



THE COMMONWEALTH OF MASSACHUSETTS  
THE STATE RECLAMATION & MOSQUITO CONTROL BOARD



# PLYMOUTH COUNTY MOSQUITO CONTROL PROJECT

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## 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 2023.

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 14,581 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 5<sup>th</sup>, 2023 and ended on October 6<sup>th</sup>, 2023. The Project responded to 13,655 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. Near the end of the season, Bridgewater and West Bridgewater were moved to “Moderate Risk” due to a positive mosquito sample found in Bristol County. There was no Eastern Equine Encephalitis Virus detected in the PCMCP service area this year.

West Nile Virus activity was widespread in Massachusetts. Statewide there were 6 human cases, none of them were in the district. All towns in the district started the season at low risk for West Nile Virus. However, later in the season the human risk was raised to moderate for all towns but Hull, Marshfield and Scituate. These three towns remained at low risk. As part of our West Nile Virus control strategy a total of 48,597 catch basins were treated with larvicide in member towns to help control WNV.

The Project participates in DPH's mosquito surveillance program. As part of that program we collected 99,563 mosquitoes and submitted 29,259 mosquitoes for testing. The mosquitoes were combined into 685 groups. DPH also tested 14,498 mosquitoes from the district. In all there were 0 isolations of EEEV from mosquito samples. There was a total of 17 WNV isolations from Abington, Brockton, Carver, Halifax, Hanover, Hingham, Kingston, Marion, Marshfield, Mattapoisett, Middleboro, Pembroke, 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 2023 season we recycled 4,039 tires bringing us to a total of 16,841 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 149 larval sites were checked.

During the summer 1,770 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 1,655 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 October.

**Water Management:** During 2023 crews removed blockages, brush and other obstructions from 1,235 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. peturbans* and *Cx. pipiens/restuans*. In the Town of Pembroke the three most common mosquitoes were, *Cs. melanura*, *Cq. peturbans*, and *An. crucians*.

**Education and Outreach:** Our Community Liaison, Erin Morrill, has had the opportunity to give 18 in-person presentations at local BOH's, COA's, libraries, schools, and fairs. Planning and scheduling for the upcoming season has already started with hopes of adding new

community organizations to the list. Erin has reached out to all of our school IPM coordinators in efforts to keep them up to date and in compliance with the Children and Families Protection Act. If your town is interested in setting up a presentation, 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.

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

Sincerely,

*Ross Rossetti*

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Superintendent

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