



Commonwealth of Massachusetts
STATE RECLAMATION AND MOSQUITO CONTROL BOARD
**NORTHEAST MASSACHUSETTS MOSQUITO CONTROL
AND WETLANDS MANAGEMENT DISTRICT**
118 Tenney Street
Manchester, MA 01833
Phone: (978) 352-2800
www.nemassmosquito.org



Operations

Barry Noone: *District Director*
Kimberly A. Foss.: *Entomologist*
Robyn A. Januszewski: *IT Coordinator*
Steven Przyjemski: *Wetlands Project Coordinator*

Commissioners

John W. Morris, CHO: *Chair*
Paul Sevigny, RS: *Vice Chair*
Joseph T. Giarrusso, Conservation Officer
Rosemary Decie, RS

2025 Best Management Practice Plan Report & 2024 Year in Review **Manchester-by-the-Sea**

District Control Measures Specific to Manchester

Adult Mosquito Surveillance Program

Vector / Virus Intervention

GIS Mapping of Mosquito Habitats and Treatment Areas

Catch Basin Treatments **(BT/BS products only, No Methoprene will be used)**

Larviciding **(Resident and/or Board of Health requests, BT/BS products only, No Methoprene will be used)**

Adulticiding **(Resident and/or Board of Health requests)**

Barrier Treatments on School Properties **(School officials / IPM coordinator request)**

Barrier Treatments on Municipal Owned Public Spaces **(Board of Health request)**

Ditch Maintenance / Wetlands Management/ Mosquito Habitat Mitigation

Tire Recycling Program

Property Inspections

Educational Resources

NOTE: Any adulticiding, larviciding or treatment of catch basins for mosquito control on public school property requires a current IPM (Integrated Pest Management) Plan. We are often asked by local Boards of Health and/or athletic directors to treat ball fields and/or parks that may be owned/used by the school departments, and without a school IPM plan that includes our current pesticide products we may not be able to assist.

-Committed to the principals of mosquito control and wetland management –

Summary of NEMMC District Operations Completed in Manchester during 2024

Date	Activity Completed
1/4/2024	Residential Pesticide Exclusion Received (1)
2/4/2024	Residential Pesticide Exclusion Received (2)
3/2/2024	Residential Pesticide Exclusion Received (1)
3/13/2024	Hand Ditch Maintenance- Summer Street 1 culvert
3/13/2024	Hand Ditch Maintenance- Mill Street 500 ft + 2 culverts
3/15/2024	2024 Draft Best Management Plans (BMP) e-mailed to BOH for review, IPVMP mailed to BOH
3/15/2024	2024 Integrated Pest and Vector Management Plan published to NEMMC website
3/17/2024	Residential Pesticide Exclusion Received (1)
3/25/2024	Hand Ditch Maintenance- Blue Heron Lane 1,300 ft + 2 culverts
3/25/2024	Hand Ditch Maintenance- Old Neck Road 830 ft + 2 culvert
3/25/2024	Residential Pesticide Exclusion Received (1)
4/9/2024	Residential Pesticide Exclusion Received (1)
4/9/2024	Larviciding- Rockwood Heights Road (3.86 lbs VectoBacG)
4/9/2024	Habitat Inspections (7)
4/10/2024	Residential Pesticide Exclusion Received (8)
4/11/2024	NEMMC zoom attendance at BOH meeting- 6:00pm
4/14/2024	Residential Pesticide Exclusion Received (3)
4/18/2024	Habitat Inspections (4)
4/21/2024	Residential Pesticide Exclusion Received (1)
4/26/2024	Resident request inspection - Forster Road
4/27/2024	Residential Pesticide Exclusion Received (1)
4/29/2024	Habitat Inspections (3)
4/30/2024	Residential Pesticide Exclusion Received (1)
5/1/2024	NEMMC Annual Virtual BOH Town Hall Meeting
5/2/2024	Residential Pesticide Exclusion Received (1)
5/2/2024	Resident request inspection- Crooked Lane
5/6/2024	Adult mosquito surveillance traps set out
5/9/2024	Residential Pesticide Exclusion Received (1)
5/14/2024	Adult mosquito surveillance starts for the season
5/16/2024	Resident request inspection - Magnolia Avenue
5/17/2024	Residential Pesticide Exclusion Received (1)
5/20/2024	Greenhead traps deployed for season
6/6/2024	Residential Adulticiding Requests completed (1)
6/11/2024	Mosquito batches to DPH lab for WNV/EEE Testing (3)- NEGATIVE
6/13/2024	Residential Adulticiding Requests completed (3)
6/17/2024	Resident request tire disposal- Desmond Avenue (8 tires)
6/18/2024	Mosquito batches to DPH lab for WNV/EEE Testing (3)- NEGATIVE
6/20/2024	Residential Adulticiding Requests cancelled due to inclement weather
6/25/2024	Mosquito batches to DPH lab for WNV/EEE Testing (2)- NEGATIVE
6/27/2024	Residential Adulticiding Requests completed (7)

2024 Best Management Practice Plan: Manchester-by-the-Sea

7/2/2024	Mosquito batches to DPH lab for WNV/EEE Testing (2)- NEGATIVE
7/3/2024	Residential Adulticiding Requests completed (2)
7/9/2024	Mosquito batches to DPH lab for WNV/EEE Testing (1)- NEGATIVE
7/11/2024	Residential Adulticiding Requests completed (1)
7/16/2024	Catch basin larviciding (675 Vectomax WSP) + Landmark ES/MS, Brookwood School (4 VectoMax WSP)
7/16/2024	Catch basins in Manchester completed- 675 total municipal basins + 4 school basins = 679 Total basins
7/16/2024	Mosquito batches to DPH lab for WNV/EEE Testing (1)- NEGATIVE
7/18/2024	Residential Adulticiding Requests completed (4)
7/23/2024	Mosquito batches to DPH lab for WNV/EEE Testing (2)- NEGATIVE
7/25/2024	Residential Adulticiding Requests completed (1)
7/30/2024	Mosquito batches to DPH lab for WNV/EEE Testing (2)- NEGATIVE
8/1/2024	Residential Adulticiding Requests completed (1)
8/6/2024	Mosquito batches to DPH lab for WNV/EEE Testing (1)- NEGATIVE
8/8/2024	Residential Adulticiding Requests completed (5)
8/13/2024	Mosquito batches to DPH lab for WNV/EEE Testing (2)- NEGATIVE
8/15/2024	Residential Adulticiding Requests completed (5)
8/20/2024	Mosquito batches to DPH lab for WNV/EEE Testing (1)- NEGATIVE
8/27/2024	Mosquito batches to DPH lab for WNV/EEE Testing (2)- NEGATIVE
8/27/2024	Residential Pesticide Exclusion Received (2)
8/29/2024	Residential Adulticiding Requests completed (1)
9/5/2024	Residential Adulticiding Requests completed (6)
9/8/2024	Residential Pesticide Exclusion Received (3)
9/12/2024	Residential Adulticiding Requests completed (4)
9/24/2024	Mosquito batches to DPH lab for WNV/EEE Testing (1)- NEGATIVE
10/1/2024	Adult mosquito surveillance concluded for season
9/30/2024	Residential Pesticide Exclusion Received (1)

- **42 residential adulticide (ULV) service requests, up from 14 in 2023**
- **0 Board of Health adulticide service requests (combined ULV and barrier treatments), unchanged from 2023**
- **4 residential property inspection service requests, up from 0 in 2023**
Informing residents that they can contact the district to inspect for standing water and help identify new breeding areas can help reduce mosquito populations.
- **15 mosquito habitat site inspections were conducted.**
- **Catch basin larviciding was completed on 7/16/2024: 679 total basins were treated (675 municipal + 4 school)**
- **30 Residential pesticide exclusions were filed with the district for Manchester during 2023, up from 29 during 2023**
- **8 abandoned tires were collected for disposal**
- **2,630 feet of hand ditch maintenance was completed, and 7 culverts were cleared of debris.**

2024 Manchester-by-the-Sea Mosquito & Arbovirus Surveillance Summary

There were no WNV/EEE mosquito isolations, human, or animal cases in Manchester in 2024. At the end of 2024, the arboviral risk level for Manchester remained at LOW for EEE and MODERATE for WNV. Risk Categories are described on pages 13, 22, 25 of the 2023 Massachusetts State Arbovirus Surveillance and Response Plan.

Massachusetts DPH assesses arboviral risk levels based on many factors including but not limited to mosquito isolations, locations of acquired veterinary and human infections, virus history locally and in bordering states, weather conditions present and predictions, and current mosquito populations and future trends.

State arbovirus risk updates: <https://www.mass.gov/info-details/massachusetts-arbovirus-update#risk-maps->

- 14 qualified mosquito batches were sent to UMass Amherst for JCV (Jamestown Canyon Virus) testing (May and June collections) all tested negative for JCV.
- 23 mosquito pools/batches were sent from Manchester to the MDPH lab for testing in 2024, all batches tested negative for EEE/WNV.
- DPH raised WNV arboviral risk level to Moderate in Manchester on 9/23/2024 due to a WNV human case isolation in a neighboring community

Mosquito virus isolation history (WNV/EEE) in Manchester-by-the-Sea:

Collection Date	Species	Test Type	Result
9/23/2019	<u>Cs. melanura</u>	EEE	Positive
9/23/2019	<u>Cs. melanura</u>	EEE	Positive
9/4/2018	<u>Culex salinarius</u>	WNV	Positive
8/25/2016	<u>Culex pipiens</u>	WNV	Positive
9/15/2013	<u>Cx. pipiens/restuans</u> complex	WNV	Positive
9/2/2012	<u>Cs. melanura</u>	WNV	Positive
9/2/2012	<u>Cq. perturbans</u>	WNV	Positive
9/3/2007	<u>Cx. pipiens/restuans</u> complex	WNV	Positive
9/3/2007	<u>Cx. pipiens/restuans</u> complex	WNV	Positive

Total Mosquito Collected in Manchester	2023	2024	% Change
Resting Boxes (8)- EEE primary vectors	56	70	25%
CDC CO2/Light Traps (1) - Mammal feeders/bridge vectors	385	553	44%
Gravid Traps (1)- WNV primary vectors	101	20	-80%
Totals	542	643	19%

2024 Best Management Practice Plan: Manchester-by-the-Sea

Mosquito Species- pest/disease list- Manchester	2023	2024	% Change	WNV/EEE +	District Total % Change 2023 to 2024
<i>Culiseta melanura</i> (red maple swamp/acid bog)	38	138	263%	NO	67%
<i>Culex pipiens</i> (container/catch basins/heavy organics)	8	6	-25%	NO	2%
<i>Culex restuans</i> (container/catch basins)	49	5	-90%	NO	-59%
<i>Culex salinarius</i> (brackish water/phragmites/roadside ditches)	11	9	-18%	NO	-90%
<i>Coquillitidia perturbans</i> (cattail)	83	268	223%	NO	437%
<i>Aedes vexans</i> (rainwater/fresh floodwater)	4	11	175%	NO	-96%
<i>Aedes japonicus</i> (tree hole/container breeder)	25	10	-60%	NO	7%
<i>Aedes sollicitans</i> (salt marsh)	0	0	-	NO	-82%
<i>Aedes cantator</i> (salt marsh)	31	5	-84%	NO	-61%
<i>Aedes canadensis</i> (snowmelt/woodland pool)	206	154	-25%	NO	-85%

For specific annual mosquito species information and summary please visit our IPVMP, see page 33 and 34
https://www.nemassmosquito.org/sites/g/files/vyhlf4751/f/uploads/2025_ipvmp_final_0.pdf

With forested wetlands, presence of vector and bridge vector mosquito species and arbovirus history in Manchester-by-the-Sea, there will always be concern for transmission and human infection from EEE and WNV. From July to the first hard frost, residents should take necessary precautions to reduce the risk of infection from these viruses, regardless of low mosquito populations and/or aggressiveness of control.

A hard, or killing frost, is defined meteorologically as two consecutive hours of temperatures below 28 degrees Fahrenheit or three hours below 32 degrees. This will occur at different times for different communities, and there may even be variation within communities based on local geography. Although mosquitoes are not killed until a hard frost occurs, they are extremely unlikely to be active when temperatures fall below 50 degrees in the evening (Page 15 of the 2024 MA Arbovirus Plan listed below).

Refer to the 2024 Massachusetts State Arbovirus Surveillance and Response Plan viewed online at:
<https://www.mass.gov/lists/arbovirus-surveillance-plan-and-historical-data>

Reminders

- **Board of Health meeting/ presentation with NEMMC**
 - Meetings will only be scheduled between the dates of October 1st - June 1st
- **Notify NEMMC with Health Department /Board of Health contact changes**
 - Work phone, cell phone, and email are required of primary and secondary contacts.
- **Review District Phased Response to WNV/EEE Virus Isolations in Integrated Pest and Vector Management Plan (IPVMP)**
- **Review login information for Municipal Toolbox on NEMMC website**
 - Contact the Board of Health Liaison (see contact below) for login information
- **Department of Public Health Notifications**
 - Due to DPH protocols for virus and risk level changes, please delay any public notifications and social media updates until NEMMC has contacted you.
- **Surveillance trap and virus locations are to remain confidential**
- **Scheduling barrier treatments/adulticiding municipally owned areas**
 - Will be scheduled upon request from BOH/Health Department or with NEMMC's recommendation and permission from BOH/Health Department.
 - School grounds may also be requested for treatment via the IPM Coordinator
 - NEMMC will coordinate with schools and other town departments for access to these areas.
 - NEMMC will provide Standard Written Notification for distribution to residents.

➤ Scheduled barrier treatments are recommended between July 15th – August 25th
- **School IPM Coordinator contact information should be kept up to date. NEMMC will alert IPM Coordinators with any pesticide product changes/additions.**

For any questions on where to find this information, scheduling, and/or how to complete these tasks, please reach out to our Board of Health Liaison:

Jennifer Sforza/Board of Health Liaison

Cell: (978) 971-7689

Office: (978) 352- 2800

Email: Jennifer.Sforza@mass.gov

2025 NEMMC Protocols for District Arboviral Events

Climate change is expected to affect the geographic and seasonal patterns of mosquito-borne diseases in the United States. The northeast is experiencing an increase in precipitation and unusually hot temperatures. Since EEE is more prevalent in wetter years and WNV in hotter years the likeness of the district experiencing EEE and/or WNV events in any given year is possible, in some years both viruses can present substantial risk. The district feels that it is beneficial to our subscribing municipalities to set prevention and response criteria preparing for both mosquito-borne viruses.

District Prevention for WNV and EEE

- Adult mosquito surveillance and DPH virus testing
- Larviciding areas that can promote mosquito breeding including municipal catch basins
- Public notification to use personal protective measures from spring to first hard frost
- Wetlands management and stormwater maintenance
- Property inspections to larvicide standing water and remove containers holding water
- Early barrier treatments for public parks, recreation areas and schools
- Tire disposal program

District Response for WNV and EEE

If risk level increases for municipality but no virus in municipality:

- Public notification to use personal protective measures
- Additional larviciding of freshwater wetlands and flooded areas
- Recommendation for municipality to complete barrier treatments

If bird biting mosquitoes in municipality test positive for virus:

- Public notification to use personal protective measures
- Supplemental adult mosquito trapping and additional DPH virus testing in risk areas
- Additional larviciding of freshwater wetlands and flooded areas
- Retreatment of catch basins (if WNV) in focal area
- Retreatment of hummock swamps (if EEE) in focal area

If human biting mosquitoes in municipality test positive for virus:

- Public notification to use personal protective measures
- Supplemental adult mosquito trapping and additional DPH virus testing in risk areas
- Additional larviciding of freshwater wetlands and flooded areas
- Recommendation for municipality to complete a block adulticide of focal area
- Recommendation for municipality to complete barrier treatments

If mammal or human case of WNV or EEE in municipality:

- Public notification to use personal protective measures
- Supplemental adult mosquito trapping and additional DPH virus testing in risk areas
- Additional larviciding of freshwater wetlands and flooded areas
- Recommendation for municipality to complete a block adulticide of focal area
- Recommendation for municipality to complete barrier treatments