

REPORT OF THE 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 2007.

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 2007 season began with a normal water table which decreased into the summer 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 21, 2007 and ended on September 28, 2007. The Project responded to 12,191 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 was first isolated from *Culiseta melanura*, a bird biting species, by the Massachusetts Department of Public Health in Plympton (2 pools) on August 7, 2007. Of the season's total of thirty one EEE isolates, nineteen were from Plymouth County as follows: Halifax - 8/13, 8/16(2), 8/27, 8/30, 9/26, Hanson - 9/5, Kingston - 8/13, 8/16(2), 8/27, 9/26, 10/5, Plympton - 8/7(2), Rockland - 9/26, West Bridgewater - 8/14(2), 8/22.

Based on guidelines defined by the "Vector Control Plan to Prevent EEE" in Massachusetts, nineteen Plymouth County towns were elevated from moderate to "High Level of EEE Risk" effective August 20, 2007. We are pleased to report that in 2007 there were no human or horse EEE cases in Plymouth County.

West Nile Virus was also found within the district. A total of ten birds tested positive for WNV in the following seven towns: Bridgewater (3), Duxbury (1), East Bridgewater (1), Halifax (1), Hanson (1), Lakeville (1) and Middleboro (2). Approximately thirty birds were handled through this Project as a dead bird repository. A total of thirteen isolations of WNV in mosquitoes were found in the following towns: Abington - 8/28, Bridgewater - 8/27(4), 9/12, Hanson - 9/5, Kingston - 8/30, Middleboro - 8/20 and Rockland - 9/21. We are also pleased to report that in 2007 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 63,558 catch basins were treated with larvicide in all of our towns to prevent WNV.

The remaining 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.

The figures specific to the Town of Abington 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 Abington residents.

Insecticide Application. 1,135 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 2,279 catch basins were treated to prevent the emergence of *Culex pipiens*, a known mosquito vector in West Nile Virus transmission.

Aerial Application. Larviciding woodland swamps by helicopter before the leaves come out on the trees continues to be very effective. In Abington this year we aeriaily larviced 67 acres.

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 2007 crews removed blockages, brush and other obstructions from 2,285 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.

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 Abington was less than two days with more than 186 complaints answered.

Mosquito Survey. A systematic sampling for the mosquitoes in Abington indicates that *Cq. perturbans* was the most abundant species. Other important species collected include *Cs. melanura* and *Ae. cinereus*.

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

Raymond D. Zucker
Superintendent

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