files to:

Clarke Environmental Mosquito Management, Inc., Attn: Emily Glasberg
675 Sidwell Court, St Charles, IL 60174 or email to eglasberg@clarke.com

STATE OF ILLINOIS)
) SS
COUNTY OF DU PAGE)

I, JoAnne E. Ragona, do hereby certify that I am the duly qualified CITY CLERK of the CITY OF DARIEN of DuPage County, Illinois, and as such officer I am the keeper of the records and files of the City;

I do further certify that the foregoing constitutes a full, true and correct copy of **RESOLUTION NO. R-52-17 — “A RESOLUTION AUTHORIZING THE CITY ADMINISTRATOR TO ENTER INTO AN AGREEMENT WITH CLARKE MOSQUITO FOR AN ADDITIONAL THREE YEARS”** of the City Of Darien, Du Page County, Illinois, Duly Passed and Approved by the Mayor and City Council at a Meeting Held on May 1, 2017.

IN WITNESS WHEREOF, I have hereunto affixed my official hand and seal this 1st day of May, 2017.





City Clerk

RESOLUTION NO. R-52-17

A RESOLUTION AUTHORIZING THE CITY ADMINISTRATOR TO ENTER INTO AN AGREEMENT WITH CLARKE MOSQUITO FOR AN ADDITIONAL THREE YEARS

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DARIEN, DU PAGE COUNTY, ILLINOIS, as follows:

SECTION 1: The City Council of the City of Darien hereby authorizes the City Administrator to enter into an agreement with Clarke Mosquito for an additional three years, attached hereto as "Exhibit A".

SECTION 2: This Resolution shall be in full force and effect from and after its passage and approval as provided by law.

PASSED BY THE CITY COUNCIL OF THE CITY OF DARIEN, DU PAGE COUNTY, ILLINOIS, this 1st day of May, 2017.

AYES: 7 - Beilke, Belczak, Chlystek, Kenny, Marchese, McIvor, Schauer

NAYS: 0 - NONE

ABSENT: 0 - NONE

APPROVED BY THE MAYOR OF THE CITY OF DARIEN, DU PAGE COUNTY, ILLINOIS, this 1st day of May, 2017.

Kathleen Moesle Weaver
KATHLEEN MOESLE WEAVER, MAYOR

ATTEST:

Joanne E. Ragona
JOANNE E. RAGONA, CITY CLERK

APPROVED AS TO FORM:

John B. Murphy
CITY ATTORNEY





City of Darien May 2019 - Status Report

SEASON PERSPECTIVE

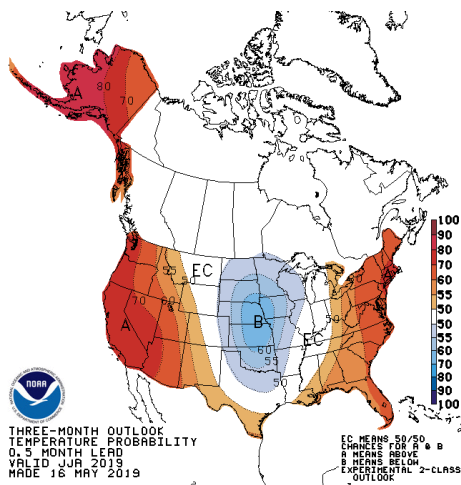
Introduction. Weather conditions critically affect the seasonal mosquito population. Excessive rainfall periods trigger hatches of floodwater mosquitoes (*Aedes vexans*), the dominant annoyance species in northern Illinois that has a flight range of 15 to 20 miles. The other target species is the northern house mosquito (*Culex pipiens*), the primary vector of West Nile virus (WNV) that flourishes under stagnant water and drought conditions.

May 2019 was the wettest month of May on record! Measureable rainfall was recorded on 21 of 31 days in May. A series of rains, totaling 8.25 inches at O’Hare International Airport, triggered twelve (12) floodwater mosquito (*Aedes vexans*) brood hatches to arrive between late May and mid-June. If temperatures reach near or above normal levels, excessive mosquito annoyance conditions can be anticipated in June.

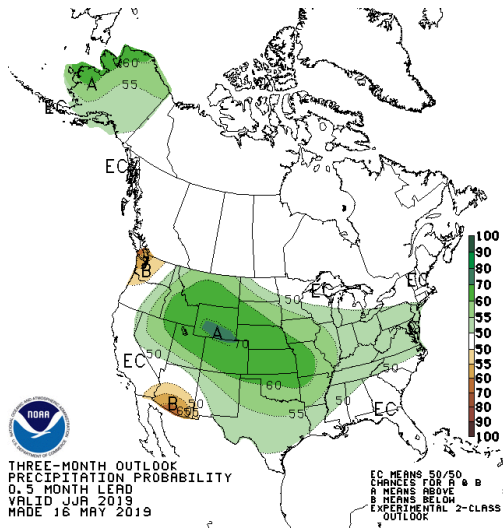
Clarke operations will focus on floodwater mosquito larval development habitats for the control of these early season hatches. Truck ULV adulticide applications could be recommended, as warranted by surveillance data, to suppress the adult mosquito population.

In addition, the National Weather Service temperature and precipitation maps provide the following outlooks for the United States, with the following prediction for Illinois:

- **Illinois – June – July - August 2019:** Normal temperatures and slightly above normal precipitation



90-Day National Weather Service Precipitation Outlook for June-July-August



90-Day National Weather Service Temperature Outlook for June-July-August

Floodwater Mosquito 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
Du Page Co.	04/27/2019	0.88	05/25/2019
Du Page Co.	04/28/2019	0.67	05/26/2019
Du Page Co.	04/29/2019	0.84	05/26/2019
Du Page Co.	04/30/2019	1.69	05/26/2019
Du Page Co.	05/02/2019	0.59	05/27/2019
Du Page Co.	05/06/2019	0.43	05/29/2019
Du Page Co.	05/08/2019	1.38	05/31/2019
Du Page Co.	05/18/2019	0.43	06/01/2019
Du Page Co.	05/21/2019	0.75	06/04/2019
Du Page Co.	05/27/2019	1.51	06/10/2019
Du Page Co.	05/28/2019	0.82	06/11/2019



MOSQUITO-BORNE DISEASE UPDATE

West Nile Virus (WNV)

2018 – USA. In 2018, there were 2,544 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 2018 in descending order: NE-CA-ND-IL-SD-TX-PA-IA-MI and CO. These 10 states accounted for 61% of the 2018 human case count. In 2018, the State of Illinois recorded 174 human WNV cases, including 16 fatalities, compared to a 2017 case count of 90, including 8 fatalities.

2019 - USA. The first WNV human cases in the United States have been reported in Las Vegas, NV and Dallas County, TX. As the season progresses, the Centers for Disease Control & Prevention website will provide the current status of WNV activity across the United States. <https://www.cdc.gov/westnile/index.html>

2019 – ILLINOIS. On May 24th, the DuPage County Health Department and Illinois Department of Public Health (IDPH) announced the first mosquitoes to test positive for West Nile virus in Illinois for 2019 in the Village of Wayne. On May 28th, the North Shore Mosquito Abatement District announced their first positive mosquitoes on May 28th Evanston, Glencoe, Glenview, Northbrook and Winnetka. No human cases of West Nile virus have been reported so far this year.

While the risk of being infected with West Nile virus is low at this time of year, citizens should take personal protection measures to minimize mosquito bites including: using insect repellent, wearing loose fitting clothing and avoiding peak mosquito feeding times during the hours around dawn and dusk. Citizens are urged to examine their property and eliminate any items that can hold water, particularly smaller items that may be easily overlooked.

County	American Crow	Blue Jay	Other Birds	Mosquito Batches	Horse	Other Mammals
COOK	0	0	0	5	0	0
DUPAGE	0	0	0	1	0	0
WILL	0	0	0	1	0	0
TOTAL	0	0	0	7	0	0



Zika virus (ZIKV)

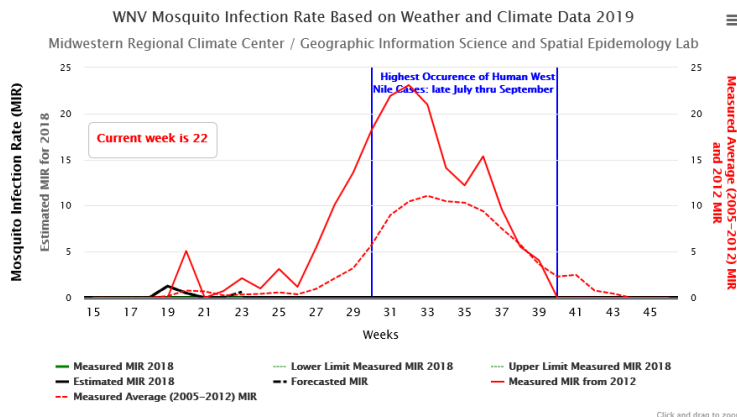
Zika virus (ZIKV) is a mosquito-borne disease that is transmitted primarily by the *Aedes aegypti* mosquito and sexual transmission. *Aedes aegypti* is a tropical mosquito that does not occur in northern Illinois. While ZIKV symptoms are generally mild in adults (fever, rash, joint pain and conjunctivitis), pregnant women who contract ZIKV can pass the virus to their unborn children, increasing the risks of serious birth defects like microcephaly. In 2016, the continental United States endured a major ZIKV outbreak with more than 5,100 travel-related nationwide and 139 locally transmitted cases in areas of south Florida. In 2017, the ZIKV human case count was dramatically diminished in the continental United States with the CDC reporting 407 cases.

In 2018, the human case count further declined to the following breakdown:

- 64 – travelers returning from affected areas
- 0 – cases acquired through presumed local mosquito-borne transmission
- 0 – cases acquired through sexual transmission

The ZIKV case count also declined in South America, the Caribbean, and American territories.

Midwest Regional Climatic Center (MRCC) WNV Prediction Model – Week 22 – 5/31/19



Services Performed May 2019:

Service Item	Start Date
ROS1302 - Targeted Site Larval Insp Serv	04/24/2019
ROS1252 - Complete Site Larval Insp Serv	05/06/2019
ROS2010 - Natular XRT BYCB Bike	05/08/2019
ROS2009 - Natular XRT CB Bike	05/09/2019
ROS2206 - NatularG30 Helicopter Prehatch	05/21/2019
ROS1302 - Targeted Site Larval Insp Serv	05/22/2019



Upcoming June Operations:

Work Type	Number of Treatments
Complete Site Inspection	2
Targeted Site Inspection	1
Backpack Treatment	1
Helicopter Treatment	1

Here Come the Mosquitoes...



Multiple broods of floodwater mosquitoes expected across IL within two weeks

With May being the wettest on record and temperatures on the rise, we are bracing for an intense start to mosquito season in Illinois. If weather conditions hold, multiple broods of floodwater mosquitoes are expected to hatch off in the next two weeks, and nuisance levels will be high.

Clarke has over 250 traps in the greater Chicagoland area that allow us to monitor population and disease activity. We are staffed and scheduling now in anticipation of the brood surge.

Together, We Can!

You can help too! Use your social media and other communication channels to engage and educate your residents to:



Tip & Toss to Fight the Bite

Encourage your residents to Tip & Toss any standing water around their properties to prevent mosquito breeding. **Larval source reduction is the single-most important thing residents can do to stay safe and comfortable outdoors.**

Limit Exposure

Educate your residents on how to limit exposure to mosquito bites:

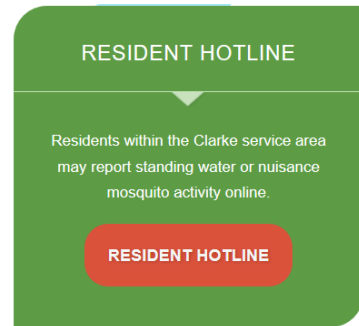
- Avoid being outside when mosquitoes are most active (dawn and dusk)
- Wear long pants and long sleeves

- Apply a CDC-recommended repellent whenever outdoors

Report It!

Standing water and nuisance levels need to be reported so problematic breeding sites can be addressed. Ask your community members to use Clarke's **new online [Resident Hotline](#)** to report this information to assist in control measures.

(Watch for a letter this week with more details and links on how to post this to your website and use in social media.)



Residents can also go to the online [Resident Hotline](#) to sign up for **text or email** notifications for scheduled adult mosquito control applications are scheduled in their area.

Clarke has been providing public health mosquito control products and services since 1946. Learn more online at www.clarke.com.



**Minutes
City of Darien
Environmental Committee Meeting
Monday, January 28, 2019**

PRESENT: Allan Jackimek, Arleta Peknik, Hilda Gonzalez, Robert Erck, Lisa Klemm – Liaison.
Additional guests present: Jim Kleinwachter (Conservation Foundation) and
Claudia Borowski (President Darien Garden Club)

ABSENT: Deb Hardtke, Kris Sant, Jane Harmon

Chairman Jackimek called the meeting to order at 7:03p.m. in the Police Department Training Room.

PUBLIC COMMENT

Jim Kleinwachter from the Conservation Foundation gave a presentation on rain barrels. He highlighted the many benefits of having a rain barrel: reduction of stress on our creeks and rivers; help recharge our local water supply; save money on water bills.

OLD BUSINESS

Lisa Klemm will check to see if recycling center is back to conducting tours.

NEW BUSINESS

Recycling Event to be held in spring – Electronics Recycling. Will work with Advanced Disposal for available date(s).

Since the representative from Advanced Disposal was not present, Liaison Klemm talked about the dos and don'ts of recycling. Members suggested putting the information in the next issue of Neighbor's Magazine as well as on the website/Direct Connect.

NEXT MEETING – Monday, June 24, 2019 – City Hall Conference Room

Meeting adjourned at 8:21 p.m.