

## REPORT OF PLYMOUTH COUNTY MOSQUITO CONTROL PROJECT

The Commissioners of the Plymouth County Mosquito Control Project are pleased to submit the following report of our activities during 2009.

The Project is a special district created by the State Legislature in 1957, and is now composed of all Plymouth County towns, the City of Brockton, and the Town of Cohasset in Norfolk County. The Project is a regional response to a regional problem, and provides a way of organizing specialized equipment, specially trained employees, and mosquito control professionals into a single agency with a broad geographical area of responsibility.

The 2009 season began with a high water table and above average rain fall into the fall season. Efforts were directed at larval mosquitoes starting with the spring brood. Ground and aerial larviciding was accomplished using B.t.i., an environmentally selective bacterial agent. Upon emergence of the spring brood of mosquitoes, ultra-low volume adulticiding began on May 26, 2009 and ended on September 25, 2009. The Project responded to a record 20,713 spray requests for service from residents.

In response to the continued threat of mosquito borne diseases in the district, we increased our surveillance trapping, aerial and ground larviciding, and adult spray in areas of concern to protect public health.

Eastern Equine Encephalitis (EEE) was first isolated in the district from *Culiseta melanura*, a bird biting species, by the Massachusetts Department of Public Health in Lakeville on August 24, 2009. Twelve EEE mosquito isolates were trapped in Plymouth County as follows: Rochester-9/3, 9/9 *Culiseta melanura*, 9/15 *Ochlerotatus canadensis* a human biter, 9/23 (4) *Culiseta melanura*, Mattapoisett-8/27, 9/9 (2) *Culiseta melanura* 8/27 *Ochlerotatus canadensis*, Plympton-9/9 *Culiseta melanura*,

Based on guidelines defined by the "Vector Control Plan to Prevent EEE" in Massachusetts, two Plymouth County towns Lakeville and Middleboro were elevated from "Low Level" to "Moderate Level" for EEE Risk" and Mattapoisett, Marion and Rochester were elevated to "High Level" EEE risk category. All other towns in Plymouth County Mosquito Control Project remained in the "Low Level Risk" category. We are pleased to report that in 2009 there were no human or horse EEE cases in Plymouth County.

West Nile Virus (WNV) was also found within the district. A total of two isolations of WNV mosquitoes were found. *Culex pipiens* bird biters were trapped in Lakeville on 8/30 and in Wareham on 9/3. We are also pleased to report that in 2009 that there were no human or horse West Nile Virus cases in Plymouth County. As part of our West Nile Virus control strategy a total of 63,940 catch basins were treated with larvicide in all of our towns to prevent WNV. The Massachusetts Department of Public Health discontinued bird testing for West Nile Virus.

The public health problem of EEE and WNV continues to ensure cooperation between the Plymouth County Mosquito Control Project, local Boards of Health and the Massachusetts Department of Public Health. In an effort to keep the public informed, EEE and WNV activity updates are regularly posted on Massachusetts Department of Public Health website at [www.state.ma.us/dph/wnv/wnv1.htm](http://www.state.ma.us/dph/wnv/wnv1.htm).

The figures specific to the Town of Mattapoisett are given below. While mosquitoes do not respect town lines the information given below does provide a tally of the activities which have had the greatest impact on the health and comfort of Mattapoisett residents.

**Insecticide Application.** 3,139 acres were treated using truck mounted sprayers for control of adult mosquitoes. More than one application was made to the same site if mosquitoes reinvaded the area. The first treatments were made in May and the last in September.

During the summer 1,035 catch basins were treated to prevent the emergence of *Culex pipiens*, a known mosquito vector in West Nile Virus transmission.

Our greatest effort has been targeted at mosquitoes in the larval stage, which can be found in woodland pools, swamps, marshes and other standing water areas. Inspectors continually gather data on these sites and treat with highly specific larvicides when immature mosquitoes are present

**Water Management.** During 2009 crews removed blockages, brush and other obstructions from 100 linear feet of ditches and streams to prevent overflows or stagnation that can result in mosquito breeding. This work, together with machine reclamation, is most often carried out in the fall and winter.

**Machine Reclamation.** 1,435 linear feet of saltmarsh ditch was reconstructed in Mattapoisett using the Project's track driven excavator.

**Aerial Application.** Larviciding woodland swamps by airplane before the leaves come out on the trees continues to be very effective. In Mattapoisett this year we aerially larvicided 560 acres.

Finally, we have been tracking response time, which is the time between notice of a mosquito problem and response by one of our inspectors. The complaint response time in the Town of Mattapoisett was less than two days with more than 542 complaints answered.

**Mosquito Survey.** A systematic sampling for the mosquitoes in Mattapoisett indicates that *Cs. melanura* was the most abundant species. Other important species collected include *Oc. canadensis* and *Cx. species*.

We encourage citizens or municipal officials to visit our website at [www.plymouthmosquito.com](http://www.plymouthmosquito.com) or call our office for information about mosquitoes, mosquito-borne diseases, control practices, or any other matters of concern.

Anthony Texeira  
Superintendent

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