

State Reclamation and Mosquito Control Board 2017 Annual Report

STATE AGENCY MEMBERS:

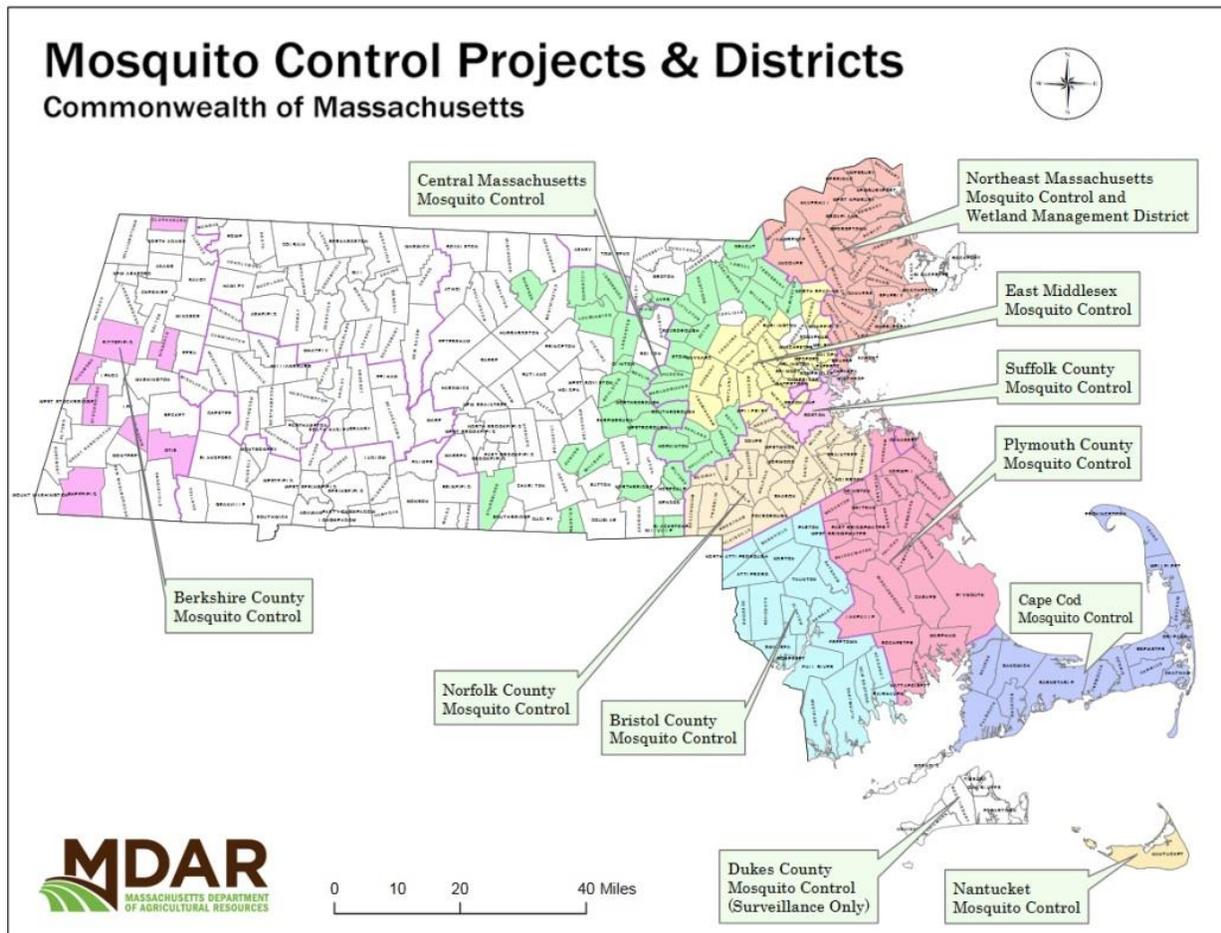
Taryn LaScola, designee Commissioner John Lebeaux, DAR
Gary Gonyea, designee Commissioner Martin Suuberg, DEP
Jim Straub, designee Commissioner Leo Roy, DCR

STAFF:

Jennifer Forman Orth, Environmental Biologist
Juan Carlos Gutierrez, Operations Coordinator
Jessica Burgess, Esq., General Counsel
Alexander Gill, Contracts Manager

Mosquito Control Districts/Projects, and Member Municipalities

There are currently 12 regional mosquito control districts/projects in the Commonwealth, 9 of which provided mosquito control or surveillance services to 205 (58%) of the state's 351 municipalities, including the Sherwood Green Road Improvement and Maintenance District in Becket (Berkshire County). The towns of Deerfield, Greenfield (Franklin County), and Northampton (Hampshire County) contracted out for mosquito surveillance and arbovirus testing services during the 2017 season. In October, the SRB formally certified the creation of the Pioneer Valley Mosquito Control District (not shown on map).



2017 Mosquito Control Season

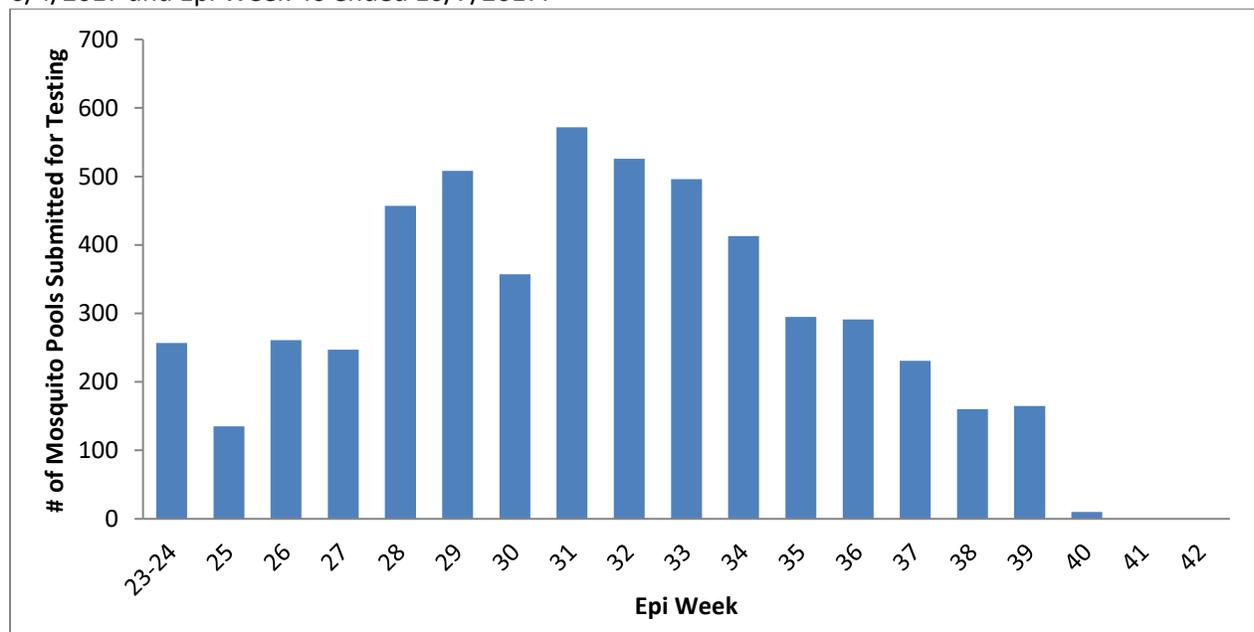
After two seasons of drought, the 2017 mosquito season found us back to normal levels of precipitation, with May rainfall actually above average. However, the initial dryness meant that there remained a general lack of larval mosquito habitat in natural areas, as well as a lack of floodwater species.

Over the course of the 2017 season, the districts/projects collected over 430,000 mosquitoes from surveillance traps, a slight increase over 2016. More than 120,000 of these (about 4500 pools) were submitted for arbovirus testing. See the table below for details:

Mosquito Control District/Project/Area	Total pools collected	Total pools submitted for testing	Total mosquitoes collected	Total mosquitoes submitted for testing
Berkshire	810	343	26,620	15,411
Bristol	1,972	521	33,724	14,822
Cape Cod	1,347	309	27,756	8,640
Central	4,205	1,331	50,839	23,703
Martha's Vineyard	21	21	166	166
East Middlesex	1,727	245	62,764	9,339
Nantucket*%		36		
Norfolk	3,262	249	71,787	8,211
Northeast	3,235	596	49,898	8,315
Plymouth	1,703	427	75,595	15,859
Suffolk	900	104	20,646	3,948
Greenfield/Deerfield*	277	189	10,617	7,136
Northampton*	266	134	9,333	5,156
TOTAL	19,725	4,505	439,745	120,706
AVERAGE	1,644	347	36,645	10,059

* Estimate % Nantucket pools were tested by an outside lab, not DPH

Total number of mosquito pools submitted, by Epi Week (does not include Nantucket). Epi Week 23 began 6/4/2017 and Epi Week 40 ended 10/7/2017:



Asian Tiger Mosquito (ATM)

Asian tiger mosquito (*Aedes albopictus* or ATM) continued to be under close scrutiny in 2017. Expanded surveillance efforts detected this species in several new municipalities, including Everett and Lowell (Middlesex County), Northampton (Hampshire County), and Sandwich (Barnstable County), and also uncovered increased populations in Worcester. There were several positive finds in the South Coast region, but also several locations in New Bedford where ATM was no longer found following treatment efforts by Bristol County MCP. There were 2224 adult ATMs collected in 2017, compared to 838 collected in 2016 and 238 collected in 2015 (though note this is also related to the increased trapping effort).

Mosquito Management

Aerial adult mosquito control operations by aircraft were not necessary during 2017. The districts/projects were able to keep mosquito populations suppressed (and arbovirus load low enough) using standard techniques of larviciding accompanied by ULV spraying of adulticide in response to finds of arbovirus-positive mosquitoes. Several districts/projects also provided ULV-spraying to property owners by request. In 2017, the majority of districts that take larviciding and adulticiding requests saw an increase in those service requests vs. 2016.

Some districts/projects also performed ditch maintenance and other water body management techniques proven to reduce mosquito-breeding habitat, including clearing brush, removing debris from In 2017, 9 districts performed freshwater management (over 812,000 linear feet managed), and 5 performed salt water management (about 67,000 linear feet managed). This is an increase over 2016 numbers (over 691,000 linear feet of freshwater habitat managed and about 65,000 linear feet of saltwater habitat managed).

The Catch Basin Applicator Permit Program, put in place in 2015, allows government employees (state, city or town) to apply for a permit to use MDAR-registered dry formulation mosquito larvicides in storm drains and catch basins, provided the employees are working under the supervision of a certified or licensed pesticide applicator. There were 5 people who signed up for an exam in 2017, down from 8 in 2016, and 19 in 2015. Those who pass the exam receive the option to submit a renewal request each year; 6 chose to renew for 2017.

Arbovirus Detections

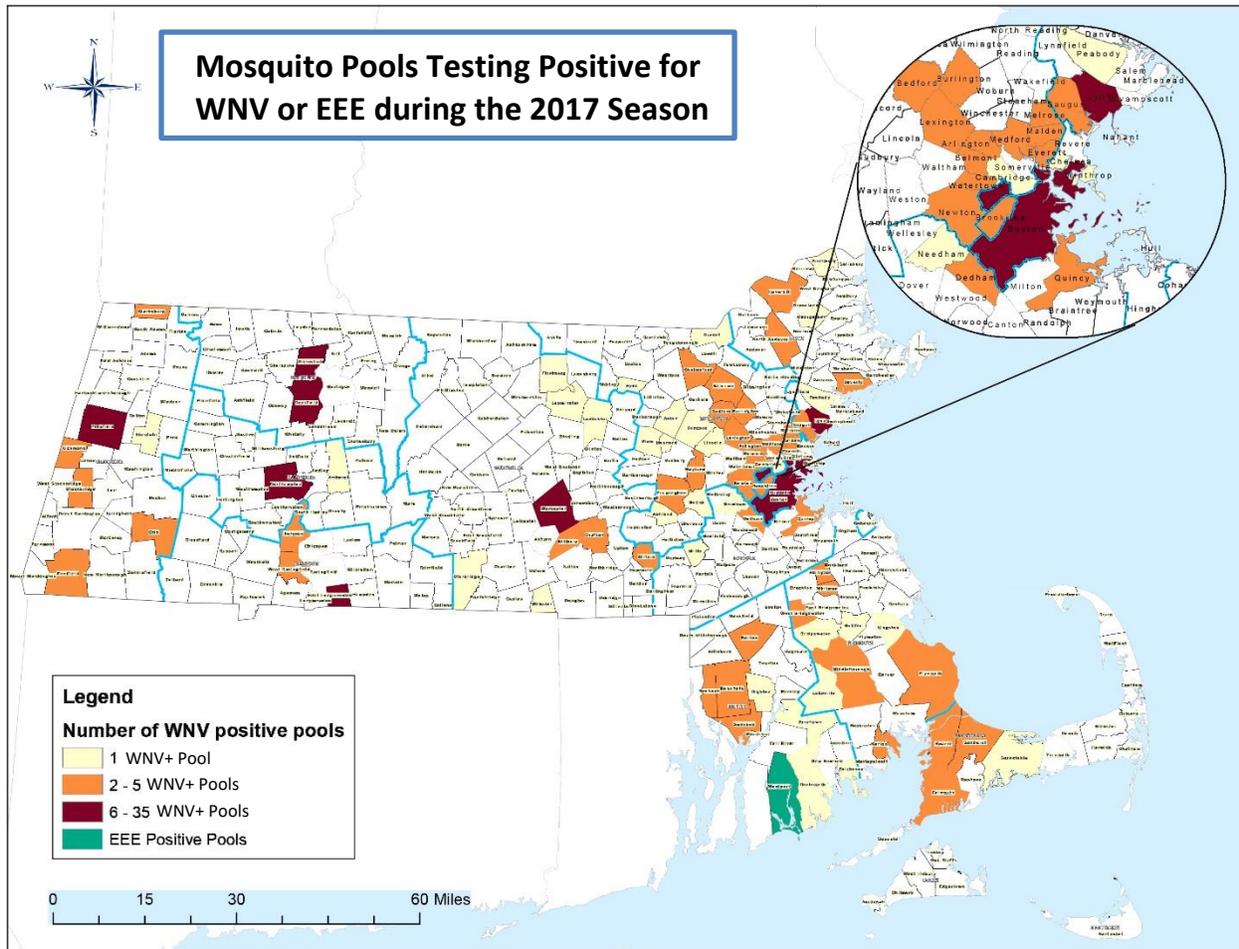
The first 2 WNV+ mosquito pools of 2017 were found in Berkshire County (Richmond) and Suffolk County (Boston) during Epi Week 26, in *Culex pipiens/restuans*. WNV presence on the whole was back up to post-drought levels. The first and only EEEv detection of 2017 occurred during Epi Week 33 in Bristol County (Westport) in *Culiseta melanura*.

Mosquito testing and arbovirus levels, 2017-2012*:

Year	# Pools Submitted	# WNV+	# EEEv+	Total Mosquitoes Submitted	% WNV+	% EEEv+
2017	5381	290	1	154,284	5.4%	0.02%
2016	6386	189	4	186,947	3%	0.06%
2015	4527	164	1	137,253	4%	0.02%
2014	5038	56	33	132,776	1%	0.7%
2013	6090	335	61	171,390	5.5%	1%
2012	6746	305	262	150,565	4.5%	4%

*This table includes surveillance and testing done directly by DPH. It has been updated to reflect the latest numbers from the DPH database, and may not exactly reports from previous years or the weekly reports from MDAR or DPH.

Below is a map showing all WNV+ and EEE+ mosquito pools found in 2017. Again, it was a very quiet year for EEE, with only 4 detections overall (one per municipality marked on the map). Note the concentration of WNV in the East Middlesex and Suffolk area:



Communications

Throughout 2017, discussions continued with representatives from several municipalities in Franklin, Hampden and Hampshire Counties regarding the potential of forming a Mosquito Control District in the Pioneer Valley region of the state. In October 2017, the SRB made a motion to formally certify the Pioneer Valley Mosquito Control District with a 5-member Commission. As of the end of 2017, volunteers were still working to enroll member communities and to secure surveillance and arbovirus testing for 2018.

In the spring of 2017, the SRB formally approved an updated version of their Massachusetts Emergency Operations Response Plan for Mosquito-Borne Illness. The document had not been officially updated since 2014. The current version can be viewed/downloaded [here](#).

Also in spring, a redraft of the Massachusetts Mosquito Control Budget Notification & Compliance Certification Policy, allowing for electronic communication between the Mosquito Control Districts/Projects and their member towns instead of requiring paper signatures of approval on an annual basis, was approved by the SRB. The current version can be viewed/downloaded [here](#).

FY17 (July 2016 – June 2017) and FY18 Budget (July 2017 – June 2018)

The FY17 budgets for the 9 regional programs plus the SRB Administrative Fund totaled \$12,258,032, an increase of about 2.6% over FY16. FY18 budget increases for the districts/projects ranged from 1.5% to 7%. The SRB budget for FY18 increased about 14%, due to payroll increases (including fringe and tax), staff changes, and chargebacks for administrative costs (including Information Technology, Human Resources and other employee services, Audits, and payment processing).

The following table indicates the FY17 and FY18 budget amounts certified by the SRMCB:

District	FY2017 SRMCB Certified Budget	FY2018 SRMCB Certified Budget	% Change
Berkshire	\$249,358	\$253,031	1.5%
Bristol	\$1,388,955	\$1,416,734	2%
Cape Cod	\$2,017,423	\$2,161,745	7%
Central Mass	\$2,171,306	\$2,266,843	4.4%
East Middlesex	\$702,677	\$716,730	2%
Norfolk	\$1,711,433	\$1,762,776	3%
Northeast	\$1,589,540	\$1,637,226	3%
Plymouth	\$1,719,076	\$1,770,648	3%
Suffolk	\$265,264	\$273,221	3%
SRB Admin	\$443,000	\$505,811	14%
Total:	\$12,258,032	\$12,764,765	4.1%

Full versions of the SRMCB annual reports, as well as the annual operational reports for each district/project, are archived at <https://www.mass.gov/state-reclamation-and-mosquito-control-board-annual-reports>