

MASSACHUSETTS MOSQUITO CONTROL ANNUAL OPERATIONS REPORT



2009 Year of Report

Date of Report: 1/21/2010

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

Address: 11 Sun St.

City/Town: Waltham

Zip: 02453-4101

Phone: 781-899-5730

Fax: 781-647-4988

E-mail: emmcp.ma@verizon.net

Report prepared by: *David Henley*

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 program 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: Lenny Izzo, Chair, Wellesley; Gerard Cody, Lexington; Jennifer Murphy, Winchester; Christopher Webb, Malden; Arnold Weinberg, M.D., Lincoln. Other Members: Christine Connolly Sharkey, Arlington; John Zupkus, Bedford; Donna Moultrup, Belmont; Patrick Maloney, Brookline; Heidi Porter, Burlington; Wendy Robinson, Cambridge; Anthony Kiszewski, Ph.D., Concord; Ethan Mascoop, Framingham; Kevin Sweet, Maynard; Karen Rose, Medford; Ruth Clay, Melrose and Wakefield; John McNally, Newton; Martin Fair, North Reading; Larry Ramdin, Reading; Robert Leupold, Sudbury; Thomas Creonte, Waltham; Steven Calichman, Wayland; Richard Sullivan, Weston.

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://www.town.sudbury.ma.us/services/health/emmcop>

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 6 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
- Wetland Scientist
- Biologist
- Education
- Laboratory
- Operations Full time: Michael Bryant, Christopher Gagnon and Michael Sweder.
Seasonal: Timothy Deschamps, Jr., Stephen Feeney, Charles King, Mathew McKillop, Corey Stenquist and Anthony Viola.
- Facilities David Henley and Michael Bryant
- Other (please list) Administrative: Lorna Rabbitt

For the year of this report, we maintained:

7 vehicles
1 modified wetland equipment (list type) Link Belt 75 track mounted excavator
ULV sprayers (list type) 1 Clarke Cougar Smartflow with radar and datamaster
11, 1 Clarke Grizzly Smartflow with radar and 2 Leco ULVs with CVs.
Larval control equipment (list type)
Other (please be specific):

Comments: In 2009 the Clarke Grizzly was modified to include Smartflow with radar.

How many cities & towns in your service area? 25

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

***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): Review of plans for stormwater runoff structures

Comments: On occasion the Project receives requests to review plans for stormwater runoff at developments planned adjacent to wetlands or for underground stormwater treatment devices.

LARVAL MOSQUITO CONTROL:

Do you have a larval mosquito suppression program? Yes

If yes, please describe the purpose of this program: Culex larvae in catchbasins, neglected swimming pools and other water holding containers are controlled to reduce the number of West Nile virus vector mosquitoes. Spring and summer floodwater mosquitoes are controlled to reduce the number of mammal biting mosquitoes and to reduce populations of potential human vectors for EEE.

Please give the time frame for this program: Culex larval control is done from June through early September. Spring floodwater mosquito larvae are controlled in April and May. Summer floodwater mosquito larvae are controlled from June through September.

Describe the areas that this program is used: Catchbasins, neglected swimming pools and intermittently flooded wetlands.

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, Vectobac 12AS - EPA #275-102 and Altosid WSP - EPA#2724-448.

Catch basins: Vectolex WSP - EPA #73049-20, Altosid WSP -EPA #2724-448 and Altosid Ingot XR Briquets - EPA #2724-421.

Containers: Vectolex WSP - EPA #73049-20, Altosid WSP - EPA #2724-448 and Vectobac 12AS-EPA #275-102

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 12AS was applied by portable sprayer at rates of 8 oz. of Bti per acre and 12 oz. of Bti per acre.

Catch basins: Vectolex WSP and Altosid WSP were applied to catchbasins at the rate of 1 packet per catchbasin. Altosid Ingot XR Briquets were applied at the rate of 1 XR Briquet per catchbasin.

Containers: Vectolex WSP was applied to neglected swimming pools at the rate of 1 pouch per 50 square feet of surface area. Altosid WSP is applied at 1 packet per 135 sq. ft. of surface area. Vectobac 12AS at 8 oz. per acre is used in water holding rimless tires.

Other:

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

Larval dip counts – please list trigger for application: one larvae per ten dips.

- Historical records
- Best professional judgment

Comments: Larval control in wetlands is funded by 24 communities. Catchbasin larval control is funded by 19 communities. Larval control in neglected swimming pools is done in cooperation with municipal health departments. Altosid WSP and Altosid Ingot XR Briquets are applied to catchbasins during the month of June as a pre-emergence treatment. All larval control in wetlands requires that larval dip counts be used to trigger larval control applications.

***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, EEE human vector or secondary WNV vector mosquitoes.

Please give the time frame for this program: Early June through the end of August

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: The adult mosquito control program using Anvil 10 + 10 is funded by 9 communities. Suspend SC was used in the Town of Reading as a residual spray that was applied to the vegetated perimeter areas surrounding athletic fields during an EEE risk period in September.

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

- 1). Anvil 10 + 10 ULV, EPA #1021-1688-8329
- 2). Suspend SC, EPA #432-763
- 3).
- 4).
- 5).
- 6).

Please list your application rates for each product:

- 1). Anvil 10 + 10 ULV is applied at .0024 lbs. per acre.

- 2). Suspend SC is applied in a dilution rate of 1 fl. oz. per gal. of water.
- 3).
- 4).
- 5).
- 6).

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

In 2009 the maximum number of times that wide area adult mosquito control occurred in any neighborhood was five applications. In 2009 applications were scheduled with a minimum of two weeks between applications.

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 A minimum of 100 - 200 mammal biting mosquitoes in a light trap depending on the average collection at each site.
- Complaint calls - please list trigger for application
- Arbovirus data
- Best professional judgment

Comments: Scheduling adult mosquito control applications is based on mosquito population data. Citizen complaints are regarded as supplemental data that may influence the shape of the area in the vicinity of the light trap site.

***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, if the local DPW is providing assistance, Project staff may remove tires from the area.

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:

Please check off all that apply INLAND DITCH MAINTENANCE:

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

Comments: Ditch maintenance is done using either a LinkBelt 75 track mounted excavator or with hand tools. The Project has been using the draft Best Management Practices when planning excavator work in freshwater wetlands.

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 2,830 linear feet
Mechanized cleaning 2,303 linear feet
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 ditch maintenance activities are accomplished between October 1 and March 30.

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: The Project conducted pre-application surveys at 98 sites with a minimum of 30 samples at each site. Post-application surveys were conducted at 18 sites with a minimum of 30 samples at each site. The post application surveys indicated that the application reduced larval populations by 93%.

Larvicide – catch basins:

Larvicide-hand/small area A minimum of 10 pre-application samples are required at each site. A minimum of 1 larvae per 10 dips is required before treatment can occur. Random post application surveys are conducted by the Assistant Superintendent.

Ground ULV Adulticide: Three to five light trap sites are monitored in each of the 9 cities and towns that fund ground ULV adulticide. There is a minimum of 100 - 200 mammal biting mosquitoes that must be collected at a trap site before spraying can be scheduled in the section of town near that trap site. The variation in trap collection sizes is related to the average population at each site. Trap collections below the minimum size result in a determination that spraying does not need to be scheduled.

Source Reduction:

Open Marsh Water Management:

Other (please list): Regarding catchbasin larviciding, sampling during June is done to determine the appropriate time when Vectolex can be used. Random pre and post application surveys of catchbasins are done in July and August. When applying larvicides to catchbasins, field personnel are required to mark the catchbasin cover with a spot of paint from a line marker paint sprayer. Random surveys are done by the Assistant Superintendent to verify that catchbasin larviciding is complete.

Provide or list standard steps, criterion, or protocols regarding the documentation of efficacy, (pre and post data) and resistance testing (if any):

OPEN MARSH WATER MANAGEMENT

Do you have an OMWM program? Choose one

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 maintains 3 gravid trap sites within our district.

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 purpose is to measure mammal biting populations and EEE and West Nile virus vector populations. The data is used to evaluate the need for control. When funding is available Culex collections are submitted to DPH to be tested for West Nile virus. During the likely EEE risk period, large collections of Cs. melanura are submitted for testing.

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 - 5 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 located 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 or residents or horses who contracted EEE or West Nile virus.

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 do you submit weekly on average? The EMMCP submitted a total of 63 pools during August and September. For those months, approximately 8 pools were submitted each week.

Please check off the arboviruses found in your area in the past 5 years:

- West Nile Virus
 Eastern Equine Encephalitis
 Other Please list:

Did the above listed diseases cause human or horse illnesses? Yes

Please explain: In the past 5 years, there have been 8 human WNV cases and 1 EEE horse case. The following provides the breakdown of cases by year and by community.
 2009 - No human or horse cases.
 2008 - 1 WNV case in Cambridge.
 2007 - 2 WNV cases in Arlington and Medford.
 2006 - 1 WNV case in Arlington.
 2005 - 4 WNV cases including 1 in Cambridge, 2 in Newton and 1 in Watertown. One EEE horse case occurred in Concord.

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

WNV: Arlington, Belmont, Brookline and Watertown began the year at a moderate risk level. The remainder of the district began the year at a low risk level.

EEE: The entire district was classified as remote risk at the start of the year.

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

WNV: Arlington, Belmont, Brookline and Watertown finished the year at a moderate risk level. The remainder of the district finished the year at a low risk level.

EEE: North Reading, Reading and Sudbury were classified as low risk at the end of the year. The remainder of the district was classified as remote risk.

What time frame during the year is this method employed?

Comments: _____

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

EDUCATION, OUTREACH & PUBLIC RELATIONS

Do you have an education/public outreach program program? Yes

If yes, please describe: The Project's public education program is designed to develop awareness within the public and the 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 borned 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 of each participating community. Annual reports and appropriation requests that include schedules and costs of mosquito control services are sent to participating communities. The Superintendent attends municipal meetings of Boards of Health, Finance Committees and Conservation Commissions upon request. 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.

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

Please list some events you participated in for the year of this report: David Henley provided information at a Harvard University Public Health Entomology class field trip that visited various mosquito habitats within the East Middlesex area. Contributed to presentations given to girl scouts in Concord and Melrose. Provided information and updates to Brookline municipal workers involved in the catchbasin larviciding program. Provided data and information on mosquitoes to a Colby student/ Newton resident and to a Marblehead resident for papers that they were writing. The EMMCP staff participated in a televised report that was done by the Waltham local access TV. Made a presentation on Newton local access TV on the Mayor's weekly program.

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

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: Participated in a meeting of the Aquatic Habitat Restoration Task Force. Contributed to the organization of a meeting between participants in aquatic habitat restoration and mosquito control project staffs to discuss common goals. Several staff members attended a meeting of mosquito control wetlands management specialists.

Please provide a list of technical reports, white/grey papers, publication in journal or trade magazines, etc. The Project provided information to Sam Telford who is the contractor responding to the requirements of the Special Review Procedure that were mandated by Ian Bowles, Secretary of Energy and Environmental Affairs. The Project submitted information to the SRB, to fulfill informational requests from the EPA related to developing requirements for a NPDES permit.

Does your staff participate in educational opportunities? Yes

If yes, please list the training and education your staff received this year: Five employees attended the Northeastern Mosquito Control Association (NMCA) meeting. Four workers attended the NMCA workshop for field workers with 3 employees receiving certificates for a Stihl chainsaw training session. Doug Bidlack attended a Arcview GIS software training session held by E.S.R.I. Two workers participated in an

AMCA Webinair on Integrated Mosquito Management. Three workers attended a Clarke mosquito control workshop that included a presentation on Northeast Vector-borne Diseases and Personal Protection Techniques. Three workers attended a meeting to identify common goals with aquatic habitat restoration participants.

Please list the certifications and degrees held by your staff: Mike Bryant, Chris Gagnon, David Henley and Mike Sweder are Certified Pesticide Applicators. Chris Gagnon and Mike Sweder have Hoist Operators Licenses. 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 an M.S in Environmental Health and Safety and a B.S. in Entomology.

Comments: In June 2009, David Henley received the Vic Karaian Award from the Massachusetts Environmental Health Association in recognition of an outstanding contribution to and support of the practice of Environmental Health.

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 and August

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. GPS equipment is used on one of the aerosol sprayers to record time, location and rate of spraying. The Project is equipped with 2 desktop and 1 laptop computers. The Project uses aerial photography of the district with delineated wetlands as a layer in our Arcview software. Our helicopter contractor, JBI Helicopters, uses Ag-Nav swath guidance equipment to record swath data during larviciding applications.

Please describe your current GIS abilities: Intermediate

Give details if possible on your GIS abilities: Arcview 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:

Comments: _____

REVENUES & EXPENDITURES

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

FY 2009 regular and supplemental appropriations received: \$648,444.06

FY 2009 expenditures: \$630,928.77

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

Comments: The following are the regular FY 2009 appropriations from the communities participating in the East Middlesex MCP: Arlington - \$5,800, Bedford - \$32,673, Belmont - \$15,157, Brookline - \$11,763.60, Burlington - \$38,673, Cambridge - \$10,588, Concord - \$18,500, Framingham - \$50,680, Lexington - \$22,000, Lincoln - \$10,000, Malden - \$18,807, Maynard - \$12,500, Medford - \$21,790, Melrose - \$12,542, Newton - \$16,231, North Reading - \$41,539, Reading - \$26,000,

Sudbury - \$45,415, Wakefield - \$19,355, Waltham - \$28,716, Watertown - \$11,990, Wayland - \$20,400, Wellesley - \$18,388, Weston - \$34,639 and Winchester - \$8,000.

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: Vectobac G
EPA Reg. #: 73049-10
Application method: aerial
Targeted life stage: Larvae
Total amount of concentrate applied: 13,120 lbs.
Comments: _____

Product Name: Vectobac 12AS
EPA Reg. #: 275-102
Application method: portable hand held sprayer
Targeted life stage: Larvae
Total amount of concentrate applied: 25 gallons
Comments: _____

Product Name: Altosid WSP
EPA Reg. #: 2724-448
Application method: hand applied
Targeted life stage: Larvae/pupae
Total amount of concentrate applied: 332 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: 422 lbs
Comments: _____

Product Name: Vectolex WSP
EPA Reg. #: 73049-20
Application method: hand applied
Targeted life stage: Larvae
Total amount of concentrate applied: 685 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: 123 gallons
Comments: _____

Product Name: Suspend SC
EPA Reg. #: 432-763
Application method: truck mounted mist sprayer
Targeted life stage: Adult
Total amount of concentrate applied: 8 fl. oz.
Comments: _____

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

Assabet River National Wildlife Refuge map:
<http://www.fws.gov/northeast/assabetriver/pdf/may07maphandout.pdf>
Great Meadows National Wildlife Refuge map:
<http://www.fws.gov/northeast/greatmeadows/greatmeadows.pdf>
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 site plans for a subdivision or other proposed development be reviewed for the purpose of mitigating the development of new mosquito habitats. Sewage treatment facilities have been inspected to determine whether mosquitoes are developing on their properties.

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 excessive sedimentation 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 some long term solutions.

Did you conduct or participate in any cooperative research or restoration projects?

If yes, please elaborate:

Did you or participate on any **State/Regional/National workgroups or panels or attend any meeting pertaining to the above?**

If yes, please elaborate: As part of the Northeastern Mosquito Control Association program committee, David Henley participated in identifying speakers and bringing them to the annual conference to present information on stormwater structures and mosquito control.

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 prerequisites for spraying are fulfilled.

If you have data on compliance with this Act and your program, please list here: In September 2009, Austin Prep in Reading fulfilled the requirements of the Act and a perimeter spray of Suspend SC was done at their athletic fields.

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

Comments:

GENERAL COMMENTS

Please list any comments not covered in this report: _____