

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 2017.

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. 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 2017 season began with normal amounts of precipitation but became drier as the season progressed. Efforts were directed at larval mosquitoes starting with the spring brood. The Project ground and aerial larvicided 15,032 acres and this 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 June 5, 2017 and ended on September 8, 2017. The Project responded to 14,209 requests for spraying and larval checks from residents covering all of the towns within the district.

Massachusetts Department of Public Health has developed an “Arbovirus Surveillance and Response Plan” for the state. The Plan creates a system which estimates the human risk for contracting Eastern Equine Encephalitis and West Nile using a several factors including the number of infected mosquitoes. Based on guidelines defined by the Plan, all towns in Plymouth County Mosquito Project were at the “Low Level Risk” for Eastern Equine Encephalitis. We are pleased to report that in 2017 there were no human, or horse EEE cases in the district. There were also no detections of EEEV in the mosquito population.

West Nile Virus was active in Massachusetts. This summer, WNV was found in mosquitoes 17 times in the district. The virus was found in Abington, Bridgewater, Halifax, Kingston, Lakeville, Marion, Middleborough, Plymouth, West Bridgewater, and Whitman. In response to these findings DPH estimated that there was a moderate risk of contracting WNV in Abington, Bridgewater, Brockton, East Bridgewater, Halifax, Hanover, Hanson, Kingston, Pembroke, Plymouth, Plympton, Rockland, West Bridgewater, and Whitman. There were no human or horse cases of WNV reported in the district. The Project responded to the increased risk by conducting additional surveillance, larviciding, and adulticiding. As part of our West Nile Virus control strategy a total of 50,694 catch basins were treated with larvicide in all of our towns to prevent WNV.

The Health threat 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.

In conjunction with the MDPH we have been monitoring *Aedes albopictus* expansion in the state. *Ae. albopictus* is an introduced mosquito that has the potential to become a serious pest and a vector of disease. The mosquito has been present in the Massachusetts since 2009. The larvae live in containers and are closely linked with human activity. They are especially associated with used tires. Our surveillance detected *Ae. albopictus* in the District for the second year. In response we reached out to the affected landowners and removed tires from the site. The Project began a tire recycling program in October 2017. Since the program started, we have recycled 3,346 tires.

The figures specific to the town of Pembroke 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 Pembroke residents.

Insecticide Applications: 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. In Pembroke 351 larval sites were checked.

During the summer 2043 catch basins were treated in Pembroke to prevent the emergence of *Culex pipiens*, a known mosquito vector in West Nile Virus transmission.

Our staff treated 552 acres 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.

Water Management: During 2017 crews removed blockages, brush and other obstructions from 2850 linear feet of ditches and streams to prevent overflows or stagnation that can result in mosquito production. This work, together with machine reclamation, is most often carried out in the fall and winter.

Mosquito Survey: Our surveillance showed that the dominant mosquitoes throughout the district were generally *Coquillettidia peturbans* and *Culex salinarius*. In the Town of Pembroke the three most common mosquitoes were *Cq. peturbans*, *Cx. species* and *Cx. salinarius*.

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

Stephen Gillett
Superintendent

Commissioners:
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