MASSACHUSETTS MOSQUITO CONTROL

ANNUAL OPERATIONS REPORT

Year Report Covers: 2023 Date of Report: 01/09/2024

Project/District Name: **Northeast Mass. Wetlands Mgmt. Mosquito Control**

Address: 118 Tenney Street

City/Town: Georgetown Zip: 01833

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Report prepared by: ***Kimberly A. Foss, Robyn Januszewski, Barry Noone and Jennifer Sforza, Steve Przyjemski***

NPDES permit no. **NPDES Permit # MAG870001 Active 12/2021 until 10/2027**

If you have a mission statement, please include it here: The prime directive of the Northeast Massachusetts Mosquito Control and Wetlands Management District is to protect the citizens of each member community from mosquito-borne diseases by targeting precise, measured, and preemptive responses to specific risks as prescribed by the District's annually-revised "Integrated Pest & Vector Management Plan" (IPVMP) and each community's "Best Management Practice" (BMP) plans. To ensure that our citizens' quality of life, health and regional economy is not severely impacted by abundant pestiferous mosquito outbreaks and arbovirus, strategies to reduce dominant mosquito populations are implemented and are designed to incorporate the District's environmentally sensitive and cost effective mosquito control strategies with the specific needs and concerns of each member community.

ORGANIZATION SETUP:

Commissioner names:

John W. Morris, CHO, Chairman
Vincent J. Russo, MD, MPH, Vice-Chairman
Joseph Giarrusso, Conservation Officer
Paul Sevigny, RS, CHO
Rosemary Decie, RS

Superintendent/Director name: Barry Noone, District Director
Superintendent/Director contact phone number: 978-609-1859
Asst. Superintendent/Director name:

District/Project website: http://www.nemassmosquito.org
Twitter handle: @
Facebook page: http://www.facebook.com/people/Northeast-Massachusetts-Mosquito-Control-Wetlands-Management-District/100082224488750/

Other social media accounts:

Staffing levels for the year of this report:
Full time: 8
Part time: 1
Seasonal: 1
Other: 1 (please describe) Finance/HR Manager

Of the above, how many are:
(Please check off all that apply, and list employee name(s) next to each category)

☒ Administrative Jennifer Sforza, Barry Noone, John Moak
☒ Biologist Robyn Januszewski
☒ Educator Kimberly Foss
☒ Entomologist Kimberly Foss
☒ Facilities Barry Noone, Andrew Sheenan
☒ Information technology Robyn Januszewski (GIS), Jennifer Sforza (Website Design/Management)
☒ Laboratory Kimberly Foss
☒ Operations Barry Noone, Kimberly Foss, Steve Przyjemski, Ross Mehaffey, Andrew Sheehan, Victoria Ambrifi, Jake Greeney, Jennifer Sforza, Robyn Januszewski
☒ Public relations Barry Noone, Jennifer Sforza, Kimberly Foss
☒ Wetland scientist Steve Przyjemski
☒ Other (please describe) John Moak (Finance/HR Manager)

For the year of this report, the following were maintained (enter number in the column to the left):

14 Modified wetland equipment (list type) 1987 Kassbohrer PB270DS "PistenBully" Flail Mower; 2013 Kassbohrer "PistenBully" 100 All-Season Flail Mower; 1987 Bombadier "Muskeg" Off-Road Dump Body/Backhoe; 1999 LinkBelt 1600 Excavator; 1996 Hudson Spray Trailer; 1996 Rokon all-terrain Motorcycle; 1987 ARGO 8 wheel Amphibious ATV; 2023 ARGO Conquest 950 Outfitter: 2012 Starcraft 14' Aluminum Boat; 2012 20hp Mercury Outboard Motor; 2022 Venture VB-1300 Boat Trailer; 2021 Takeuchi TL8RZ-CR skid-steer; 2021 Takeuchi TB257FR Excavator with Takeuchi Forestry Mulcher TBL1EX75
5 Larval control equipment (list type) Larval control equipment (list type) Maruyama MD300 Backpack Dusters
7 ULV sprayers (list type) ULV sprayers (list type) Clarke "ProMist Dura" sprayers
18 Vehicles
Other (please be specific): 1 A1 Mist Sprayers "Ranger" Barrier Sprayer; 1 Leco HD Series D 70001047 (Blower Model: 26-3210) Barrier Sprayer and 1 Leco 1100 (Blower Model: RAI 89D) Barrier Sprayer 1 Maruyama MM181 Backpack Mistblower 1 Invasive Vegetation Sprayer: Roots ID # 865-105-20 Rears Ag Sprayer S-95-1044 3 Hand operated Solo Backpack Sprayers for Invasive Vegetation Contro

Comments: _____

How many cities and towns are in your service area?* 34
Alphabetical list: Amesbury, Andover, Beverly, Boxford, Danvers, Essex**, Georgetown, Gloucester **, Groveland, Hamilton, Haverhill, Ipswich, Lynn, Lynnfield, Manchester-by-the-Sea, Marblehead, Merrimac, Methuen, Middleton, Nahant, Newbury, Newburyport, North Andover, Peabody, Revere, Rowley, Salem, Salisbury, Saugus, Swampscott, Topsfield, Wenham, West Newbury and Winthrop

*https://www.nemassmosquito.org/resident-services/pages/towns-we-serve

**Essex and Gloucester Subscribe to Northshore Greenhead Fly Program ONLY

Were there any changes to your service area this year? No
Cities/towns added:
Cities/towns removed:

***Please attach a map of your service area (or a website link to that map).**

INTEGRATED PEST MANAGEMENT (IPM):

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

☒ **Adult mosquito control**
☒ **Adult mosquito surveillance**
☒ **Ditch maintenance**
☒ **Education, Outreach & Public education**
☒ **Larval mosquito control**
☒ **Larval mosquito surveillance**
☐ **Open Marsh Water Management**
☒ **Research**
☒ **Source reduction (tire removals)**
☒ **Other (please list): Inspectional services including wastewater and water treatment facilities, greenhead fly control, wetlands management and restoration**

Comments: The District routinely inspects and treats known breeding areas and will assess areas of concern as requested by residents and local Boards of Health. The District also provides inspection services for planned developments upon request from member municipalities to advise on reducing potential mosquito breeding habitat.

LARVAL MOSQUITO CONTROL:

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

Describe the purpose of this program: To reduce larval mosquito populations before adult emergence can occur.

What months is this program active? January - December

Describe the types of areas where you use this program: Fresh and salt water wetlands, stormwater control structures, floodwater areas, tire piles, catch basins, and containers

Do you use:
☒ **Ground application (hand, portable and/or backpack, etc.)**
☒ **Aerial applications**
☐ **Other (please list):**
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**	**Targeted life stage**	**Habitat Type**	**Total finished product applied**
Fourstar Bti-CRG	85685-4	7.5-20.0 lbs./acre	Hand	Larvae	☐ Catch basins ☐ Containers ☒ Wetland ☒ Other (please list): saltmarsh	.97 lbs
VectoBac G	73049-10	2.5-10.0 lbs./acre	Hand or Backpack Sprayer	Larvae	☐ Catch basins ☒ Containers ☒ Wetland ☒ Other (please list): saltmarsh	1,010.43 lbs
VectoBac 12AS	73049-38	1 qt. / acre	Aerial by helicopter	Larvae	☐ Catch basins ☐ Containers ☐ Wetland ☒ Other (please list): saltmarsh	3,040 gals
Altosid WSP	2724-448	1 pouch/catch basin = 7 gm.	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	44,373 pouches
Fourstar CRG	85685-2	7.5-10.0 lbs./acre	Hand or Backpack Spraye	Larvae	☐ Catch basins ☐ Containers ☒ Wetland ☒ Other (please list): saltmarsh	2,546.80 lbs
Fourstar 90-day Briquet	83362-3	1 briquet/catch basin = 20.85 gm.	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	249 briquets
VectoMax WSP	73049-429	1 pouch/catch basin = 10 gm	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	17,754 wsp

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**	**Targeted life stage**	**Habitat Type**	**Total finished product applied**
VectoMax FG	73049-429	5.0-20.0 lbs./acre	Hand or Backpack Spraye	Larvae	☐ Catch basins ☐ Containers ☒ Wetland ☒ Other (please list): saltmarsh	132.33 lbs
Altosid XR Briquet	2724-421	1 briquet/catch basin = 36.49gm	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	2 Briquets
Metalarv XRP WSP	73049-475	1 pouch/catch basin = 18 gm.	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	9,361 wsp
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	

What is your trigger for larviciding operations? (check all that apply)
☒ Best professional judgment
☒ Historical records
☒ Larval dip counts – please list trigger for application:
☒ Other (please describe): Arbovirus notifications, tidal and precipitation events, surveillance trap counts and resident/BOH requests
Comments: _____

Please attach a map of your service area (or a website link to that map).
https://www.nemassmosquito.org/resident-services/pages/towns-we-serve

ADULT MOSQUITO CONTROL:

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

Describe the purpose of this program: To reduce adult mosquito populations in response to virus positive mosquito pools and nuisance mosquito complaints

What is the time frame for this program? June through October, end date depends on virus activity and weather.

Describe the types of areas where you use this program: Residential streets, schools (per Children's Protection Act), and parks and recreational areas (per Municipal office request)

Do you use:
☐ **Aerial applications**
☐ **Portable applications**
☒ **Truck applications**
☐ **Other (please list):**
Comments: _____

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

Product Name	**EPA #**	**Application Rate(s)**	**Application Method**	**Total finished product applied**
Zenivex E4RTU	2724-807	1.0 fl.oz/acre	truck mounted ULV sprayer	56.65 gals
Duet	1021-1795-8329	0.64 fl.oz/acre	truck mounted ULV sprayer	21.18 gals
Suspend Polyzone	432-1514	1.5 fl. oz : 1.0 gal water. 1.0 gal mix/min	truck mounted barrier sprayer	362.8 oz

Please describe the maximum amounts or frequency used in a particular time frame such as season and areas
Zenivex E4 RTU & Duet: No more than 1 application per site per week or 25 applications per site per year. (ULV applications)
Suspend SC: No more than 1 application per site within a two week period. (Barrier applications)
Suspend Polyzone: No more than 1 application per site within a three week period (Barrier applications)
*Applications are made in accordance with product label directions.

What is your trigger for adulticiding operations? (check all that apply)
☒ Arbovirus data
☒ Best professional judgment
☒ Complaint calls (Describe trigger for application: Resident and/or BOH requests)
☐ Landing rates (Describe trigger for application *Not performed due to the threat of WNV and/or EEE)
☒ Light trap data (Describe trigger for application Increasing amount of disease carrying vectors)
Comments: All applications on school property must be in compliance with Massachusetts Children and Families Protection Act.

Please attach maps of your service areas (or a website link to that map).
https://www.nemassmosquito.org/resident-services/pages/towns-we-serve

SOURCE REDUCTION (Tire Removals)

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

Please describe your program: District personnel coordinate with local municipalities to remove tires at community events, such as Hazardous Waste Days, large tire dump sites, and tires discarded at road-side and/or wetland sites. Additionally, residents in member municipalities can submit a request directly to the District for removal of tires from their property.

What time frame during the year is this method employed? January-December

Comments: Total Tires Removed in 2023: 648

WATER MANAGEMENT/DITCH MAINTENANCE

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

Please check all that apply:
☒ Inland/freshwater
☒ Saltmarsh
Please describe your program: Maintenance and restoration of both freshwater and salt marsh ditches to increase flow and reduce mosquito breeding habitat.

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

Maintenance Type	Estimate of cumulative length of culverts, ditches, swales, etc. maintained (ft)
☒ Culvert cleaning	57 culverts
☒ Hand cleaning	23,941 feet
☒ Mechanized cleaning	1,607 feet
☒ Stream flow improvement	3
☒ Other (please list): mechanized projects	8 projects

Comments: _____

For **saltmarsh ditch maintenance**, check off all that apply:

Maintenance Type	Estimate of cumulative length of ditches maintained (ft)
☐ Hand cleaning	
☐ Mechanized cleaning	
☒ Other (please list): Phragmites australis mowing to allow access for larval treatments and machine access for mechanized work	47.251 acres

Comments: _____

What time frame during the year is this method employed? Hand ditch maintenance is year round and mechanized ditch maintenance goes from Fall through Spring.

Comments: _____

Please attach a map of ditch maintenance areas (or a website link to that map). Maps available upon request

OPEN MARSH WATER MANAGEMENT

If you have an Open Marsh Water Management program, please fill out the section below, else 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:

Comments: NEMMC no longer holds a current OMWM permit. NEMMC's relevant projects focus on restoring water movement so as to prevent creating new mosquito breeding habitats.

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

MONITORING (Measures of Efficacy)

Describe monitoring efforts for each of the following:

Aerial Larvicide – wetlands: Salt marsh: Pre and Post dips at up to ten dip stations per participating municipality

Ground ULV Adulticide: Surveillance and supplemental traps set in all member municipalities

Larvicide – catch basins: Random basins in each muncipality checked post treatment as needed. Small study conducted to compare the efficacy of the 3 larvicides used by the District.

Larvicide-hand/small area Pre-treatment dips with >1 larvae present in 5-dip average; post treatment dips as necessary

Open Marsh Water Management:

Source Reduction: Surveillance data and resident complaints

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):

Note 1- Aerial Larvicide- wetlands: Salt marsh, pre and post dips at up to ten dip stations per participating municipality

Note 2- Larvicide-catch basins: post treatment dip counts as needed and/or collection of larvae to be reared.

Catch basin study: samples were collected from basins throughout the district and brought back to headquarters. The larval samples were monitored, and resultes documented, to determine how long after treatment adult emergence did / did not occur. The results were compared to determine which larvicides provide the stated level of control or if control varied greatly from expected.

Note 3- Larvicide-hand/small area: post treatement dip counts as needed

Check the boxes below, indicating if your program has performed any of the following:

Research Project	Details
Bottle assays	
Efficacy testing	
Other: NEVBD/Cornell	NEVBD Resistance testing program
Other: JVC Testing	Mosquitoes were submitted to UMass for JCV testing

ADULT MOSQUITO SURVEILLANCE

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

Describe the purpose of this program: To monitor species, particularly vector species, for management of populations and testing for arboviruses. From Introduction to "Best Management Plans" and as outlined in our Integrated Pest and Vector Management Plan (IPVMP): The District focus is to collect a representative sample of mosquitoes in a city or town on a regular basis. Historical collection stations are in areas where substantial portions of municipality residents reside to determine arboviral risk. Supplemetal trapping is initiated after WNV/EEE positives are detected from historical surveillance trap sites or if increases in vector mosquitoes are noticed in historic trap sites around risk areas

What months is this program active? May to 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	☐	
☐ ABC light trap w/CO_2	☐	
☐ CDC light trap	☐	
☒ CDC light trap w/CO_2	☐	35
☒ Gravid trap		37
☐ Landing rate test		
☐ NJ light trap	☐	
☐ NJ light trap w/CO_2	☐	
☒ Ovitrap		5
☒ Resting box		160
☐ Other (please describe):		
☐ Other (please describe):		
☐ Other (please describe):		

Do you maintain long-term trap sites in any of your areas? Yes
If yes, how many:
54

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

☒ *Ae. albopictus*
☒ *Ae. cinereus*
☒ *Ae. vexans*
☒ *An. punctipennis*
☒ *An. quadrimaculatus*
☒ *Cq. perturbans*
☒ *Cx. pipiens*
☒ *Cx. restuans*
☒ *Cx. salinarius*
☒ *Cs. melanura*
☒ *Cs. morsitans*
☒ *Oc. abserratus*
☒ *Oc. canadensis*
☒ *Oc. cantator*
☒ *Oc. j. japonicus*
☒ *Oc. sollicitans*

☒ *Oc. taeniorhynchus*
☒ *Oc. triseriatus*
☒ *Oc. trivittatus*
☒ *Ps. ferox*
☒ *Ur. sapphirina*
☒ Others (please list): **Spring pest species: Ae. punctor, Ae. excrucians/stimulans/fitchii complex. An. crucians**

Do you participate in the MDPH Arboviral Surveillance program? Yes
How many pools do you submit weekly on average? 50
Total number of adult mosquito pools submitted to DPH this past season: 867
Number of adult mosquito pools collected but not submitted to DPH ("Unsubmitted"): 3,168

Total number of adult mosquitoes submitted to DPH this past season: 14,595
Number of adult mosquitoes collected this season but not submitted to DPH: 45,932

Number of ovitrap collections this season, if any: 5
Any other trap collections of note (please describe): 1 Ae. albopictus adult from Gravid trap in Nahant, increase in collections of An. crucians, Ps. ciliata. Possible collection of An. perplexans

Number of traps in your service area **placed by MDPH**: 1
Were these long-term trap sites or supplemental trapping sites? supplemental

Which arboviruses were found in your area during this past mosquito season? Enter the number of positive pools and/or cases below:

Arbovirus	Positive Mosquito Pools	Equine Cases	Human Cases
☐ Eastern Equine Encephalitis (EEE)			
☒ West Nile Virus (WNV)	6	0	0
☐ Other (please list):			

Comments: 2023 season data, WNV identified in primary vectors only (pipiens and/or restuans) in Lawrence (1 MDPH), Andover (1), Haverhill (3), Middleton (1)

For each arbovirus listed below, please list the risk levels in your project area at both the start and end of the season (if more than one, please list all):

Arbovirus	Start of Season	End of Season
EEE	Remote to Low	Remote to Low
WNV	Low to Moderate	Low to Moderate

Comments: No DPH arbovirus risk increases in our area during 2023

EDUCATION, OUTREACH & PUBLIC RELATIONS

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

Describe the purpose of this program: The District provides educational outreach on vector-borne disease, personal protection, residential source reduction, storm water management, habitat restoration, invasive species, and environmental science primarily relevant to mosquitoes. This information is made available to schools, civic organizations, not for profit organizations, public access TV, the general public, as well as state, federal, and municipal officials upon request and / or during the course of routine operations. District personnel are available to meet, in accordance with COVID-19 precautions, at government and community meetings (i.e. Conservation Commissions, US Army Corps, Public Works Departments, Boards of Health, Board of Selectmen, or other) to provide information related to all of the above.

The District's website (www.nemassmosquito.org) provides information about operational strategies, procedures, videos, equipment and materials, links to other websites, including the

Massachusetts Department of Public Health, regarding disease/virus information and prevention as well as seasonal activity summaries

Other Media: The District has various hand-outs, posters and presentations which are available to the public upon request. Outreach Programs: The District creates educational programs tailored to the specific needs of schools, civic organization, and public officials.

What time frame during the year is this method employed? January-December

Check off all education/outreach methods that were performed by your program this year:
☒ Development/distribution of brochures, handouts, etc.
☒ Door-to-door canvassing (door hangers, speaking to property owners, etc.)
☒ Facebook page, Twitter, or other social media
☒ Mailings (Describe target audience(s): District Newsletter to residents, BOH, Towns)
☒ Media outreach (interviews for print or online media sources, press releases, etc.)
☒ Presentations at meetings
☒ School-based programs, science fairs, etc.
☒ Tabling at events (local events, annual meetings, etc.)
☒ Website
☒ Other (please describe): Municipal and BOH televised meetings & presentations

Estimate the audience reached this year using the education/outreach methods above: ~80,000
Comments:

List your program's top 3 education/outreach activities for this past year:
1. PSA Website/Facebook
2. Property owner outreach
3. Board of Health televised meetings and presentations

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 Early planning process for research and wetlands restoration with Governors Academy, Cornell, UMASS Amhurst, CT AGR
☒ Another mosquito control district/project NMCA Quarterly Newsletter contributions, Pioneer Valley MC District
☒ Another state agency (DCR, DPH, etc.) MA DPH, MA DOT
☒ Environmental groupsPesticide Environmental Stewardship Program, Trustees of Reservations (ongoing 5 year study on the effects of runneling on the salt marsh), Conservation Committees
☐ Industry

List any training/education your staff received this year: All District employees are trained annually in accordance with the Commonwealth's PACE Program. Attendance and participation in the Northeastern Mosquito Control Association conference. Additionally, the District's staff has attended the M.U.S.T. Excavation Safety Seminar. Chainsaw safety training. Pesticide trainings.

Please list the certifications and degrees held by your staff: Various scientific and environmental degrees including Associates, Bachelors, Masters, and Doctoral degrees. District certifications and licensing include MA Pesticide Core License, Commercial Certification Category 47 (Public Health, Mosquito and Biting Fly), Category 39 (Aquatic Pests), and Category 40 (Right of Way), MA Hoisting Engineer Class 2A, 1C and 4G, MA Commercial Driver's license - Class A & B, and Massachusetts Trappers Certification.

Comments: _____

INFORMATION TECHNOLOGY (IT)

Does your program use (check all that apply):

☒ Aerial Photography
☒ Databases
☒ Dataloggers (monitoring for temperature, etc.)
☒ GIS mapping (Describe: Fiekdseeker, ESRI)
☒ GPS equipment
☒ Smartphones
☒ Tablets/Toughbooks
☐ Other (please describe):

Describe any changes/enhancements in IT from the previous year: Truck mounted realtime weather stations for more precise applications. New wireless hub integration for data uploads and transfers.

Describe any difficulties your program had with IT software/equipment this year:

Comments: _____

REVENUES & EXPENDITURES

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

	Date of Fiscal Year	**Approved Budget**	**Notes**
Previous	2023	$1,998,841.69	
Current	2024	$2,038,818.52	
Future	2025	$2,120,371,26	estimated

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):

Municipality	2023 Total Assessment for 2024		
Amesbury	$54,189	Andover	$145,274
Beverly	$90,314	Boxford	$92,128
Danvers	$69,538	Georgetown	$51,287
Groveland	$35,851	Hamilton	$58,057
Haverhill	$148,300	Ipswich	$127,346
Lynn	$79,571	Lynnfield	$50,358
Manchester By The Sea	$43,209	Marblehead	$42,739
Merrimac	$33,725	Methuen	$105,344
Middleton	$58,305	Nahant	$8,583
Newbury	$92,269	Newburyport	$49,625
N. Andover	$116,335	Peabody	$92,945
Revere	$54,311	Rowley	$70,534
Salem	$56,249	Salisbury	$62,206
Saugus	$60,359	Swampscott	$25,030
Topsfield	$50,723	Wenham	$30,696
West Newbury	$51,681	Winthrop	$18,349

Comments: _____

SERVICE REQUESTS

How many service requests did you receive this season? 2,243
How many were for larviciding? 124 (Resident= 121 BOH=5)
How many were for adulticiding? 2,109 (Resident= 1,907 BOH=210)

Was this an increase or decrease over last season? Increase

Comments: 2023 Totals

EXCLUSIONS

How many exclusion requests did you receive this season? 2023- 239 pesticide exclusions

Was this an increase or decrease over last season? Decrease

Do you have large areas of pesticide exclusion, including priority habitat? Yes

SPECIAL PROJECTS

Did your program perform any of the following special projects? Check all that apply.

- ☒ Inspectional services (inspections at sewage treatment facilities, review of subdivision plans, etc.)

  Describe: Inspections and treatments at District sewage treatment facilities, new housing developments/construction and Municipal stormwater designs/alterations

- ☒ 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

  Describe: NEMMC works closely with local DPWs to coincide catch basin treatments with each municipality's cleaning schedule in order to use the most effective larvicide product in catch basins and stormwater structures.

- ☒ Work with groups as described above on long term solutions?

  Describe: Wetland restoration and ditch/stormwater projects completed to enhance drainage and reduce future mosquito breeding

- ☒ Conduct or participate in any cooperative research or restoration projects?

  Describe: Trustees of Reservations, Governors Academy, NEVBD, UMASS Amherst, CTAg

- ☒ Participate in any state/regional/national workgroups or panels, or attend any meeting pertaining to the above?

  Describe: NMCA annual meeting, MADPH meetings

- ☐ Work on any biological control projects, such as enhancement of habitat for native predators, release of predatory fish or invertebrates, etc.?

  Describe:

CHILDREN AND FAMILIES PROTECTION ACT (CFPA)

Is your program impacted by the CFPA? Yes

If yes, please explain: Pesticides used by the District are required to be listed on a school's Integrated Pest Management (IPM) plan to allow the District to treat the school property. In recent years, the District has been asked by local Boards of Health to spray town fields including school properties for adult mosquitoes, particularly in the event of virus outbreaks. Schools that do not include mosquito control as part of their IPM plan reduce the District's ability to provide proactive and emergency mosquito control in those municipalities. This may lead to the possibility of increased virus for the surrounding towns and increased costs to the District.

If you have data on compliance rates with the CFPA within your program area, please list here: The compliance rates for schools with updated IPM plans are as follows: 16.76% of all educational facilities (Public schools, 10.42%; Private schools, 2.2%; Daycare facilities, 4.01%; Family daycare facilities, 0.06%). A plan is considered complete if all pesticides used by the District are included in the plan. The compliance rate for schools with complete IPM plans is as

follows: Public schools, 3.37%; Private schools, 0.26%; Daycare facilities, 0.45%; Family daycare facilities, 0%. A plan is considered partially complete if some of the pesticides used by the District are included. This creates problems with being able to efficiently and effectively treat school properties, and leaves large gaps in the overall treatment of many municipalities. The compliance rate for schools with partial IPM plans is as follows: Public schools, 7.06%; Private schools, 1.94%; Daycare facilities, 3.56%; Family daycare facilities, 0.06%.

Describe any difficulties you have had with the implementation of your program due to the CFPA, please elaborate here: The District is often asked by local Boards of Health to spray town properties, including schools, for adult mosquitoes, particularly during times of virus outbreaks. Schools that do not include mosquito control as part of their IPM plan reduce the District's ability to provide proactive and emergency mosquito control in those municipalities. This may lead to the possibility of increased virus for the surrounding towns and increased costs to the District.

Comments: At the beginning of 2022 our Board of Health Liasion worked directly with schools to update their IPM outdoor pest plans. The district also modified our BMP (Best Management Plan) to have a checkbox list for local BOH to know what needed attention for the preparadness into the current arbovirus season. Updating school IPM plans are on that new list. We have seen a positive increase in district school participation through 2022.

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT PROGRAM

Did your program report any adverse incidents during this reporting period? No

If yes, please list any corrective actions here: _____

GENERAL COMMENTS

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