

# Annual Operations Report

Year Report Covers: 2025 Date of Report: 1/14/26

Project/District Name: Suffolk County Mosquito Control Project

Count of Cities and Towns in Service Area: 2

Alphabetical List of Cities/Towns: Boston, Chelsea

Were there any changes to your service area this year? no

Municipality added:

Municipality removed:

HQ Address: 11 Sun St, Waltham, MA 02453

Phone: 781-899-5730

Email: scmcp@mass.gov

Report Prepared By: Brian Farless

Mission Statement, if available: The Suffolk County Mosquito Control Project was established in 1974 and provides mosquito control services to Boston and Chelsea. The governing body of the Project is the Suffolk County Mosquito Control Commission which is comprised of 5 board members. Integrated mosquito management services provided by the project and approved by the commission will be based on the State's Generic Environmental Impact Report on Mosquito Control in Massachusetts, the Massachusetts Arbovirus Surveillance and Response Plan, and the policies of the State Reclamation and Mosquito Control Board. The Project's integrated mosquito management plan consists of mosquito surveillance, larval mosquito control of wetlands and catch basins, adult mosquito control, wetlands management/ditch maintenance, source reduction, and public education.

## ORGANIZATION SETUP

Commissioner Names:

Julien Farland

Leslie Karnes

Sam Lipson

Superintendent/Director Name: Brian Farless

Asst. Superintendent/Director Name:

District/Project Website: [www.mass.gov/info-details/mosquito-control-projects-and-districts](http://www.mass.gov/info-details/mosquito-control-projects-and-districts)

Please list below any additional social media accounts:

Staffing levels for the year of this report:

Full time: 1                      Part time:                      Seasonal: 2      Other: (please describe) in addition, 2 full time and 1 part time administrative employees share time between Suffolk County Mosquito Control and East Middlesex Mosquito Control

**Of the above, how many are:**

(Please check off all that apply, and list how many are Full Time, Part Time, Or Seasonal)

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Administrative 2 full-time, 1 part-time, split with East Middlesex Mosquito Control | <input type="checkbox"/> Facilities                                    | <input type="checkbox"/> Wetland scientist       |
| <input type="checkbox"/> Biologist  | <input type="checkbox"/> Information technology                        | <input type="checkbox"/> Other (please describe) |
| <input type="checkbox"/> Educator   | <input type="checkbox"/> Laboratory                                    |  |
| <input type="checkbox"/> Entomologist   | <input checked="" type="checkbox"/> Operations 1 full-time, 2 seasonal |  |
|   | <input type="checkbox"/> Public relations                              |  |

**Comments:**

**During the season, the following were maintained:**

Count	Equipment Type	Type(s)
	Modified wetland equipment	
2	Larval control equipment	backpack pump sprayer
1	ULV sprayers	Clarke Smartflow ULV sprayer
1	Electric Vehicles	
3	Gas Powered Vehicles	
1	Other: backpack mistblower	

**Comments:**

**INTEGRATED PEST MANAGEMENT (IPM):**

Check off all services that your district/project currently provides to member municipalities as part of an IPM program (details will be provided in the sections below):

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Adult mosquito control                 | <input checked="" type="checkbox"/> Larval mosquito surveillance |
| <input checked="" type="checkbox"/> Adult mosquito surveillance            | <input type="checkbox"/> Open Marsh Water Management             |
| <input checked="" type="checkbox"/> Ditch maintenance                      | <input type="checkbox"/> Research                                |
| <input checked="" type="checkbox"/> Education, Outreach & Public education | <input checked="" type="checkbox"/> Source reduction             |
| <input checked="" type="checkbox"/> Larval mosquito control                | <input type="checkbox"/> Other (Please List:)                    |

# THE COMMONWEALTH OF MASSACHUSETTS

EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS



## Department of Agricultural Resources

225 Turnpike Road, 3<sup>rd</sup> Floor, Southborough, MA 01772  
www.mass.gov/agr



Maura T. Healey  
GOVERNOR

Kimberley Driscoll  
LIEUTENANT  
GOVERNOR

Rebecca L. Tepper  
SECRETARY

Ashley E. Randle  
COMMISSIONER

### Comments:

### LARVAL MOSQUITO SURVEILLANCE

*If you have a larval mosquito surveillance program, please fill out the section below, otherwise skip ahead to the next section.*

Describe the purpose of this program:

What months is this program active?

Describe the process of monitoring / sampling:

Describe the habitat that is being sampled:

What environmental conditions (vegetation, water quality, predators) are observed?

How frequently are sites monitored?

Comments:

### ADULT MOSQUITO SURVEILLANCE

*If you have an adult mosquito surveillance program, please fill out the section below, otherwise skip ahead to the next section.*

Describe the purpose of this program: Measure populations of mammal biting species and populations of species considered enzootic or bridge vectors for WNV and EEE. The data is used to evaluate the need for further control. As funding is available, Culex species, Culiseta melanura, Coquillettidia perturbans and other potential human bridge vector species are submitted to DPH for virus testing. Municipalities are notified as EEE/WNV positive mosquitoes are found.

What months is this program active? May through October

Check off all trap types used this past season by your program:

Trap Type	Canopy? (check box for yes)	Number of traps (leave blank if zero)
ABC light trap	<input type="checkbox"/>	
ABC light trap w/CO <sub>2</sub>	<input type="checkbox"/>	
CDC light trap	<input type="checkbox"/>	
CDC light trap w/CO <sub>2</sub>	<input type="checkbox"/>	117
Gravid trap	<input type="checkbox"/>	105
Landing rate test	<input type="checkbox"/>	
NJ light trap	<input type="checkbox"/>	
NJ light trap w/CO <sub>2</sub>	<input type="checkbox"/>	
Ovitrap	<input type="checkbox"/>	

Resting box	<input type="checkbox"/>	
Other (please describe):		
Other (please describe):		
Other (please describe):		

Do you maintain long-term trap sites in any of your areas? Yes or No: yes

If yes, how many: 36

Please check off the species of **concern** in your service area:

<input checked="" type="checkbox"/> <i>Ae. albopictus</i>	<input checked="" type="checkbox"/> <i>Cx. salinarius</i>	<input checked="" type="checkbox"/> <i>Oc. sollicitans</i>
<input checked="" type="checkbox"/> <i>Ae. cinereus</i>	<input checked="" type="checkbox"/> <i>Cs. melanura</i>	<input checked="" type="checkbox"/> <i>Oc. taeniorhynchus</i>
<input checked="" type="checkbox"/> <i>Ae. vexans</i>	<input checked="" type="checkbox"/> <i>Cs. morsitans</i>	<input checked="" type="checkbox"/> <i>Oc. triseriatus</i>
<input checked="" type="checkbox"/> <i>An. punctipennis</i>	<input checked="" type="checkbox"/> <i>Cx. restuans</i>	<input checked="" type="checkbox"/> <i>Oc. trivittatus</i>
<input checked="" type="checkbox"/> <i>An. quadrimaculatus</i>	<input checked="" type="checkbox"/> <i>Oc. abserratus</i>	<input checked="" type="checkbox"/> <i>Ps. ferox</i>
<input checked="" type="checkbox"/> <i>Cq. perturbans</i>	<input checked="" type="checkbox"/> <i>Oc. canadensis</i>	<input type="checkbox"/> <i>Ur. sapphirina</i>
<input checked="" type="checkbox"/> <i>Cx. pipiens</i>	<input checked="" type="checkbox"/> <i>Oc. cantator</i>	<input checked="" type="checkbox"/> <i>Others: Oc. thibaulti</i>
<input checked="" type="checkbox"/> <i>Cx. restuans</i>	<input checked="" type="checkbox"/> <i>Oc. j. japonicus</i>	

Do you participate in the **MDPH Arboviral Surveillance program**? (yes/no): yes

How many pools did you submit weekly on average? 20.8

Total number of adult mosquito pools submitted to DPH this past season: 270

Number of adult mosquito pools collected but not submitted to DPH ("Unsubmitted"):

Total number of adult mosquitoes submitted to DPH this past season: 9,239

#### ADULT MOSQUITO SURVEILLANCE

Number of adult mosquitoes collected this season but not submitted to DPH: 31,825

Number of Ovitrap collections this season, if any:

Any other trap collections of note (please describe):

Number of traps in your service area placed by **MDPH**: 15

Were these long-term trap sites or supplemental trapping sites? Yes or No: yes

Which arboviruses were found in your area during this past mosquito season?

Enter the number of positive pools and/or cases below:

Comments:

Arbovirus	+ Mosquito Pools	Equine Cases	Human Cases
<input type="checkbox"/> Eastern Equine Encephalitis (EEE)			
<input checked="" type="checkbox"/> West Nile Virus (WNV)	16	0	1
<input type="checkbox"/> Other (please list):			

For each arbovirus listed below, please list number of municipalities at each risk level in your project area at both the start and peak of the season (say “all” if all municipalities are at same risk level):

Arbovirus	Start of Season	Peak of Season
EEE	remote, low	remote, low
WNV	low	moderate, high

Comments:

### LARVAL MOSQUITO CONTROL:

*If you have a larval mosquito control program, please fill out the section below, otherwise skip ahead to the next section.*

Describe the purpose of this program: This program is focused on controlling larvae of spring and summer floodwater (freshwater) species, salt marsh and brackish water species, and artificial container species. Spring floodwater species are controlled because they are aggressive mammal biting species that are active during the late spring and early summer, when residents are frequently involved in outdoor activities. The mosquito species, *Culiseta melanura*, amplifies EEE within the bird population. *Culiseta melanura* mosquito populations are reduced as a result of spring larvicide applications. Summer floodwater species are controlled because they are aggressive mammal biting species, some of which are vectors of EEE. Salt marsh mosquitoes are controlled because they bite during the day and are considered very aggressive mammal biting mosquitoes. Salt marsh species can be disease vectors of EEE. Brackish water species are aggressive mammal biting species. The brackish water species, *Culex salinarius*, is a human vector of EEE and WNV. *Culex pipiens/restuans* species are controlled because they are the primary vectors for WNV in Massachusetts. They are found in catch basins and other artificial water holding containers, as well as in freshwater wetland habitat.

Suffolk County Mosquito Control worked collaboratively with the Boston Public Health Commission and Chelsea Health Department to distribute larvicides in catch basins to control *Culex* mosquitoes. Suffolk County Mosquito Control also distributed catch basin larvicides to large Boston property managers including the Boston Housing Authority, the Franklin Park Zoo, and Harvard University.

What months is the program active? late March through early October

Describe the types of areas where you use this program: Intermittently flooded wetlands, salt marshes, stormwater detention basins, catch basins, neglected swimming pools and other water holding containers.

Do you use:

- Aerial applications. Describe operations:
- Portable applications. Describe operations: Catch basins: Larvicide is applied to catch basins to reduce the primary vector for West Nile virus.

Ground based hand larviciding: Pre-application larval surveys are conducted prior to each application. Random post-application surveys are conducted to monitor efficacy.

- Other (please list):

What is your trigger for larviciding operations? (check all that apply)

- Best professional judgment. Describe:
- Historical records
- Larval dip counts – Describe trigger for application: 3 larvae per 10 samples
- Other (please describe):

**Comments:**

List all products that you use for larval mosquito control in the table below (leave blank if not applicable):

Product Name	EPA #	Application Rate(s)	Application Method	Target Life Stage	Habitat Type	Total Product Applied
Altosid Pellets WSP	2724-448	1 pouch (7 grams) per catch basin or similar water holding container	hand applied	larvae	<input checked="" type="checkbox"/> Catch basins <input checked="" type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	13,459 packets
Vectolex WSP	73049-20	1 pouch (10 grams) per catch basin or similar water holding container	hand applied	larvae	<input checked="" type="checkbox"/> Catch basins <input checked="" type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	14,767 packets
Vectobac 12AS	73049-38	0.25 - 2 pts per acre	backpack pump sprayer	larvae	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	3.0488 gals
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
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					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	

## ADULT MOSQUITO CONTROL:

If you have an adult mosquito control program, please fill out the section below, otherwise skip ahead to the next section.

Describe the purpose of this program: To reduce the number of mammal biting mosquitoes and EEE/WNV vector species.

What is the time frame for this program? May through September

Describe the types of areas where you use this program: Truck mounted ULV sprayers are used in residential neighborhoods with a relatively dense configuration of streets. A backpack mistblower is used in areas with high mosquito populations and/or in areas with an elevated disease risk.

Do you use:

- Aerial applications. Describe operations:
- Portable applications. Describe operations: A backpack mistblower is used in areas with high mosquito populations and/or in areas with an elevated disease risk.
- Truck applications. Describe operation: Truck mounted ULV sprayers are used in residential neighborhoods with a relatively dense configuration of streets.
- Other (please list):

For each product used, please list the name, EPA #, and application rate(s):

Product Name	EPA #	Application Rate(s)	Application Method	Total product applied
Suspend Polyzone	432-1514	0.25-1.5 ounce per 1,000 square feet	backpack mistblower	2.25 oz

Please describe the maximum amounts or frequency used in a particular time frame such as season and areas: All pesticide labels are followed.

As found on the Suspend Polyzone label - Treatments may be applied at 21-day intervals or as necessary to maintain adequate control.

What is your trigger for adulticiding operations? (check all that apply)

- Arbovirus data
- Best professional judgment
- Complaint calls. Describe trigger for application:
- Landing rates. Describe trigger for application:

Light trap data. Describe trigger for application: at least 200 mosquitoes found in a trap from one night

Comments:

**Please attach maps of your service areas (or a website link to that map):** [www.mass.gov/info-details/mosquito-control-projects-and-districts](http://www.mass.gov/info-details/mosquito-control-projects-and-districts)

## SOURCE REDUCTION

*If you practice source reduction methods, such as tire removal, please fill out the sections below, otherwise skip ahead to the next section.*

### Tire Removal

Please describe your program: Containers are tipped over or removed as necessary. Tires are collected and taken to a recycling facility.

What time frame during the year is this method employed? all year

Comments:

## Water Management/ Ditch Maintenance

*If you have a water management or ditch maintenance program, please fill out the section below, otherwise skip ahead to the next section.*

Please check all that apply:

- Inland/freshwater
- Saltmarsh

Please describe your program:

For inland/freshwater water management, check off all that apply:

Maintenance Type	Estimate of cumulative length of culverts, ditches, swales, etc. maintained (ft)
<input type="checkbox"/> Culvert cleaning	
<input checked="" type="checkbox"/> Hand cleaning	510
<input type="checkbox"/> Mechanized cleaning	

<input type="checkbox"/> Stream flow improvement	
<input type="checkbox"/> Other (Please List:)	

Comments:

### Water Management/ Ditch Maintenance

For saltwater ditch maintenance, check off all that apply:

Maintenance Type	Estimate of cumulative length of ditches maintained (ft)
<input type="checkbox"/> Hand cleaning	
<input type="checkbox"/> Mechanized cleaning	
<input type="checkbox"/> Other (Please List:)	

Comments:

What time frame during the year is this method employed? Ditch maintenance can be done year round, but most ditch maintenance activities are done between September and the end of March.

**Please attach a map of ditch maintenance areas (or a website link to that map).** [www.mass.gov/info-details/mosquito-control-projects-and-districts](http://www.mass.gov/info-details/mosquito-control-projects-and-districts)

### Open Marsh Water Management

If you have an Open Marsh Water Management program, please fill out the section below, otherwise skip ahead to the next section.

Describe the purpose of this program:

What months is this program active?

Please give an estimate of total square feet or acreage:

**Please attach a map of OMWM areas (or a website link to that map).**

### MEASURES OF EFFACACY

*Describe monitoring efficacy efforts for each of the following:*

Aerial Larvicide – wetlands: none

Ground ULV Adulticide: Pre-application adult mosquito surveys using CDC light traps are done to determine whether control is needed. Post-application surveys using CDC light traps are conducted to determine if additional ground ULV adulticiding is needed.

Larvicide – catch basins: Pre-application larval surveys are done in June to determine the appropriate time to begin using *Bacillus sphaericus*. Random pre-application and post-application surveys are undertaken during July, August, and September to monitor *Culex* larval populations and to determine the efficacy of *Bacillus sphaericus* applications. Random monitoring of paint marks on catch basins left by catch basin applicators are conducted to evaluate the coverage in neighborhoods where larvicide applications have been completed.

Larvicide-hand/small area Pre-application larval surveys are conducted prior to each application. Random post-application surveys are conducted to monitor efficacy.

Open Marsh Water Management: none

Source Reduction: Water holding containers are tipped over or removed as necessary. Ditches are cleaned to help reduce standing water.

Other (please list):

Provide or list standard steps, criterion, or protocols regarding the documentation of efficacy (pre and post data), and resistance testing (if any): For catch basin applications, catch basin larvicide applicators are required to mark each catch basin with water soluble marking paint when larvicide is applied. Monitoring of paint marks left on catch basin grates is conducted to evaluate coverage. Random post application sampling is conducted to determine the efficacy of *Bacillus sphaericus* applications. For small area wetland larval control, applicators are required to find 3 larvae per 10 dips before a larvicide can be applied. Post-application surveys are carried out at random. Before adult mosquito control is scheduled, CO2 baited CDC light traps are used to monitor mosquito populations in that area. Spraying could be considered if there are more than 200 mosquitoes in any individual trap. Certain mosquito species are tested for EEE/WNV. Disease being present is also considered when deciding on where and when to spray.

Research Project	Details
Bottle assays	
Efficacy testing	
Other:	
Other:	

## EDUCATION, OUTREACH & PUBLIC RELATIONS

*If you have an education/outreach program, please fill out the section below, otherwise skip ahead to the next section.*

Describe the purpose of this program: Suffolk County Mosquito Control Project's public education program is designed to develop awareness within the public and private sectors as to their roles in mosquito control. The Project serves as a resource to residents, municipal officials, and the local media on controlling mosquitoes, larval mosquito habitats, and mosquito borne diseases.

What time frame during the year is this method employed? year round

Check off all education/outreach methods that were performed by your program this year:

- |  |   |
|--|---|
| <input type="checkbox"/> Development/distribution of brochures, handouts, etc.                     | <input checked="" type="checkbox"/> Media outreach (interviews for print or online media sources, press releases, etc.) |
| <input type="checkbox"/> Door-to-door canvassing (door hangers, speaking to property owners, etc.) | <input checked="" type="checkbox"/> Presentations at meetings   |
| <input type="checkbox"/> Facebook page, Twitter, or other social media                             | <input type="checkbox"/> School-based programs, science fairs, etc.   |
| <input type="checkbox"/> Mailings (Describe target audience(s): )                                  | <input type="checkbox"/> Tabling at events (local events, annual meetings, etc.)  |

- Website
- Other (please describe): Suffolk County Mosquito Control communicates with the Boston Public Health Commission, Chelsea Health Department, and other municipal departments throughout the year in regards to mosquito and disease related issues. Each city provides educational materials to their

residents. Public notification is coordinated through the Boston Public Health Commission prior to neighborhood truck mounted aerosol applications to control adult mosquitoes. Employees frequently communicate with residents through phone calls and emails, and also when they are doing work throughout the district.

Estimate the audience reached this year using the education/outreach methods above:

List your program's top 3 education/outreach activities for this past year:

1. Suffolk County Mosquito Control communicates with the Boston Public Health Commission, Chelsea Health Department, and other municipal departments throughout the year in regards to mosquito and disease related issues.
2. Phone calls and emails from residents.
3. Website

Were you involved in any collaborations with the following partners this year? Provide details below, including a list of technical reports, white/grey papers, journal publications, trade magazine articles, etc.:

- Academia
- Another mosquito control district/project
- Another state agency (DCR, DPH, etc.)
- Environmental groups
- Industry

Please list any certifications and degrees held by your staff: Tim Barrows, Brian Farless, and Mike Radley are Licensed Pesticide Applicators. Nolan DiDonato and Kacey Espiritu are Permitted Catch Basin Applicators. Tim Barrows has a B.S in Biology. Brian Farless has a B.S. in Communications. David Henley has a B.B.A. in Management. Mike Radley has a B.S. in Resource Economics.

List any training/education your staff received this year: Tim Barrows, Brian Farless, Dave Henley, Mike Radley, Nolan DiDonato, and Kacey Espiritu took the following classes: Being Cyber Safe, Diversity at the Commonwealth, Domestic Violence and Sexual Assault Awareness, Preventing Conflicts of Interest, Preventing Harrassment at Work, and Preventing Violence in our workplace. Tim Barrows, Brian Farless, and Mike Radley attended the Northeastern Mosquito Control Association conference. Tim Barrows attended the American Mosquito Control Association conference. Tim Barrows and Mike Radley attended presentations at the Northeastern Mosquito Control Association field day event.

## INFORMATION TECHNOLOGY (IT)

Does your program use (check all that apply):

- Aerial Photography
- Databases
- Dataloggers (monitoring for temperature, etc.)
- GIS mapping (Describe:)
- GPS equipment
- Smartphones
- Tablets/Toughbook
- Other (please describe):

Describe any changes/enhancements in IT from the previous year:

### **REVENUES & EXPENDITURES**

*Please enter your approved budgets for the previous, current, and future fiscal years.*

	<b>Date of Fiscal Year</b>	<b>Approved Budget</b>
Previous	FY25	298,555.96
Current	FY26	298,555.96
Future		

List each member municipality, along with the corresponding (cherry sheet) funding assessment dollar amount, for the current fiscal year (or provide a web link to this information): Boston - \$286,959; Chelsea - \$11,597

Comments:

### **SERVICE REQUESTS**

How many service requests did you receive this season? 14

How many were for larviciding? 5

How many were for adulticiding? 5

Was this an increase or decrease over last season? decrease

Comments:

## EXCLUSIONS

How many exclusion requests did you receive this season? 21

Was this an increase or decrease over last season? Yes or No: increase

Do you have large areas of pesticide exclusion, including priority habitat? Massachusetts Audubon, Boston Nature Center and Wildlife Sanctuary; Trustees of Reservations properties

Comments:

## SPECIAL PROJECTS

*Did your program perform any of the following special projects?*

Project	Description
<input checked="" type="checkbox"/> Inspectional services (inspections at sewage treatment facilities, review of subdivision plans, etc.)	Suffolk County Mosquito Control works with Inspectional Services to identify and remove mosquito habitat. Source reduction prevents mosquitoes from developing.
<input checked="" type="checkbox"/> Work with DPW departments or other local or state officials to address stormwater systems, clogged culverts, or other areas identified as man-made mosquito problem areas.	Suffolk County Mosquito Control coordinated catch basin applications with the Boston and Chelsea Public Works catch basin cleaning programs so as not to conflict with catch basin cleaning.
<input type="checkbox"/> Work with groups as described above on long-term solutions.	
<input type="checkbox"/> Conduct or participate in any cooperative research or restoration projects?	
<input type="checkbox"/> Participate in any state/regional/national workgroups or panels, or attend any meeting pertaining to the above?	
<input type="checkbox"/> Work on any biological control projects, such as enhancement of habitat for native predators, release of predatory fish or invertebrates, etc.?	
<input type="checkbox"/> Other	

## GENERAL COMMENTS

Please add any comments here for topics not covered elsewhere in this report: