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 are pleased to submit the following report of our activities during 2022.

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 12,236 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 May 31st, 2022 and ended on September 16th, 2022. The Project responded to 14,323 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 and remained at low risk for the entire summer. There was no Eastern Equine Encephalitis Virus detected in Massachusetts this year.

West Nile Virus activity occurred predominately in Middlesex, Plymouth and Suffolk counties. Statewide there were 8 human cases, one of them was in the district. The risk level for Abington, Brockton, Carver, Cohasset, East Bridgewater, Halifax, Hanover, Marion, Middleboro, Norwell, Pembroke, Plympton, Rochester, Rockland, Scituate, Wareham and Whitman was moderate. For the rest of the district the risk level was low for the entire season. As part of our West Nile Virus control strategy a total of 60,074 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 over 66,270 mosquitoes and submitted 17,801 mosquitoes for testing. The mosquitoes were combined into 410 groups. DPH also tested 9,767 mosquitoes from the district. In all there were 0 isolations of EEEV from mosquito samples. There was a total of 19 WNV isolations from Abington, Brockton, Carver, Cohasset, Halifax, Hanson, Marion, Middleboro, Plympton, Rockland, Scituate, Wareham 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. In conjunction with DPH we have been monitoring *Aedes albopictus* expansion in the state. We conducted surveillance for *Ae. albopictus* at 7 locations. The larvae live in containers and are closely linked with human activity. They are especially associated with used tires. This year we detected the mosquito for the second time in Mattapoisett. The Project responded by canvasing the area and treating any habitat or cleaning up any containers found. The Project began a tire recycling program in October 2017. During the 2022 season we recycled 579 tires bringing us to a total of 12,099 tires for the program.

The figures specific to the town of Kingston 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 Kingston 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 Kingston 502 larval sites were checked.

During the summer 3,349 catch basins were treated in Kingston to prevent the emergence of *Culex pipiens,* a known mosquito vector in West Nile Virus transmission.

Our staff treated 2,888 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.

Water Management: During 2022 crews removed blockages, brush and other obstructions from 6,945 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 *Ae. vexans* and *Cx. salinarius.* In the Town of Kingston, the three most common mosquitoes were *Cq. peturbans, Cs. melanura,* and *Ae. vexans.*

Education and Outreach: Our new 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.

We encourage residents 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.

Sincerely,

Ross Rossetti
Superintendent

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