

2020 MOSQUITO CONTROL SUMMARY – CITY OF LOWELL

The Central Mass. Mosquito Control Project (CMMCP) offers a comprehensive program of mosquito control in 44 communities in both Middlesex and Worcester counties. Our goal is to reduce mosquito exposure to the public, and the potential for disease transmission by mosquitoes, by utilizing proven, sound mosquito control techniques. Following is an explanation of our services and a summary of activity to date in Lowell:

PUBLIC EDUCATION: Letters were mailed to the Superintendent of Lowell Public schools to inform them about our educational program available to students K-8. We also reached out to the Lowell Senior center to schedule an educational presentation for senior citizens. Due to restrictions from COVID-19 our educational programs were not made available in person.

LARVAL CONTROL: Mid-March marks the beginning of our larval treatment program in area wetlands. We use a species-specific bacterium called *Bacillus thuringiensis var. israelensis* for control of mosquito larvae. In mid-May catch basin (storm drains) treatments began using a mosquito growth regulator called methoprene to reduce emergence of mosquitoes that have potential to carry WNV. Basin treatments continued throughout the summer and have totaled 1,594 basins treated to date in all areas of the city.

SURVEILLANCE: 21 surveillance sites around the city were chosen to set up our mosquito traps and are checked on a rotational basis weekly. Surveillance traps are specially designed to catch adult mosquito species of concern for mosquito-borne diseases. In all, 61 collections consisting of 302 individual mosquitoes were captured and identified to species at our lab, and of those, 13 collections consisting of 244 specimens were tested for WNV and Eastern Equine Encephalitis (EEE). 0 collections have been confirmed to be infected with WNV or EEE. 10 different species in all were identified by our lab personnel. One species of concern, the Asian Tiger Mosquito (*Ae. albopictus*), was not found despite surveys for this invasive mosquito species.

ADULTICIDING: 176 service requests for spraying were received by our office from city residents to reduce the mosquito population in their area. The pesticide we use is called *etofenprox*, and is classified as a reduced-risk pesticide by the EPA. It's a non-residual synthetic pyrethroid that dissipates very quickly in the environment. We utilize ultra-low volume (ULV) spraying where the pesticide is broken up into very small droplets (20µ) and impacts the mosquito when they are actively flying looking for a bloodmeal. This is different than most commercial applications where residual products are applied to foliage for extended treatment periods. Our spraying is done after sunset and ends about midnight to reach the mosquito during their most active period and for the protection of pollinators and other beneficial insects. When WNV or EEE is confirmed in mosquito samples, standard protocol is to determine the appropriate response with coordination with local health officials. Spraying reduces the number of mosquitoes in an area, reducing the risk from mosquito-borne disease.

SOURCE REDUCTION: This program consists of collecting and transporting for recycling used tires. Used tire casings left out in the environment and allowed to hold water provide suitable areas for larval mosquito development, including those species known to carry West Nile virus such as *Oc. j. japonicus* and *Culex pipiens*. During the course of one season, the potential exists for hundreds or even thousands of mosquitoes to emerge from just one tire. If tires infested with mosquito eggs, larvae or pupae are transported, the potential to introduce mosquito species into new areas and/or the potential for the spread of arboviruses and their transmission may increase significantly. Residents can make individual requests to our office for pickup, and we have also coordinated in other member communities for hazardous waste collections and other community-wide events. **We are lacking in this program in Lowell, if the Health Department or Dept. of Public Works can assist we would be happy to collaborate.**

DITCH MAINTENANCE: Mosquito larvae can only develop in still, stagnant water. We have a specialized ditch maintenance program that restores historic flow patterns in area drainage systems. To date we have cleaned 3,760 feet of ditches to permit the free flow of water and reduce larval mosquito habitat.

RESEARCH & EFFICACY: This program is to check for the efficacy of our products and techniques, and perform research in new or advanced control methods. While CMMCP is an agency charged with the control of mosquitoes, we strive to check for efficacy of our products and techniques, and whenever possible perform research in new or different areas of mosquito control.

I hope this serves as a guide to our services available and work performed to date in the city of Lowell, please do not hesitate to contact me at any time with questions and concerns. Thank you.

Timothy D. Deschamps

Executive Director

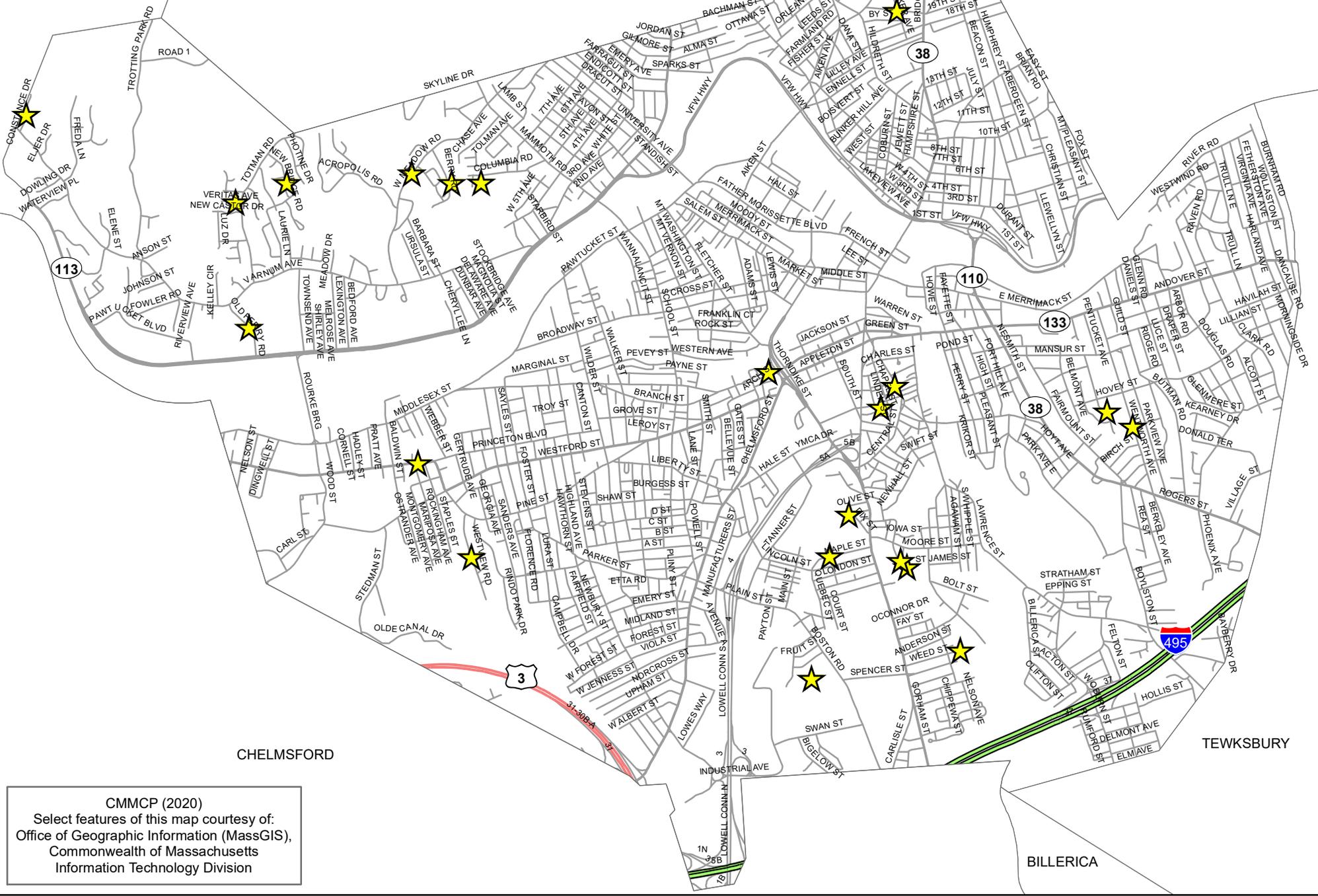
deschamps@cmmcp.org

City of Lowell: CMMCP Mosquito Surveillance Trap Sites



TYNGSBOROUGH

DRACUT



CHELMSFORD

TEWKSBURY

BILLERICA

CMMCP (2020)
Select features of this map courtesy of:
Office of Geographic Information (MassGIS),
Commonwealth of Massachusetts
Information Technology Division

5). PUBLIC EDUCATION

Educating the public about mosquitoes and their biology is an important aspect of our program. We offer a comprehensive program geared towards school-aged children. The Project produces educational materials, and all member Town Halls, Libraries, etc. are stocked with this information. We have a special program geared specifically towards senior citizens, an at-risk population for mosquito-borne viruses. We also display at Health Fairs and other community organized events.

<http://www.cmmcp.org/public-education>

6). RESEARCH AND EFFICACY

While CMMCP is an agency charged with the control of mosquitoes, we strive to check for efficacy of our products and techniques, and perform research in new areas of control. Past areas of study have included: Mosquito Resistance to Pesticides; Spray Program Efficacy; Yearly Resident Satisfaction Survey, Host Seeking Activities of Mosquitoes in Central Mass., and many others.

<http://www.cmmcp.org/research-efficacy>

7). SOURCE REDUCTION

We have a curbside tire collection and recycling program for residents to eliminate this larval mosquito habitat from the environment. We also coordinate with communities in Earth Day cleanups, hazardous waste day events, etc.

<http://www.cmmcp.org/tire-collection-program>

8). BEAVER MITIGATION

Installation of water level control device and other procedures. This program is available subject to current local, state and federal regulations, and some limitations apply. For more information please check:

<http://www.cmmcp.org/beaver-mitigation-program>

MEMBERSHIP IN CMMCP OFFERS RESIDENTS ACCESS TO A FULL PROGRAM OF MOSQUITO CONTROL. CMMCP HAS MADE GREAT STRIDES OVER THE YEARS TO REDUCE DEPENDENCY ON SPRAYING BY PLACING GREATER EMPHASIS ON LARVAL CONTROL, PUBLIC EDUCATION, DITCH MAINTENANCE AND SOURCE REDUCTION. SPRAYING IS DONE ONLY AFTER REQUEST BY A PROPERTY OWNER. IF MOSQUITO-BORNE VIRUSES ARE IDENTIFIED, SPRAYING IS DONE IF LOCAL AND STATE OFFICIALS ARE CONSULTED AND IT HAS BEEN DETERMINED THAT SPRAYING IS AN APPROPRIATE RESPONSE.

RESIDENTS MAY EXCLUDE THEIR PROPERTY FROM ANY PART OF OUR PROGRAM AT ANY TIME.

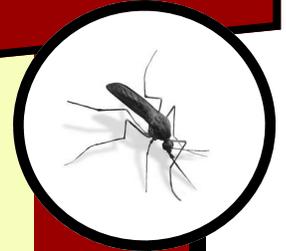
FOR MORE INFORMATION PLEASE GO TO

WWW.CMMCP.ORG



**MEMBERSHIP IN
THE**

**CENTRAL MASS.
MOSQUITO
CONTROL PROJECT**



**WHAT SERVICES
ARE AVAILABLE ?**

**CENTRAL MASS MOSQUITO CONTROL PROJECT
111 OTIS STREET
NORTHBOROUGH, MA 01532
(508) 393-3055
www.cmmcp.org**

MEMBERSHIP IN CMMCP - WHAT SERVICES ARE AVAILABLE?

CMMCP is a Massachusetts state agency that operates under the State Reclamation & Mosquito Control Board, an agency in the Dept. of Agricultural Resources. We work closely with several other state agencies, most notably the Dept. of Public Health and the Dept. of Environmental Protection. Membership in CMMCP allows a full program of mosquito control to be accessed by residents and town officials. The annual cost of membership is determined by the Dept. of Revenue and is a



Mosquito larvae

factor of the equalized evaluations and the total land area of each town. This amount is withheld from the local aid package sent out by the State each year and placed into our budget.

We were formed in 1973 and currently provide service to 44 member cities and towns in both Worcester and Middlesex counties. We employ 22 full time staff and hire up to 10 seasonal staff each summer to work in our surveillance department and assist in other areas such as

research, source reduction, larval control and ditch maintenance. We operate out of a newly renovated, state-of-the-art facility in Northborough, and we are the largest mosquito control project in the state covering over 810 square miles. We constantly strive to offer the latest advances and procedures in mosquito control operations. Our website at <https://www.cmmcp.org> has detailed information on our program. For more information please call our office at (508) 393-3055 during business hours or e-mail us anytime at cmmcp@cmmcp.org.

MOSQUITO CONTROL SERVICES

We offer a full program of mosquito control which consists of 8 components: larval control; adult control; ditch maintenance; mosquito surveillance; public education; research and efficacy; source reduction (tire recycling) and beaver mitigation. Details of each program are outlined in this pamphlet.

1). LARVAL MOSQUITO CONTROL

Wetlands and suspected mosquito larval sites are monitored by specially-trained technicians from March through September to determine the need for applications of environmentally sensitive products (typically Bti) to control the larval mosquito. By controlling mosquitoes in their larval stage the need for adult mosquito spraying is greatly reduced.

<http://www.cmmcp.org/larval-control-program>

2). ADULT MOSQUITO CONTROL

Adult mosquito control (called adulticiding) is only done by REQUEST OF RESIDENTS & TOWN OFFICIALS, OR AS A RESPONSE TO VIRUS CONFIRMATIONS. If adult mosquito populations have reached established thresholds, GPS tracked, computer controlled truck-mounted sprayers are used to reduce the adult mosquito levels in targeted areas. The Project has worked diligently over the past 30 years to achieve the goal of reducing the dependency on adulticiding by increasing the emphasis on the other proactive services outlined in this pamphlet. If mosquito-borne viruses are identified, we work closely with local and state health officials to determine the appropriate response.

<http://www.cmmcp.org/adulticide-program>

3). DITCH MAINTENANCE

CMMCP conducts maintenance on ditches to improve water

flow, cleans roadside culverts and man-made ponds to improve water quality, thereby restoring historic flow patterns and reducing the potential for larval mosquito habitat in these areas.

<http://www.cmmcp.org/ditch-maintenance-program>

4). MOSQUITO SURVEILLANCE

Mosquito populations are monitored in both the larval and adult stages to determine the appropriate control methods to be employed, record prevalent mosquito species, and determine disease transmission potential. We supplement the Dept. of Public Health's arbovirus surveillance program, and send in samples weekly from all member communities to be tested for mosquito-borne viruses.

<http://www.cmmcp.org/arbovirus-surveillance-program>