MASSACHUSETTS MOSQUITO CONTROL

ANNUAL OPERATIONS REPORT

Year Report Covers: 2020 Date of Report: 01/28/2021

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

Address: 118 Tenney St.

City/Town: Georgetown Zip: 01833

Phone: 978-352-2800 Fax: 978-352-5234

E-mail: nemmc@mass.gov

Report prepared by: ***Kimberly A. Foss, Robyn Januszewski, Katelynn King, Barry Noone and William Mehaffey***

NPDES permit no. **MAG87A028**

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 and regional economy is not severely impacted by abundant pestiferous mosquito outbreaks, 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: William Mehaffey, Jr.
Superintendent/Director contact phone number: 978-352-2800
Asst. Superintendent/Director name:

District/Project website: http://www.nemassmosquito.org
Twitter handle: @

Facebook page: http://www.facebook.com/

Staffing levels for the year of this report:
Full time: 10
Part time: 1
Seasonal: 2
Other: 1 (please describe) finance 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, Robyn Januszewski, William Mehaffey, John Moak, Roy Melnick (until 4/28/2020)
☒ Biologist Robyn Januszewski
☒ Educator Kimberly Foss, Kelsey Liakos, Robyn Januszewski
☒ Entomologist Kimberly Foss
☒ Facilities William Mehaffey, Barry Noone, Roy Melnick (until 4/28/2020)
☒ Information technology Robyn Januszewski, Kelsey Liakos (Website Design/Management)
☒ Laboratory Kimberly Foss
☒ Operations William Mehaffey, Barry Noone, Kimberly Foss, Katelynn King, Kelsey Liakos, Ross Mehaffey, Andrew Sheehan, Jake Greeney, Robyn Januszewski, Roy Melnick (until 4/28/2020)
☒ Public relations William Mehaffey, Barry Noone, Kelsey Liakos, Kimberly Foss, Katelynn King, Robyn Januszewski
☒ Wetland scientist Katelynn King (Wetlands Project Coordinator)
☒ Other (please describe) John Moak (Finance Manager); Jessica Lambert, Victoria Ambrifi (contract seasonal field technicians)

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

13 Modified wetland equipment (list type) 1987 Kassbohrer PB270DS "PistenBully" Flail Mower; 1986 Kassbohrer PB270D "PistenBully" Flail Mower/Grader/Rotary Ditcher; 1987 Kassbohrer PB270DS "PistenBully" Flail Mower/Grader/Rotary Ditcher; 1990 Kassbohrer PB260DW "PistenBully" Off-Road Dump Body/Grader; 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; 2012 Starcraft 14' Aluminum Boat; 2012 20hp Mercury Outboard Motor; 2012 EZ-Loader Boat Trailer
5 Larval control equipment (list type) Maruyama MD300 Backpack Dusters
7 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 Control

Comments: _____

How many cities and towns are in your service area?* 33
Alphabetical list: Amesbury, Andover, Beverly, Boxford, Danvers, Essex**, Georgetown, 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 Subscribes to Northshore Greenhead Fly Program ONLY

Were there any changes to your service area this year? No
Cities/towns added: None
Cities/towns removed: None

***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, wastewater and water treatment facility inspections and treatments, greenhead fly control, wetlands management and restoration**

Comments: The primary vector species of West Nile Virus, Culex pipiens, typically breeds in highly organic waters such as that found in catch basins and retention/detention ponds. The District routinely inspects and treats known breeding areas and will assess areas of concern as requested by residents and local Boards of Health. Additionally, the District 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? March-October

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

Do you use:

☒ **Ground application (hand, portable and/or backpack, etc.)**

☒ **Aerial applications**

☒ **Other (please list): Source reduction**

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 or Backpack Sprayer	Larvae	☐ Catch basins ☐ Containers ☒ Wetland ☒ Other (please list): Saltmarsh	1,741.23 lbs.
VectoBac G	73049-10	2.5-10.0 lbs./acre	Hand or Backpack Sprayer	Larvae	☐ Catch basins ☒ Containers ☒ Wetland ☒ Other (please list): Saltmarsh	417.91 lbs.
VectoBac 12AS	73049-38	1 qt. / acre	Aerial by helicopter	Larvae	☐ Catch basins ☐ Containers ☐ Wetland ☒ Other (please list): Saltmarsh	2,280.00 gals.
Altosid WSP	2724-448	1 pouch/catch basin = 7 gm.	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	42,366 pouches = 653.73 lbs.
Altosid XR Briquet	2724-421	1 briquet /100 sq ft = 1.28 oz.	Hand	Larvae	☐ Catch basins ☐ Containers ☐ Wetland ☒ Other (please list): Swimming pools	8 briquets = 10.24 ozs.
Fourstar 90-day Briquet	83362-3	1 briquet/catch basin = 20.85 gm.	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	350 briquets = 16.09 lbs.
VectoMax WSP	73049-429	1 pouch/catch basin = 10 gm.	Hand	Larvae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	22,085 pouches = 486.84 lbs.

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**
Cocobear	8329-93	3 gals/acre	Hand held Sprayer	Larvae/pupae	☐ Catch basins ☐ Containers ☒ Wetland ☒ Other (please list): Saltmarsh	3.75 gals.
VectoMax FG	73049-429	5.0-20.0 lbs./acre	Hand or Backpack Sprayer	Larvae	☐ Catch basins ☒ Containers ☒ Wetland ☒ Other (please list): Saltmarsh	40.00 lbs.
				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):	
				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: >1 per 5 dips average
☒ 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 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 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	92.25 gals.
Duet	1021-1795-8329	0.64 fl.oz/acre	truck mounted ULV sprayer	5.0 gals.
Suspend Polyzone	432-1514	1.5 fl. oz : 1.0 gal water. 1.0 gal mix/min.	truck mounted barrier sprayer	2.35 gals.

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: Upon 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 a map of your service area (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.

Total Tires Removed in 2020: 164

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

Comments: _____

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	54 culverts
☒ Hand cleaning	20,655 feet
☒ Mechanized cleaning	100 feet
☐ Stream flow improvement	
☐ Other (please list):	

Comments: We have seen an increase in overall projects, many that require permitting, now that we have a full time Wetlands Project Coordinator.

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

Maintenance Type	**Estimate of cumulative length of ditches maintained (ft)**
☒ Hand cleaning	
☒ Mechanized cleaning	2,298 feet
☒ Other (please list): Phragmites australis mowing to allow access for larval treatments	38 acres

Comments: See comments above

What time frame during the year is this method employed? Year round for hand cleaning of ditches. Mechanized cleaning, typically larger projects, are usually performed from Fall to early Spring.

Comments: See comment above

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: Although Northeast MA Mosquito Control does not hold a current OMWM permit, previously constructed/permitted OMWM sites will be reviewed and maintained as necessary and in compliance with current OMWM regulations.
NEMMC did not have a Wetlands Project Coordinator for over a year, until October 2019 when we hired a new person to fill this position. Now that this position has been filled, OMWM projects will be monitored and maintained.

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

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:

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.

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	See Notes Above
Other:	

Other:	

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-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		30 +-
☒ 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: Oc. punctor, Oc. excrucians/stimulans/fitchii complex.**

Number of adult mosquitoes collected this season (whether submitted to DPH or not): 23,488
Number of adult mosquito pools collected this season (submitted and unsubmitted): 2,152
Number of ovitrap collections this season, if any: 0
Any other trap collections of note (please describe): 4 Supplemental CDC CO2/Light traps set for WNV response and EEE areas of interest (total collections included above)

Do you participate in the MDPH Arboviral Surveillance program? Yes
Total number of adult mosquito pools submitted to DPH this past season: 307
How many pools do you submit weekly on average? 50

Number of traps in your service area **placed by MDPH**: 0
Were these long-term trap sites or supplemental trapping sites? Choose one

Which arboviruses were found in your area during the previous mosquito season? Enter the number of pools/cases below:

Arbovirus	Positive Mosquito Pools	Equine Cases	Human Cases
☐ Eastern Equine Encephalitis (EEE)	0	0	0
☒ West Nile Virus (WNV)	1	0	0
☐ Other (please list):			

Comments: 2020 season data

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	Critical, High, Moderate	Remote to Low
WNV	Low	Low to Moderate

Comments: 2020 WNV Moderate-Lynn, Saugus, Revere, Winthrop

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, 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, presentations, and DVDs 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):)
☒ 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): Due to COVID-19, all municipal/BOH presentations delivered in 2020 have occurred remotely via virtual online media events or telecommunications. Any resident/public interactions were conducted in accordance with COVID-19 prevention guidelines.

Estimate the audience reached this year using the education/outreach methods above:
~800,000
Comments:

List your program's top 3 education/outreach activities for this year:
1. Website/PSA
2. Property owner outreach
3. Virtual meeting 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
☐ Another mosquito control district/project
☐ Another state agency (DCR, DPH, etc.)
☒ Environmental groupsPesticide Environmental Stewardship Program, Trustees of Reservations
☐ Industry

List any training/education your staff received this year: TRAINING:
All District employees are trained annually in accordance with the Commonwealth's PACE Program. Additionally, the District's staff has attended the M.U.S.T. Excavation Safety Seminar. Due to COVID-19, all other education/training in 2020 have occurred remotely via virtual online classes, seminars and training events.

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 and 1C, 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:)
☐ GPS equipment
☒ Smartphones
☒ Tablets/Toughbooks
☐ Other (please describe):

Describe any changes/enhancements in IT from the previous year: The District upgraded the data collection tablets used in field operations.

Describe any difficulties your program had with IT software/equipment this year: There were unanticipated issues with the rollout of the data collection program upgrade. These were addressed throughout the spring and summer to resolve the issues.

Comments: _____

REVENUES & EXPENDITURES

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

	Date of Fiscal Year	Approved Budget	Notes
Previous	2020	1,777,453.00	
Current	2021	1,884,100.18	
Future	2022	1,940,623.00	Estimate

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	2020 Total Assessment for FY2021
Amesbury	$49,961.00
Andover	$136,814.00
Beverly	$83,593.00
Boxford	$85,742.00
Danvers	$65,298.00
Georgetown	$47,636.00
Groveland	$33,179.00
Hamilton	$54,264.00
Haverhill	$136,429.00
Ipswich	$118,460.00
Lynn	$68,952.00
Lynnfield	$47,140.00
Manchester By The Sea	$40,960.00
Marblehead	$41,209.00
Merrimac	$31,296.00
Methuen	$97,441.00
Middleton	$54,431.00
Nahant	$7,924.00
Newbury	$85,430.00
Newburyport	$46,347.00
North Andover	$107,997.00
Peabody	$87,090.00
Revere	$45,381.00
Rowley	$65,332.00
Salem	$49,450.00
Salisbury	$57,559.00
Saugus	$55,978.00
Swampscott	$22,765.00
Topsfield	$47,444.00
Wenham	$28,566.00
West Newbury	$47,939.00

Winthrop $16,690.00

Comments: _____

SERVICE REQUESTS

How many service requests did you receive this season? 1,917
How many were for larviciding? Resident= 40, BOH=4 Total =44
How many were for adulticiding? Resident= 1,725, BOH=148 Total=1,873

Was this an increase or decrease over last season? Increase

Comments: 2020 totals

EXCLUSIONS

How many exclusion requests did you receive this season? 2020 = 285 exclusions

Was this an increase or decrease over last season? Decrease

Do you have large areas of pesticide exclusion, such as estimated or priority habitats? Yes

If yes, please explain, and attach maps or a web link if possible. US Fish & Wildlife/Parker River Wildlife Refuge (Newbury, Rowley, Ipswich), The Trustees of Reservations and MA Audubon

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:

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

  Describe: Worked with Parker River National Wildlife Refuge to plan the alterations of several OMWM ditch plugs. Because of sea-level rise, some of the salt marsh areas within or between each site were starting to breed mosquitoes because the water could not drain off between tides.

  Worked with the Trustees of Reservations on data collection in salt marsh restoration areas on Trustee properties.

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

  Describe: NMCA annual meeting, MA DPH surveillance meetings, Regional EEE meeting with local Boards of Health and MA DPH. Due to COVID-19, all meetings/workgroups in 2020 have occurred remotely via virtual online platforms and through teleconferences.

- ☐ 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:

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: _____