

**STATE RECLAMATION AND MOSQUITO CONTROL BOARD
MASSACHUSETTS MOSQUITO CONTROL DISTRICT**
ANNUAL OPERATIONS REPORT



2013 Year of Report

Date of Report: 1/21/2014

Project/District Name: **East Middlesex Mosquito Control Project**

Address: 11 Sun St.

City/Town: Waltham

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Report prepared by: *David Henley*

NPDES permit no. **MAG87A020**

If you have a mission statement, please include it here: The East Middlesex Mosquito Control Commission (the Commission) represents the interests of the participating communities and their residents in providing guidance and oversight to the East Middlesex Mosquito Control Project (The Project). The Commission strives to ensure that the member communities receive services that are consistent with applicable laws and justified by the tenets of public health, vector control, environmental safety and fiscal responsibility. 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 will consist of mosquito surveillance, larval mosquito control of wetlands and catchbasins, adult mosquito control, wetlands management/ ditch maintenance and public education.

ORGANIZATION SETUP:

Please list your Commissioner's names:

Executive Committee: Leonard Izzo, Chair, Wellesley; Gerard Cody, Lexington; Ruth Clay, Melrose, Reading and Wakefield; John McNally, Newton and Martin Fair, North Reading. Other members: Cristine Bongiorno, Arlington; Heidi Porter, Bedford; Stefan Russakow, Belmont; Patrick Maloney, Brookline; Christine Mathis, Burlington; Wendy Robinson, Cambridge; Anthony Kiszewski, PhD., Concord; TBD, Everett, Steven Ward, Framingham; Arnold Weinberg, MD, Lincoln; Christopher Webb, Malden; Kelly

Pawluczonek, Maynard; Robert Leupold, Sudbury; Thomas Creonte, Waltham; TBD, Watertown; Julia Junghanns, Wayland; Richard Sullivan, Weston and Jennifer Murphy, Winchester.

Please list the Supt./Director's name: David Henley

Please list the Supt./Director's contact phone number: 781-899-5730

Please list your Asst. Supt./Asst. Director's name: Michael Bryant

Do you have a website? Yes If yes, please list the web address here:
<http://sudbury.ma.us/services/health/emmcp/>

Please list your staffing levels for the year of this report:

Full time: 5

Part time: 1

Seasonal: 6

Other: (please describe)

Please break these down into the following areas:

Administrative staff: Superintendent and part-time Administrative Assistant

Field staff: Assistant Superintendent, Entomologist, Skilled Equipment Operator - Grade 1, Skilled Equipment Operator - Grade 2 and six full-time seasonal catchbasin applicators.

Please check off all that apply, and list employee name(s) next to each category:

Public relations David Henley

Information technology

Entomologist Douglas Bidlack, PhD.

Wetland Scientist

Biologist

Education

Laboratory

Operations Full-time: Michael Bryant, Christopher Gagnon and Michael Sweder.

Seasonal: Michael Ciommo, Jon Daigle, Stephen Feeney, Thomas Foti, Gregory Hegel and Cameron Kelley

Facilities David Henley and Michael Bryant

Other (please list)

For the year of this report, we maintained:

7 vehicles

modified wetland equipment (list type) Linkbelt 75 Spin Ace track mounted excavator

ULV sprayers (list type) 2 ULV sprayers - 1 Clarke Cougar Smartflow with radar

1 Clark Grizzly Smartflow with radar.

Larval control equipment (list type)
Other (please be specific):

Comments: _____

How many cities & towns in your service area? 26

Please list: Arlington, Bedford, Belmont, Brookline, Burlington, Cambridge, Concord, Everett, Framingham, Lexington, Lincoln, Malden, Maynard, Medford, Melrose, Newton, North Reading, Reading, Sudbury, Wakefield, Waltham, Watertown, Wayland, Wellesley, Weston and Winchester.

Any changes to your service area this year? Yes

Please list cities/towns added or removed A Memorandum of Agreement was signed to share administrative services with the Suffolk County Mosquito Control Project, which provides mosquito control services to Boston and Chelsea.

***Please attach a link to a map of your service area if possible.**

INTEGRATED PEST MANAGEMENT (IPM):

DEFINITION: a comprehensive strategy of pest control whose major objective is to achieve desired levels of pest control in an environmentally responsible manner by combining multiple pest control measures to reduce the need for reliance on chemical pesticides; more specifically, a combination of pest controls which addresses conditions that support pests and may include, but is not limited to, the use of monitoring techniques to determine immediate and ongoing need for pest control, increased sanitation, physical barrier methods, the use of natural pest enemies and a judicious use of lowest risk pesticides when necessary.

Please check off all of the services that you currently provide to your member cities and towns as part of your IPM program; details of these services are in the next sections.

- Larval mosquito control
- Adult mosquito control
- Source reduction
- Ditch maintenance
- Open Marsh Water Management
- Adult mosquito surveillance
- Education, Outreach & Public education
- Research
- Other (please list): On occasion the Project receives requests to review plans for stormwater runoff at developments planned adjacent to wetlands or for underground stormwater treatment devices.

Comments: _____

LARVAL MOSQUITO CONTROL:

Do you have a larval mosquito suppression program? Yes

If yes, please describe the purpose of this program: This program is focused on controlling larvae of spring and summer floodwater species and Culex 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 youth sports, recreation activities and outdoor maintenance projects. Summer floodwater species are controlled because they are aggressive mammal biting species and possible human vectors of EEE. Culex mosquitoes are controlled because they are considered enzootic and human vectors for West Nile Virus.

Please give the time frame for this program: Spring floodwater mosquito larvae are controlled from late March through May. Summer floodwater mosquito larvae are controlled from late May through early October. Culex mosquito larvae are controlled from late May through September.

Describe the areas that this program is used: Intermittently flooded wetlands, stormwater detentions basins, catchbasins, neglected swimming pools and other water holding containers.

Do you use:

Ground applied (includes hand, portable and/or backpack)

Helicopter applications

Other (please list):

Comments: _____

What products do you use in – (please use product name and EPA#)

Wetlands: VectoBac G - EPA #73049-10, VectoBac12AS - EPA #275-102, Altosid Pellets - EPA #2724-448.

Catch basins: Vectolex WSP - EPA #73049-20, Spheratax SPH WSP - EPA #84268-2, Altosid Pellets - EPA #2724-448, Altosid Pellets WSP - EPA #2724-448, Altosid XR Ingot Briquets - EPA #2724-421.

Containers: Spheratax SPH WSP - EPA #84268-2, Vectolex WSP - EPA #73049-20, Altosid Pellets - EPA #2724-448.

Other (please list):

Please list the rates of application for the areas listed above:

Wetlands: Vectobac G was applied by helicopter at a rate of 5 lbs. per acre. Vectobac 12 AS was applied by portable sprayers at rates of 8 oz. per acre and 12 oz. per acre. Altosid Pellets were applied at rates of 2.5 lbs per acre to 5 lbs. per acre.

Catch basins: Vectolex WSP, Spheratax SPH WSP and Altosid WSP were applied at a rate of one pouch per catchbasin. Altosid XR Ingot Briquets were applied at a rate of 1 briquet per catchbasin. Altosid Pellets were applied at a rate of 8 grams per catchbasin.

Containers: Vectolex WSP and Spheratax WSP were applied to neglected swimming pools at the rate of 1 pouch per 50 square feet. Altosid Pellets were applied to neglected swimming pools, rimless tires and other water holding containers at the rate of 2.5 lbs. per acre to 5 lbs. per acre.

Other:

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

- Larval dip counts – please list trigger for application: 3 larvae per 10 samples
- Historical records
- Best professional judgment

Comments: Larval control in wetlands is funded by 25 communities. Helicopter larval control applications are funded by 18 communities. Catchbasin larval control is funded by 22 communities. Larval control at neglected swimming pools is done in cooperation with municipal health departments. Altosid Pellets, Altosid Pellets WSP and Altosid XR Ingot Briquets are applied to catchbasins during the month of June as a pre-emergence treatment to control Culex larvae. Altosid Pellets, Altosid Pellets WSP, Altosid XR Ingot Briquets, Spheratax SPH WSP and Vectolex WSP were used to control Culex larvae in catchbasins in July, August and September.

***Please attach a link to maps of treatment areas if possible.**

ADULT MOSQUITO CONTROL:

Do you have an adult mosquito suppression program? Yes

If yes, please describe the purpose of this program: To reduce the number of mammal biting mosquitoes, EEE human bridge vector mosquitoes and secondary WNV human bridge vector species.

Please give the time frame for this program: June through September

Describe the areas that this program is used: Suburban residential neighborhoods with a relatively dense configuration of streets.

Do you use:

- Truck applications**
- Portable applications**
- Aerial applications**
- Other (please list):**

Comments: _____

Please list the names of the products used with EPA #:

- 1). Anvil 10 + 10, EPA #1021-1688-8329
- 2).
- 3).
- 4).
- 5).
- 6).

Please list your application rates for each product:

- 1). Anvil 10 + 10 ULV at .0024 lbs. per acre.
- 2).
- 3).
- 4).
- 5).
- 6).

Please describe the maximum amounts or frequency used in a particular time frame such as season and areas

In 2013 the maximum number of times that wide area adult mosquito control occurred in any neighborhood was five times. The shortest interval between applications was 12 days between spraying.

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

- Landing rates - please list trigger for application
- Light trap data - please list trigger for application 100-200 mammal biting mosquitoes.
- Complaint calls - please list trigger for application
- Arbovirus data
- Best professional judgment

Comments: Scheduling adult mosquito control applications is based on mosquito population data. Spraying in the vicinity of an EEE or West Nile Virus isolation or human case may be done if the community where the isolation occurs supports the application. Citizen requests for control are regarded as supplemental data that may influence the shape of the area, where control is scheduled.

***Please attach a link to maps of treatment areas if possible.**

SOURCE REDUCTION

Do you perform source reduction methods such as tire/container removal? Yes

If yes, please describe your program: During ditch maintenance activities, tires may be removed from work areas, if the municipality where the work is being done is willing to accept the tires and fund their disposal.

What time frame during the year is this method employed? October through March.

Comments: _____

DITCH MAINTENANCE

Do you have a ditch maintenance program? Yes

Please check all that apply:

- Inland/freshwater
- Saltmarsh

If yes, please describe: Ditch maintenance is done using either a LinkBelt 75 track mounted excavator or hand tools. When planning ditch maintenance activities, the protocols contained in the Massachusetts Best Management Practice and Guidance for Freshwater Mosquito Control are followed.

Please check off all that apply INLAND DITCH MAINTENANCE:

- Hand tools**
- Mechanized equipment**
- Other (please list):**

Comments: _____

Please check off all that apply SALTMARSH DITCH MAINTENANCE:

- Hand cleaning**
- Mechanized cleaning**
- Other (please list):**

Comments: _____

Please give an estimate of cumulative length of ditches maintained from the list above **INLAND:**

Hand cleaning 3,636'
Mechanized cleaning 2,746'
Other (please list):

Comments: _____

Please give an estimate of cumulative length of ditches maintained from the list above
SALTMARSH:

Hand cleaning

Mechanized cleaning

Other (please list):

What time frame during the year is this method employed? Most inland ditch maintenance work is done from October through March.

Comments: _____

***Please attach a link to maps of ditch maintenance areas if possible.**

MONITORING (Measures of Efficacy)

Please describe monitoring efforts for each of the following:

Aerial Larvicide – wetlands: Pre-application surveys were conducted at 98 sites. Post-application surveys were conducted at 42 sites. Arcview GIS maps of targeted wetlands are prepared prior to the application. Ag-Nav maps recorded during the application are reviewed to determine coverage.

Larvicide – catch basins: Pre-application larval surveys are done in June to determine the appropriate time to begin using *Bacillus sphaericus* products. Random pre-application and post-application larval surveys are undertaken during July, August and September. Random monitoring of paint marks on catchbasins left by applicators is conducted to evaluate coverage of treated areas.

Larvicide-hand/small area Pre-application surveys are conducted prior to all applications. Random post-application surveys are conducted.

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

Source Reduction:

Open Marsh Water Management:

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 aerial larval control pre-application larval dip counts are undertaken with a minimum of 30 dips per site. Random post application dip counts with a minimum of 30 dips at sites where monitoring occurs. In addition the applicator is supplied with ArcView GIS maps of targeted wetlands that are used in the applicator's AgNav systems. The**

AgNav maps recorded during the application are reviewed following the application to evaluate the coverage of treated areas.

At catchbasins, sampling using a Landers Ladle is conducted during the early summer to determine when the presence of Culex larvae becomes common. Two samples using a Landers ladle are taken at each sampled catchbasin.

Applicators are required to mark each catchbasin with water soluble marking paint, when they apply a larvicide. Monitoring of paint marks left on catchbasin grates by applicators 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 do a minimum of 10 dips and find a minimum of 3 larvae before a larvicide can be applied. Random post-application surveys are conducted by the Operations Manager.

Before adult mosquito control is scheduled, three to five CO₂ baited light traps are used to monitor mosquito populations in a community. A minimum of 100 to 200 mammal biting mosquitoes must be collected at a trap site before spraying will be scheduled in neighborhoods near a trap site. The variation in the minimum trap collection size to justify spraying is related to the normal mosquito collections found at a site. Trap collections below the minimum number result in a determination that spraying does not need to be scheduled in that neighborhood or re-scheduled if the neighborhood has recently been sprayed.

OPEN MARSH WATER MANAGEMENT

Do you have an OMWM program? No

If yes, please describe:

Please give an estimate of total square feet or acreage:

What time frame during the year is this method employed?

Comments: _____

***Please attach a link to maps of OMWM areas if possible.**

ADULT MOSQUITO SURVEILLANCE

Do you have an adult mosquito surveillance program? Yes

Please list the number (not location) of MDPH traps in your service area: MDPH did not use survey traps in the East Middlesex district in 2013.

Please check off all the types of surveillance that apply to your program:

- | | |
|---|---------------------------------|
| <input checked="" type="checkbox"/> Gravid traps | |
| <input type="checkbox"/> Resting boxes | |
| <input type="checkbox"/> CDC light traps | <input type="checkbox"/> Canopy |
| <input checked="" type="checkbox"/> CDC light traps w/CO ₂ | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> ABC light traps | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> ABC light traps w/CO ₂ | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> NJ light traps | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> NJ light traps w/CO ₂ | <input type="checkbox"/> Canopy |

Other (please describe):

Please describe the purpose of this program: The primary purpose is to measure populations of mammal biting mosquito species and populations of species considered enzootic or bridge vector species for West Nile Virus and EEE. The data is used to evaluate the need for control. As funding is available, collections of *Culex* species, *Cs. melanura*, *Cq. perturbans* and other potential human bridge vector species are submitted to DPH.

Do you maintain long-term trap sites in any of your areas? Yes

If yes, please describe how you chose these long-term sites. In most municipalities there are 3 to 5 trap sites. In municipalities with significant wetland acreage, light trap sites are located in yards that are in close proximity to major mosquito habitats for spring and summer floodwater mosquitoes, *Cq. perturbans* and *Cs. melanura*. In densely populated areas without significant wetland acreage, gravid trap sites are placed in yards or municipal properties with the goal of providing geographic spacing within the community. Light traps and gravid traps are also located near properties where people or horses are believed to have contracted EEE or West Nile Virus in the past.

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

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

Other (please list):

Do you participate in the MDPH Arboviral Surveillance program? Yes

How many pools did you submit this year? 314 pools

Please check off the arboviruses found in your area **this** year:

- West Nile Virus
 Eastern Equine Encephalitis
 Other Please list:

Did the above listed diseases cause human or horse illnesses? No

Please explain:

At what arbovirus risk level did the year begin in your area? (If more than one please list)

**WNV: All 26 communities started the year at low risk.
EEE: Framingham and Reading started the year at moderate risk, Concord, North Reading and Sudbury started the year at low risk. The remaining communities started the year at remote risk.**

At what arbovirus risk level did the year end in your area? (If more than one please list)

**WNV: Arlington, Bedford, Belmont, Brookline, Burlington, Cambridge, Concord, Everett, Lexington, Lincoln, Malden, Medford, Melrose, Newton, North Reading, Reading, Wakefield, Waltham, Watertown, Wellesley, Weston and Winchester finished the year at moderate risk. Framingham, Maynard, Sudbury and Wayland finished the year at low risk.
EEE: Framingham and Reading finished the year at moderate risk. Concord, North Reading and Sudbury finished the year at low risk. The remaining communities finished the year at remote risk.**

Comments: _____

***Please attach a link to maps of surveillance areas if possible.**

EDUCATION, OUTREACH & PUBLIC RELATIONS

Do you have an education/public outreach program? Yes

If yes, please describe: The 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.

Please check off all that apply:

- School based program
- Website
- PR brochures/handouts
- Community events
- Science fairs
- Meeting presentations
- Other (please describe): The Project sends out press releases to community and regional newspapers related to aerial Bti applications, ground based adult mosquito control applications, personal protection from mosquitoes and preventative actions that homeowners can take to reduce mosquito development on their property. Notices on the pesticide exclusion process and notices on ground based adult mosquito control are regularly posted on municipal websites. Memos and reports on mosquito control activities, local disease risk and other items of interest are sent to municipal officials from each participating community. Annual reports and appropriation requests that include schedules and costs of mosquito control services are sent to participating communities. The Superintendent upon request attends Board of Health and Conservation Commission meetings. Project representatives are periodically interviewed by newspaper, radio, television and local access cable reporters. A previously recorded episode of the PBS program, Curious George, that includes Project representatives describing mosquito biology to Newton elementary school students is periodically aired. The Project provided mosquito larvae and mosquito surveillance equipment to a Cambridge Health educator for use in at an outdoor community event.

Please give an estimate of attendance/participants in this program:

Please list some events you participated in for the year of this report: The Superintendent gave presentations on mosquitoes, mosquito borne diseases and mosquito control to the Waltham Rotary Club and to the Newton Medical Reserve Corps., the Superintendent gave presentations and/or answered questions at the Reading Board of Selectmen, Wayland Board of Health, a Wayland Board of Health hearing on adult mosquito control and a Winchester Board of Health meeting. The Assistant Superintendent answered questions at a meeting of the Medford Conservation Commission. The Superintendent did an interview for WCAC, Waltham local access television, which included filming various services provided by the Project. The Superintendent appeared in studio at Fox news to do a live interview.

What time frame during the year is this method employed? Throughout the year.

Have you performed any research projects, efficacy, bottle assays, etc.? Not at this time

If yes, please elaborate on your research projects:

Are you involved in any collaboration with academia, industry, environmental groups, etc.? Yes

If yes, please elaborate on your collaborations this past year: The Project provided information for a paper being done by a Northeastern University student

Please provide a list of technical reports, white/grey papers, publication in journal or trade magazines, etc.

Does your staff participate in educational opportunities? Yes

If yes, please list the training and education your staff received this year: Two employees attended the American Mosquito Control Association meeting, Five employees attended the Northeastern Mosquito Control Association meeting. Three employees attended the NMCA workshop for Field Workers. Four employees attended a beaver management workshop.

Please list the certifications and degrees held by your staff: Mike Bryant, Chris Gagnon, David Henley and Mike Sweder are Certified Pesticide Applicators. Mike Ciommo, Jon Daigle, Stephen Feeney, Thomas Foti, Greg Hegel and Cameron Kelley are Licensed Pesticide Applicators. Mike Sweder has a Hoist Operator's License. David Henley has a B.B.A. in Management, Mike Bryant has an A.B. in Turf Management, Doug Bidlack has a Ph.D. in Entomology, an M.S. in Entomology and Plant Pathology and a B.S. in Biological Sciences. Chris Gagnon has a B.S. in Wildlife Biology. Mike Sweder has a M.S. in Environmental Health and Safety and a B.S. in Entomology.

Comments: _____

BIOLOGICAL CONTROL EFFORTS

Do you have a biological control program? Yes

If yes, please describe: *Bacillus sphaericus* used to control *Culex* mosquitoes in catchbasins and neglected swimming pools is a live bacteria that recycles in water that supports *Culex* larvae.

Is this program the introduction of mosquito predators or the enhancement of habitat for native predators? no

Please check off all that apply:

Predatory fish

- Predatory invertebrates
- Other (please describe): Bacillus sphaericus

What time frame during the year is this method employed? July, August and September.

Comments: _____

INFORMATION TECHNOLOGY

Does your program use (check all that applies):

- Computers
- GIS mapping
- GPS equipment
- Computer databases
- Aerial Photography
- Other (please describe):

Please describe your capabilities in these areas: Databases are maintained on adult mosquito populations, mosquito habitats, larval mosquito surveys, pesticide usage and ditch maintenance. The Project is equipped with 2 desktop computers and 1 laptop computer. The Project uses aerial photography of the district with delineated wetlands as a layer in our ArcView GIS software. GIS aerial photos are used to identify property owners when planning ditch maintenance activities and to confirm the location of endangered species habitats and pesticide exclusions. Shape files are provided to the helicopter contractor, which uses the files in an AgNav system to guide aerial larval control applications over targeted wetlands.

Please describe your current GIS abilities: Intermediate

Give details if possible on your GIS abilities: ArcView GIS is used in our wetland database, helicopter larval control program and our wetlands management program.

Please describe any changes/enhancements in this area from the previous year: A new employee hired by the Suffolk County Mosquito Control Project with previous GIS experience has been working with the East Middlesex staff to expand our capabilities with the ArcView software.

Comments: _____

REVENUES & EXPENDITURES

Please give a concise statement of revenues & expenditures for the prior fiscal year ending June 30.

FY 2013 regular and supplemental appropriations received: \$652,551.04

FY 2013 expenditures: \$634,842.60

List each **member municipality along with the corresponding (cherry sheet) funding assessment** dollar amount for the prior fiscal year.

The following are the regular appropriations from the communities participating in the East Middlesex MCP: Arlington - \$5,850, Bedford - \$37,005, Belmont - \$16,080, Brookline - \$12,047, Burlington - \$39,639, Cambridge - \$19,521, Concord - \$20,000, Everett - \$11,000, Framingham - \$49,020, Lexington - \$24,164, Lincoln - \$10,300, Malden - \$18,807, Maynard - \$13,050, Medford - \$22,255, Melrose - \$11,542, Newton - \$39,731, North Reading - \$45,690, Reading - \$26,000, Sudbury - \$45,870, Wakefield - \$17,420, Waltham - \$31,238, Watertown - \$13,348, Wayland - \$21,848, Wellesley - \$18,663, Weston - \$36,938 and Winchester - \$15,000.

Comments: _____

PESTICIDE USAGE

Please total your pesticide usage with information from your Mass. Pesticide Use Report, WNV Larvicide Use records and contracted pesticide applications. Applications methods include; hand/backpack, aerial, ULV, mistblower, other (please explain)

Product Name: Altosid Pellets
EPA Reg. #: 2724-448
Application method: hand applied
Targeted life stage: Larvae/pupae
Total amount of concentrate applied: 226 lbs.
Comments: _____

Product Name: Altosid Pellets WSP
EPA Reg. #: 2724-448
Application method: hand applied
Targeted life stage: Larvae/pupae
Total amount of concentrate applied: 147 lbs.
Comments: _____

Product Name: Altosid Ingot XR Briquets
EPA Reg. #: 2724-421
Application method: hand applied
Targeted life stage: Larvae/pupae
Total amount of concentrate applied: 412 lbs.
Comments: _____

Product Name: Spheratax SPH WSP
EPA Reg. #: 84268-2

Application method: hand applied
Targeted life stage: Larvae
Total amount of concentrate applied: 968 lbs.
Comments: _____

Product Name: Vectobac 12AS
EPA Reg. #: 275-102
Application method: portable sprayer
Targeted life stage: Larvae
Total amount of concentrate applied: 24 gals.
Comments: _____

Product Name: Vectobac G
EPA Reg. #: 73049-10
Application method: helicopter
Targeted life stage: Larvae
Total amount of concentrate applied: 12,180 lbs.
Comments: _____

Product Name: Vectolex WSP
EPA Reg. #: 73049-2
Application method: hand applied
Targeted life stage: Larvae
Total amount of concentrate applied: 7 lbs.
Comments: _____

Product Name: Anvil 10 + 10
EPA Reg. #: 1021-1688-8329
Application method: truck mounted aerosol sprayer
Targeted life stage: Adult
Total amount of concentrate applied: 103 gals.
Comments: _____

Product Name:
EPA Reg. #:
Application method:
Targeted life stage: Choose one
Total amount of concentrate applied:
Comments: _____

LARGE AREA EXCLUSIONS

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. Great Meadows National Wildlife Refuge and the Assabet River National Wildlife Refuge manage large tracts of wetland acreage in Bedford, Concord, Lincoln, Maynard, Sudbury and Wayland that is excluded from larval and adult mosquito control pesticide applications. The only exception occurs when the Refuge Manager determines that there is an imminent risk from mosquito borne disease and issues a permit. The Sudbury Valley Trustees, a private land trust that owns wetlands in Concord, Framingham, Sudbury and Wayland, has excluded their property from pesticide exclusions.

Assabet River National Wildlife Refuge, topo map: www.farnwr.org/maps1.html

Great Meadows National Wildlife Refuge map:

http://www.fws.gov/refuge/great_meadows/map.html

Sudbury Valley Trustees trail maps: <http://www.sudburyvalleytrustees.org/maps>

SPECIAL PROJECTS

Do you perform any inspectional services such as inspections at sewage treatment facilities or review sub division plans? Yes

If yes, please elaborate Periodically municipal officials will request that plans for sub division stormwater runoff be reviewed to determine the likely impact on mosquito development.

Do you work with DPW departments or other local or state officials to address stormwater systems, clogged culverts or other areas that you have identified as man-made mosquito problem areas? Yes

If yes, please elaborate: Municipal officials have requested that we identify and remove excess sedimentation and debris that is obstructing ditches and culverts.

Have you worked with these departments on long term solutions? Yes

If yes, please elaborate: Reviewing site plans for subdivisions and developments have provided long term solutions.

Did you conduct or participate in any cooperative research or restoration projects? No

If yes, please elaborate:

Did you or participate in any **State/Regional/National workgroups or panels or attend any meeting pertaining to the above?** Please choose one

If yes, please elaborate:

CHILDREN AND FAMILIES PROTECTION ACT

Is your program impacted by the Children and Families Protection Act? Yes

If yes, please explain: Per the provisions of the Act, the Project excludes schools, day care centers and school age child care programs from adult mosquito control pesticide applications unless the pre-requisites for spraying are fulfilled.

If you have data on compliance with this Act and your program, please list here:

If you had difficulties with implementation of your program due to this law, please elaborate here:

Comments:

NPDES SECTION

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

If yes please list any corrective actions here: _____

GENERAL COMMENTS

Please list any comments not covered in this report: _____