

**MASSACHUSETTS MOSQUITO CONTROL
ANNUAL OPERATIONS REPORT**



2014 Year of Report

Date of Report: 1/22/2015

Project/District Name: **Suffolk County Mosquito Control Project**

Address: 11 Sun St.

City/Town: Waltham

Zip: 02453

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Report prepared by: David Henley and Brian Farless

NPDES permit no. **MAG87A041**

If you have a mission statement, please include it here: The Suffolk County Mosquito Commission (the Commission) represents the interests of Boston, Chelsea, and their residents in providing guidance and oversight to the Suffolk County Mosquito Control Project (the Project). The Commission strives to ensure that the member communities receive services that are consistent with applicable law 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:

Christopher Busch, Jennifer Evans, DVM and Kaitlyn Hennigan.

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: Brian Farless, Field Supervisor

Do you have a website? Yes If yes, please list the web address here:
<http://scmcp.webs.com/>

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

Full time: 3

Part time: 1

Seasonal: 3

Other: (please describe)

Please break these down into the following areas:

Administrative staff: Full-time Superintendent; part-time Clerk

Field staff: Full-time Field Supervisor; full-time Field Technician; three full-time seasonal Field Technicians

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

Public relations David Henley

Information technology

Entomologist

Wetland Scientist

Biologist

Education

Laboratory

Operations Full Time: Brian Farless, Michael Radley. Seasonal: Nathaniel Grondin, Brendan Riske, Connor Delaney

Facilities David Henley, Brian Farless

Other (please list) Clerk: Lorna Rabbit

For the year of this report, we maintained:

3 vehicles

0 modified wetland equipment (list type)

2 ULV sprayers (list type) 1 handheld ULV sprayer; 1 Clarke Cougar Smartflow with radar

5 Larval control equipment (list type) Solo backpack sprayer

Other (please be specific): Stihl backpack mistblower

Comments: _____

How many cities & towns in your service area? 2

Please list: Boston, Chelsea

Any changes to your service area this year? No

Please list cities/towns added or removed

***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):

Comments: _____

LARVAL MOSQUITO CONTROL:

Do you have a larval mosquito suppression program? Yes

If yes, please describe the purpose of this program: This program 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.

The Project worked collaboratively with the Boston Public Health Commission to distribute larvicides for use in catchbasins to municipal departments and large property managers in Boston including the Boston

Housing Authority, the Franklin Park Zoo, Boston University, Harvard University and Tufts University.

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 September. Culex mosquito larvae are controlled from June 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 and VectoBac 12AS - EPA #275-102

Catch basins: Vectolex WSP - EPA #73049-20, Spheratax SPH WSP - EPA #84268-2, Altosid Pellets WSP - EPA #2724-448, Altosid XR Ingot Briquets, - EPA #2724-421, Fourstar 90-Day Briquets - EPA #83362-3

Containers: Spheratax SPH WSP - EPA #84268-2, Vectolex WSP - EPA #73049-20

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 16 oz. 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, and Fourstar 90-Day Briquets were applied at a rate of 1 briquet per catchbasin.

Containers: Spheratax SPH WSP, Vectolex WSP, and Altosid WSP were applied to neglected cantainers that couldn't be dumped.

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: 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 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. Also on Long Island which hosts camps throughout the summer for children, has a homeless shelter, a juvenile detention center, a rehab clinic, Public Health Department offices.

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). Suspend SC, EPA #432-763
- 3). Mavrik Perimeter, EPA #2724-478
- 4).
- 5).
- 6).

Please list your application rates for each product:

- 1). Anvil 10 + 10 ULV is applied at 0.0012 lbs. per acre and 0.0024 lbs. per acre.
- 2). Suspend SC is mixed at 0.8 fl. oz per gal. of water and applied at rate of 1 gal. finished spray per 1,000 sq. ft.
- 3). Mavrik Perimeter is mixed at 0.1 fl. oz. per gal. of water and applied at a rate of 1 gal. finished spray per 1,000 sq. ft.
- 4).

- 5).
- 6).

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

In 2014 the maximum number of times that wide area adult mosquito control occurred in any area was three times. The shortest interval between applications was 14 days.

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

- Landing rates - please list trigger for application 1 mosquito per minute
- 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. 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.

What time frame during the year is this method employed? September 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 hand tools and the East Middlesex Mosquito Control Project's LinkBelt 75 track mounted excavator to remove obstructions and restore water flow. The planning process for using an excavator involve 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 3050'
Mechanized cleaning 232'
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 September 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 2 sites. Post-application surveys were conducted at 2 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 a larvicide was applied. 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 carried out.

Before adult mosquito control is scheduled, CO₂ baited light traps are used to monitor mosquito populations in the neighborhood. A minimum of 100 to 200 mammal biting mosquitoes must be collected at a trap site before spraying will be scheduled in that neighborhood. 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:

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): BG-Sentinel were used to monitor for Aedes albopictus.

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. Collections of Culex species, Cs. melanura and other potential human bridge vector species are submitted to DPH to be tested for West Nile Virus and EEE. The BG-Sentinel trap is used primarily to trap Aedes albopictus.

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

If yes, please describe how you chose these long-term sites. If yes, please describe how you chose these long-term sites. Light trap sites are located in close proximity to major mosquito habitats for spring and summer floodwater mosquitoes and *Cq. perturbans*. Gravid trap sites are placed with the goal of providing geographic spacing within Boston and Chelsea.

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

- | | |
|--|---|
| <input checked="" 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 type="checkbox"/> <i>Oc. punctor</i> |
| <input checked="" type="checkbox"/> <i>Cq. perturbans</i> | <input checked="" 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? Trapping was done over 17 weeks. The Project submitted 127 pools between 6/29/14 and 10/4/14. Over that time span an average of 9.07 pools were submitted per 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 2012 there were 6 residents that contracted WNV. In 2011 there were 2 residents that contracted WNV.

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

WNV: Boston and Chelsea began the year with a low risk of WNV.
EEE: Boston and Chelsea began the year with a remote risk of EEE

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

WNV: Boston and Chelsea finished the year with a moderate risk for WNV
EEE: Boston and Chelsea finished the year with a remote risk for EEE.

What time frame during the year is this method employed? Monitoring mosquito populations using co2 baited light traps typically begins in late May and continues through September. Monitoring using gravid traps typically begins in late June and continues through September. Sending mosquito specimens to the State Lab begins in late June and continues through September.

Comments: Following the collection of a single Aedes albopictus from a gravid trap in September 2014, the Project began using a BG sentinel trap in an effort to determine the extent of the Aedes albopictus population in Boston and Chelsea.

***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, mosquito borne diseases and mosquito management pesticides. The Project and the Boston Public Health Commission have agreed upon a protocol to notify the public in advance of helicopter larval control applications of Bti to wetlands and neighborhood truck mounted aerosol applications of Anvil to control adult mosquitoes. The Project also provided assistance to the Boston Public Health Commission Outreach coordinator at community events and developing Outreach material.

Please check off all that apply:

- School based program
- Website
- PR brochures/handouts
- Community events
- Science fairs
- Meeting presentations
- Other (please describe): Public notification procedures prior to helicopter applications of Bti to wetland areas and neighborhood truck mounted aerosol applications of Anvil to control mosquitoes.

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 gave a presentation on the Project's program at a meeting of the Chelsea Board of Health and at a meeting of the Boston Conservation Commission. A Project representative participated in an informational booth organized by the Outreach Specialist for the Boston Public Health Commission at outdoor community movie nights in Mattapan and West Roxbury and at an outdoor concert in Roslindale.

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.? Please select

If yes, please elaborate on your collaborations this past year:

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: Three employees attended the Northeastern Mosquito Control Association meeting. Two employees attended the NMCA workshop for Field Workers. Three employees attended a CommBUYS workshop. Two employees attended the following classes offered through PACE (Performance and Career Enhancement): Effective Business Writing Skills, Facilitation Skills, Time Management, Goal Setting Techniques. One employee attended the following classes offered through PACE: Supervisory Skills, Team Building.

Please list the certifications and degrees held by your staff: David Henley is a Certified Pesticide Applicator. Brian Farless, Michael Radley, Nathaniel Grondin, Brendan Riske, and Connor Delaney are Licensed Pesticide Applicators. David Henley has a B.B.A. in Management. Brian Farless has a B.S. in Communication. Michael Radley has a B.S. in Resources Economics. Nathaniel Grondin has a B.S. in Environmental Science. Brendan Riske has a B.A. in International/Global Studies.

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 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 - 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 and pesticide usage. The Project is equipped with 1 desktop computer. The Project collaborates with the East Middlesex MCP to use aerial photography of the district with delineated wetlands as a layer in our ArcView GIS software. GIS aerial photos are used 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 the helicopter larval control program.

Please describe any changes/enhancements in this area from the previous year: The

Field Supervisor has been working collaboratively with East Middlesex MCP staff to expand the GIS capabilities using ArcView software. The Project purchased a ArcView software and a computer capable of running the program.

Comments: _____

REVENUES & EXPENDITURES

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

FY 2014 assessments: \$265,272

FY 2014 expenditures: \$201,602.96

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

Comments: **Boston: \$255,252, Chelsea: 10,020**

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 WSP

EPA Reg. #: 2724-448

Application method: hand applied

Targeted life stage: Larvae

Total amount of concentrate applied: 80.05 lbs.

Comments: _____

Product Name: Altosid XR Ingot Briquets

EPA Reg. #: 2724-421

Application method: hand applied

Targeted life stage: Larvae

Total amount of concentrate applied: 140.76 lbs.

Comments: _____

Product Name: Spheratax SPH WSP

EPA Reg. #: 84268-2

Application method: hand applied

Targeted life stage: Larvae

Total amount of concentrate applied: 211.31 lbs.

Comments: _____

Product Name: Vectolex WSP
EPA Reg. #: 73049-2
Application method: hand applied
Targeted life stage: Larvae
Total amount of concentrate applied: 329.44 lbs.
Comments: _____

Product Name: Fourstar 90-day Briquet
EPA Reg. #: 83362-3
Application method: hand applied
Targeted life stage: Larvae
Total amount of concentrate applied: 54.57 lbs.
Comments: _____

Product Name: Vectobac G
EPA Reg. #: 73049-10
Application method: helicopter
Targeted life stage: Larvae
Total amount of concentrate applied: 312.5 lbs.
Comments: _____

Product Name: Vectobac 12AS
EPA Reg. #: 275-102
Application method: portable sprayer
Targeted life stage: Larvae
Total amount of concentrate applied: 10.82 gal.
Comments: _____

Product Name: Mavrik Perimeter
EPA Reg. #: 2724-478
Application method: backpack mistblower
Targeted life stage: Adult
Total amount of concentrate applied: 2 oz.
Comments: _____

Product Name: Suspend SC
EPA Reg. #: 432-763
Application method: backpack mistblower
Targeted life stage: Adult
Total amount of concentrate applied: 26 oz.
Comments: Ran out of room but also used product Anvil 10 + 10. EPA Reg. #1021-1688-8329. Application method: truck mounted aerosol sprayer. Targeted life stage: adult. Total amount of concentrate applied: 6.65 gal.

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. The Project does not spray dirt roads in priority habitats in the Stony Brook Reservation in Hyde Park and in the area adjacent to Gethsemane Cemetery in West Roxbury.

SPECIAL PROJECTS

Do you perform any inspectional services such as inspections at sewage treatment facilities or review sub division plans? No

If yes, please elaborate

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: The Project opened up blocked culverts in the Stony Brook Reservation in Hyde Park with an excavator. Planning with DCR was done prior to the work.

Have you worked with these departments on long term solutions? No

If yes, please elaborate:

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:

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?
Please check one

If yes please list any corrective actions here: _____

GENERAL COMMENTS

Please list any comments not covered in this report: _____