



THE COMMONWEALTH OF MASSACHUSETTS
THE STATE RECLAMATION & MOSQUITO CONTROL BOARD



PLYMOUTH COUNTY MOSQUITO CONTROL PROJECT

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2024 REPORT OF PLYMOUTH COUNTY MOSQUITO CONTROL PROJECT

The Commissioners of the Plymouth County Mosquito Control Project (PCMCP) are pleased to submit the following report of our activities during 2024.

The Project is a special district created by the State Legislature in 1957, and is composed of the 27 municipalities in Plymouth County 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.

In the spring, larviciding efforts begin as water temperatures rise and mosquito larvae begin to feed. The Project ground and aerial larvicided 20,114 acres and this was accomplished using an environmentally selective bacterial agent. Upon emergence of the spring brood of mosquitoes, ultra-low volume adulticiding began on June 3rd, 2024 and ended on September 30th, 2024. The Project responded to 16,502 requests for spraying and larval checks from residents covering all of the towns within the district.

The Department of Public Health (DPH) 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 Virus using several factors including the number of infected mosquitoes. Based on guidelines defined by the Plan, all towns in Plymouth County Mosquito Control Project started the season at “Low Level Risk” for Eastern Equine Encephalitis. At the end of the season the following towns were still at “Low Level Risk”: Abington, Brockton, Cohasset, Duxbury, East Bridgewater, Hanover, Hanson, Hingham, Hull, Marshfield, Norwell, Pembroke, Rockland, Scituate, West Bridgewater, and Whitman. The following towns were at “Moderate Level Risk”: Bridgewater, Carver, Halifax, Kingston, Lakeville, Mattapoisett, Marion, Middleboro, Plymouth, Plympton, Rochester, and Wareham. The towns of Carver, Middleboro and Plymouth were temporarily raised to “High Level Risk” due to EEEV activity that included 4 horse cases and 1 human case. Statewide there were 4 human cases and 4 animal cases.

The Commonwealth of Massachusetts responded to the EEEV activity by conducting wide scale aerial adulticiding. The area treated was 157,000 acres and included parts of the towns of Carver, Halifax, Kingston, Middleboro, Plymouth, Plympton, Rochester, and Wareham. Applications of this kind are complex and involve a large number of state agencies including DPH, The Department of Agricultural Resources and The State Reclamation and Mosquito Control Board. The Project assisted with these applications in a number of ways, including supplying equipment and helping to document efficacy of the application.

PCMCP followed the “Arbovirus Surveillance and Response Plan” and responded to the EEEV by increasing our adulticiding and mosquito surveillance. The Project conducted wide area applications by truck in locations where EEE was detected. We also submitted extra mosquito samples for virus testing.

West Nile Virus activity was widespread in Massachusetts. Statewide there were 18 human cases, none of them were in the district. All of the district started the season at the “Low Risk Level” for West Nile Virus. However, later in the season the human risk was raised to moderate for most towns and the following towns were raised to the “High Risk Level” Brockton, Abington, Whitman, East Bridgewater, Rochester, Marion and Mattapoisett. As part of our West Nile Virus control strategy a total of 57,096 catch basins were treated with larvicide in member towns to prevent WNV.

The Project participates in DPH’s mosquito surveillance program. As part of that program, we collected 115,484 mosquitoes and submitted 35,177 mosquitoes for testing. The mosquitoes were combined into 824 groups or pools. DPH also tested 13,789 mosquitoes from the district. In all there were 65 isolations of EEEV from mosquito samples. EEEV was found in Abington, Carver, Halifax, Kingston, Marion, Mattapoisett, Middleboro, Plymouth, Rochester, Wareham, West Bridgewater and Whitman. There was a total of 109 WNV isolations from Abington, Bridgewater, Brockton, Cohasset, Duxbury, East Bridgewater, Halifax, Hanover, Hanson, Hanover, Hingham, Hull, Kingston, Marion, Marshfield, Mattapoisett, Middleboro, Pembroke, Plymouth Rochester, Rockland, Scituate, Wareham, West Bridgewater, and Whitman.

The health threat of EEE and WNV continues to ensure cooperation between the Plymouth County Mosquito Control Project, local Boards of Health and the Department of Public Health. In an effort to keep the public informed, EEE and WNV activity updates are regularly posted on the Department of Public Health website.

The introduced mosquito *Aedes albopictus* has the potential to become a serious pest and a vector of disease. The mosquito has been present in Massachusetts since 2009. The larvae live in containers and are closely linked with human activity. They are especially associated with used tires. The Project began a tire recycling program in October 2017. During the 2024 season we recycled 1,533 tires bringing us to a total of 13,615 tires for the program.

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. Field Technicians continually gather data on these sites and treat with highly specific larvicides when immature mosquitoes are present. In Pembroke 277 larval sites were checked.

During the summer 1,846 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 4,872.25 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 2024 crews removed blockages, brush and other obstructions from 4,195 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 *Cq. perturbans* and *Cx. pipiens/restuans*. In the Town of Pembroke the three most common mosquitoes were, *Cq. perturbans*, *Cs. melanura* and *An. crucians*.

Education and Outreach: Our Community Liaison, Erin Morrill, has been reaching out to schools and daycares to update IPM plans in preparation for the upcoming mosquito season. In-person visits to local BOH's are ongoing with the aim to meet with every community before the summer. Erin has been working with interested parties to set up educational presentations starting in the spring. If your town is interested in setting up a presentation at summer camps, schools, fairs, libraries, or councils on aging please contact our office.

Our Project website is a great resource for information on upcoming meetings, the annual budget, educational information, and Project services. Announcements and important dates can be found on the home page. Please visit us at www.plymouthmosquito.org or call our office with any matters of concern.

Sincerely,

Ross Rossetti

Ross Rossetti
Superintendent
01/07/2025