

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 2006.

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 or responsibility.

The 2006 season began with a normal water table until record May precipitation produced large numbers of spring and summer brood mosquitoes throughout the County. 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. The Project responded to 13,708 requests for service from residents.

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

Eastern Equine Encephalitis virus was first isolated from *Culiseta melanura*, a bird biting species, by the Massachusetts Department of Public Health in Carver on July 17, 2006. Of the season's record breaking total of one hundred fifty seven EEE isolates, fifty four were from Plymouth County as follows: Bridgewater- 7/1(2), 8/18 8/19; Brockton- 9/18; Carver- 7/17,8/2,8/6,8/21 (2),8/22,10/2; Cohasset- 8/25; East Bridgewater- 8/9; Halifax- 8/2 (2), 8/7,8/10,8/16,8/21,8/31(3); Hanover- 9/18; Hingham- 9/12; Kingston- 8/7(2), 8/10(2), 8/21,8/22,9/25; Lakeville- 7/25,7/26(2), 8/28/6(4), 8/22; Marshfield- 8/31; Mattapoisett- 8/10; Middleboro- 8/1; Pembroke- 8/16; Plympton- 7/31, 8/16(2), 8/28,8/30; Rochester- 9/6; Rockland- 8/14 and Scituate- 9/12. Five human cases of EEE were confirmed statewide with cases reported in Lakeville and Middleboro. Three horses were diagnosed with EEE in Plymouth County (Lakeville, Middleboro and Pembroke). A Llama from Scituate was also tested positive for EEE.

Analysis of risk indicators in Southeastern Massachusetts were showing that the risk of human EEE infection was at a critical level. This precipitated aerial spraying at dusk on August 8th of approximately 159,000 acres and an expanded aerial spray zone of approximately 425,000 acres between August 22nd and 24th which included a great portion of Plymouth County. We normally end our spray season on Labor Day. This year we suspended ULV ground spray season on September 30. Based on guidelines defined by the "Vector Control Plan to Prevent EEE" in Massachusetts, Southeastern Massachusetts will be at a "moderate level of EEE risk" beginning the 2007.

We are pleased to report that in 2006 there were no human or horse West Nile Virus cases in Plymouth County. A total of five birds tested positive for WNV in the following three Towns: Bridgewater (3), Brockton (1) and Pembroke (1). A total of six isolations of WNV in mosquitoes were found in the following Towns: Bridgewater (8/22), Carver (8/21), Halifax (8/30), Kingston (9/19), Pembroke (8/6) and Plympton (8/30).

The recurring 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. 1,855 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 June and the last in September.

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 2006 crews removed blockages, brush and other obstructions from 2775 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 288 complaints answered.

Mosquito Survey. A systematic sampling for the mosquitoes in Abington indicates that *Aedes vexans* was the most abundant species. Other important species collected include *Coquillettidia perturbans* and *Ochleratatus Canadensis*.

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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