



The Commonwealth of Massachusetts

STATE RECLAMATION & MOSQUITO CONTROL BOARD

CENTRAL MASSACHUSETTS MOSQUITO CONTROL PROJECT

111 Otis Street, Northborough, MA 01532-2114
Telephone (508) 393-3055 • Fax (508) 393-8492
www.cmmcp.org



COMMISSION CHAIRMAN
RICHARD J. DAY

EXECUTIVE DIRECTOR
TIMOTHY D. DESCHAMPS

PESTICIDE ENVIRONMENTAL STEWARDSHIP PROGRAM BACKGROUND DOCUMENT FOR THE CENTRAL MASSACHUSETTS MOSQUITO CONTROL PROJECT

Submitted to: the American Mosquito Control Association

Contact: Timothy D. Deschamps, Executive Director
Central Mass. Mosquito Control
111 Otis Street Northborough, MA 01532

Phone: (508) 393-3055
Fax: (508) 393-8492
Email: deschamps@cmmcp.org

Date: May 15, 2007

I. INTRODUCTION TO BACKGROUND DOCUMENT

Chapter VII of the American Mosquito Control Association (AMCA) "Partnership Strategy Document" (PSD) provides for qualified member organizations to attain PESP partnership status under the auspices of the AMCA. This "Background Document" has been developed by the Central Mass. Mosquito Control Project (CMMCP), a sustaining member and affiliate of the AMCA, to meet a requirement of the revised Pesticide Environmental Stewardship Program (PESP) format that was instituted in July 1999. This document will describe the current policies and organizational structure of the CMMCP and present a brief overview of our general control practices. This "Background Document" will also describe how the CMMCP will strive to improve its ongoing policy of encouraging environmental stewardship by its members.

II. OVERVIEW OF THE CENTRAL MASS MOSQUITO CONTROL PROJECT

The CMMCP is a state agency of the Commonwealth of Massachusetts. The Project was created by the Massachusetts State Legislature in 1973, and currently consists of 38 cities and towns in Central Massachusetts, from both Worcester and Middlesex Counties, covering over 685 square miles. The Project is administered by the State Reclamation and Mosquito Control Board located in Boston. The address is Suite 500,

251 Causeway Street, and the phone number is (617) 626 -1715. Membership in the Project is done by a majority vote in either an Annual or Special Town Meeting, or by City Council.

The objective of the Project is to attain an efficient, economic mosquito control operation which will provide the best results possible and be consistent with all ecological aspects and the best interests of the member towns. 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. CMMCP believes the best way to accomplish this task is by practicing an Integrated Pest Management (IPM) approach as it relates to mosquito control in Massachusetts. IPM utilizes a variety of control techniques and evaluation procedures. Control efforts are undertaken only after surveillance data has been collected and analyzed. Training, experience and common sense dictate our response in any given situation.

It is our desire and responsibility for this Project to have the best mosquito control for the communities that we serve. We offer a full service program of mosquito control year round, consisting of 6 elements: larval control, adult control, surveillance, water management, public education, research/efficacy. These services are outlined below:



LARVAL CONTROL: After a field technician has determined that larval mosquitoes are present, a small amount of environmentally sensitive product is applied to the area according to label directions. This is often a very effective control method, reducing the emergence of the adult mosquito from that area. Larviciding is practiced from late-March to September. Bti is the product of choice for larviciding in wetlands, however if the bulk of the collection are pupae, we will use a refined mineral oil. We currently employ aerial treatments for spring brood mosquitoes in 3 member towns using granular Bti, covering nearly 1,800 acres per year. Larval samples are brought back to the Project's lab to be keyed to species and entered into a GIS database.



ADULT CONTROL: The control of adult mosquitoes is done on a request only basis, and the presence of adult mosquitoes is confirmed from landing counts or other surveillance data, according to pre-determined thresholds, before any application is done. Adulticiding can be an effective method of temporary control, which can be beneficial prior to public gatherings, outdoor events and festivals, or when mosquito populations have been determined to be intolerable. Since this part of the program is done only upon request, this allows the individual resident to have the ultimate discretion on mosquito spraying in their area - how much or how little. Exemptions for spraying are handled through the City/Town Clerk and our office, and are updated each year. Adulticiding is done from approximately Memorial Day to Labor Day, depending on prevalent mosquito populations. We use the pyrethroid class of adulticides, sumithrin for ULV and are considering deltamethrin for barrier treatments on a limited scale for 2007. Notifications for the adulticide program consist of a mailing to the City/Town Clerk, Police Department and Board of Health office 2 weeks prior to the start of each month with the scheduled evening for each city or town; on the day of the application, we post on our phone system a listing by town with street names included, and this posting is

also made available on our website. Detailed locations are given to the Police Department prior to each application.



SURVEILLANCE: We operate a full surveillance program in our service area. The landing rates performed by our field staff are brought back to the Project lab to be keyed out to species, allowing us to tailor our larviciding program and reduce future dependence on adulticides. We have mobile teams of specialized mosquito traps (gravid & CDC baited w/CO₂) designed to capture virus-bearing mosquitoes. These mosquito samples are sent into the MDPH laboratory in Jamaica Plain for testing of West Nile Virus, Eastern Equine Encephalitis, and other arboviruses of concern by MDPH. These traps are used in a rotation throughout our service area, and are then supplemented in areas showing arboviral activity to augment Mass. Department of Public Health's collections. Additional trap types are utilized in suspect areas to monitor and evaluate the risk of viral transmission to the local populace.



WATER MANAGEMENT: This method reduces or eliminates the source of a potential mosquito problem, and consists of cleaning road-side ditches and culverts and removal of brush and accumulated debris from streams. All of the above mentioned methods serve to accomplish the same goal - they permit water to flow freely, and reduce the likelihood for stagnant areas, areas in which the mosquito needs to reproduce. Water management is practiced year-round, and is done only after extensive examinations, and permission is received by the property owner(s). These projects can be as simple as field crews using hand and power tools, to using specialized heavy equipment (less than 3 psi). We employ a full time year round Wetland Project Coordinator charged with the responsibility of setting up these projects.



PUBLIC EDUCATION: The "Mosquito Awareness" Program which we offer to elementary schools and other civic organizations in our district has become very popular. Project staff meets with students, teachers or residents to discuss mosquito biology, mosquito habitat, and control procedures. Much of the presentation is directed towards what can be done to prevent mosquitoes from breeding around their homes. This program is tailored to meet the needs of the specific audience. Two thousand, two hundred and fifty (2,250) students and/or residents attended these programs in 2006. Educational pamphlets are available to anyone interested in learning about mosquito control and the services provided by the Project, and these items are routinely stocked in member Town/City Halls and libraries. Display boards with information on our program are rotated through area Town/City Halls throughout the year. This year we developed a brochure specifically for horse owners to alert them to the dangers of mosquito-borne disease. Bookmarks with educational information have been printed and stocked in member libraries and town halls, and are used as part of the education program. We also have a website at www.cmmcp.org that has extensive information on mosquito biology, our control procedures, products we use, etc.



RESEARCH & EFFICACY: 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. With the staffing of a full-time Field Biologist in mid 2006, this department of CMMCP is now running at full strength. Anticipated areas of study in 2007 include: mosquito bloodmeal analysis (with CT Agr. Exp. Station & other MA mosquito projects); Pesticide resistance testing; Adulticide program efficacy evaluation; Turbidity study during restoration projects (in consultation with other MA mosquito projects). We are also beginning to utilize the power of GIS to benefit our operations.

We operate from a state-of-the-art facility in Northborough, Massachusetts. Our office hours are Monday through Friday, 7:00 AM to 3:30 PM. We encourage citizens to phone our office to register mosquito complaints, ask questions and request further investigation of mosquito areas. Tours of the facility can be arranged by calling the office in advance. We have a website at <http://www.cmmcp.org> which has extensive information about the services we offer to member cities and towns.

III. RECENT CMMCP ENVIRONMENTAL STEWARDSHIP PROGRESS

Over the years, CMMCP has made significant strides in making environmental stewardship an important program consideration. This is evidenced by initiatives including:




The implementation of **wetland restoration projects** in freshwater habitats that enhance the natural resources of the area, as well as mosquito control. These ditches resemble natural meandering streams and may allow fish and other mosquito larval predators to reach formerly isolated areas to naturally control mosquito larvae. The restoration projects also restore these areas to historic drainage patterns and reduce and/or eliminate the need for larval control projects. Maintenance of these areas is an ongoing function of CMMCP.





The increased use of the **biorational products** such as *Bacillus thuringiensis israelensis* (Bti) and the insect growth regulator methoprene for larval control with applications being made based on accurate, scientifically valid surveillance performed by trained field technicians.



CMMCP employs a comprehensive **continuing education program** to its staff. These programs are designed to thoroughly train our mosquito control personnel (from field workers to senior management) about all aspects of mosquito control. These programs are administered through private and state colleges and universities; professional associations like the Northeastern Mosquito Control Association (NMCA) and AMCA; and through public health departments. All CMMCP employees are required to obtain (and maintain) certifications in Category 47: Mosquito and Biting Fly, through the Commonwealth of Massachusetts Pesticide Bureau. 2006/2007 training session were: chain saw safety; CPR/AED; defensive driving; forklift operations; mosquito surveillance; GIS training; various mosquito control & public health seminars.

 CMMCP staff participates in a number of **public education** programs for both children and adults to inform them about proper mosquito control and about what measures they can take to help themselves (e.g., waste container disposal). Two thousand, two hundred and fifty (2,250) students and/or residents attended these programs in 2006. Educational pamphlets are available to anyone interested in learning about mosquito control and the services provided by the Project, and these items are routinely stocked in member Town/City Halls and libraries. Display boards with information on our program are rotated through area Town/City Halls throughout the year. This year we developed a brochure specifically for horse owners to alert them to the dangers of mosquito-borne disease. Bookmarks with educational information have been printed and stocked in member libraries and town halls, and are used as part of the education program. We also have a website at www.cmmcp.org that has extensive information on mosquito biology, our control procedures, products we use, etc.

 CMMCP conducts operational **research projects** and collaborates with other state and local agencies, as well as local college personnel. A key to meeting the scientific challenges of the mosquito control community is through competent, well-focused applied research. We participate in research projects which may contribute to minimizing pesticide risk.

 Over the past several decades through **research and cooperative efforts**, CMMCP has worked closely with governmental agencies to better manage our habitats while providing adequate mosquito control benefits. We have worked closely with the Mass. Department of Public Health in developing a vector control plan for the control of mosquitoes in the event of a WNV or EEE outbreak. We are also working with the Department of Environmental Protection on a Best Management Practices manual for freshwater mosquito control.

IV. MEASURING PROGRESS IN MEETING PESP GOALS

CMMCP will provide annual reports to the AMCA as our national association develops their yearly PESP report on the identified activities for the year. For the past several years, this information has been provided to the Northeastern Mosquito Control Association for their yearly contribution to the AMCA report. That information will be provided directly to the AMCA, as well as to the NMCA, as is appropriate.

V. SUMMARY

CMMCP looks forward to this NMCA/AMCA/EPA-PESP Partnership to as we strive to continue our on-going efforts to reduce pesticide risk while recognizing that the environmentally sound use of chemicals will remain an important component of our IPM program for the foreseeable future. We recognize the benefits that this partnership can provide to our service area, in particular in having an effective avenue of communication with the EPA (through the AMCA).

CMMCP recognizes the need to protect public health and the environment with efficient, cost-effective mosquito control. In our role as a partner in PESP, CMMCP promotes the adoption of innovative, alternative pest control practices that reduce potential pesticide risk. We feel that environmental stewardship is an integral part of mosquito control. We commit to working toward pesticide practices that reduce risk to humans and the environment, and we'll take strategic approaches to risk reduction and undertake specific, measurable activities toward achieving risk reduction goals.

A handwritten signature in black ink, reading "Timothy D. Deschamps". The signature is fluid and cursive, with a large initial 'T' and 'D'.

Timothy D. Deschamps
Executive Director