MASSACHUSETTS MOSQUITO CONTROL

ANNUAL OPERATIONS REPORT

Year Report Covers: 2016 Date of Report:

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

Address: 39 Industrial Dr.

City/Town: Boston Zip: 02136

Phone: 781-899-5730 Fax: 781-647-4988

E-mail: emmcp.ma@verizon.net

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 Control 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:

Commissioner names:

Cristopher Busch _____
Julien Farland _____
Kaitlyn Hennigan
Sam Lipson _____

Superintendent/Director name: David Henley, Superintendent
Superintendent/Director contact phone number: 781-899-5730
Asst. Superintendent/Director name: Brian Farless, Assistant Superintendent

District/Project website: http://scmcp.webs.com
Twitter handle: @

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

Staffing levels for the year of this report:
Full time: 4
Part time: 1
Seasonal: 3
Other: one part-time employee retired in July and one full-time employee was hired in December (please describe)

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

☒ Administrative David Henley, Lorna Rabbitt, Katherine Swan
☐ Biologist
☐ Educator
☐ Entomologist
☒ Facilities David Henley, Brian Farless
☐ Information technology
☐ Laboratory
☒ Operations Brian Farless, Michael Radley. Seasonal: Connor Delaney, Brendan Riske, Kelly Palmer
☒ Public relations David Henley, Brian Farless
☐ Wetland scientist
☐ Other (please describe)

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

0 Modified wetland equipment (list type)
5 Larval control equipment (list type) Solo backpack sprayer
2 ULV sprayers (list type) 1 handheld ULV sprayer, 1 Clarke Smartflow with radar
3 Vehicles
Other (please be specific): 1 Stihl backpack mistblower

Comments: _____

How many cities and towns are in your service area?* 2
Alphabetical list: Boston, Chelsea

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

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

INTEGRATED PEST MANAGEMENT (IPM):

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

☒ **Adult mosquito control**
☒ **Adult mosquito surveillance**
☒ **Ditch maintenance**
☒ **Education, Outreach & Public education**
☒ **Larval mosquito control**
☒ **Larval mosquito surveillance**
☐ **Open Marsh Water Management**

☒ **Research**
☒ **Source reduction (tire removals)**
☐ **Other (please list):**

Comments: _____

LARVAL MOSQUITO CONTROL:

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

Describe the purpose of this program: This program is focused on controlling larvae of spring and summer floodwater species, salt marsh and brackish water 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. Salt marsh mosquitoes are controlled because they bite during the day and are considered very aggressive mammal biting mosquitoes. Brackish water species are aggressive mammal biting species. 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 control Culex mosquitoes to municipal departments and large Boston property managers including the Boston Housing Authority, the Franklin Park Zoo, Boston University, Harvard University and Tufts University.

What months is this program active? Spring floodwater mosquito larvae are controlled from late March through May. Summer floodwater mosquito larvae are controlled from late May through September. Salt marsh mosquito larvae are controlled following full moon high tides from June through Sepember. Culex mosquito larvae are controlled from June through September.

Describe the types of areas where you use this program: Intermittently flooded wetlands, salt marshes, stormwater detention basins, catchbasins, neglected swimming pools and other water holding containers.

Do you use:
☒ **Ground application (hand, portable and/or backpack, etc.)**
☒ **Aerial applications**
☐ **Other (please list):**
Comments: _____

List all products that you use for larval mosquito control in the table below (leave blank if not applicable)**:**

Product Name	**EPA #**	**Application Rate(s)**	**Application Method**	**Targeted life stage**	**Habitat Type**	**Total finished product applied**
VectoBac G	73049-10	10 lbs. per acre	backpack mist blower	Larvae	☐ Catch basins ☐ Containers ☒ Wetland ☐ Other (please list):	10 lbs.
VectoBac G	73049-10	5 lbs. per acre	helicopter	Larvae	☐ Catch basins ☐ Containers ☒ Wetland ☐ Other (please list):	207.5 lbs.
Vectobac 12AS	275-102	16 oz. per acre	backpack pump sprayer	Larvae	☐ Catch basins ☐ Containers ☒ Wetland ☐ Other (please list):	5.61 gals.
Vectolex WSP	73049-20	1 pouch per catchbasin or similar water holding container	hand	Larvae	☒ Catch basins ☒ Containers ☐ Wetland ☐ Other (please list):	456.95 lbs.
Altosid Pellets WSP	2724-448	1 pouch per catchbasin	hand	Larvae/pupae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	171.76 lbs.
Altosid XR Ingot	2714-421	1 briquet per catchbasin	hand	Larvae/pupae	☒ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	107.89 lbs.
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	

List all products that you use for larval mosquito control in the table below (leave blank if not applicable)**:**

Product Name	**EPA #**	**Application Rate(s)**	**Application Method**	**Targeted life stage**	**Habitat Type**	**Total finished product applied**
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	
				Choose one	☐ Catch basins ☐ Containers ☐ Wetland ☐ Other (please list):	

What is your trigger for larviciding operations? (check all that apply)
☐ Best professional judgment
☒ Historical records
☒ Larval dip counts – please list trigger for application: 3 larvae per 10 samples
☐ Other (please describe):
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, and Vectolex WSP were used to control Culex larvae in catchbasins in July, August and September.

Please attach a map of your service area (or a website link to that map).
http://scmcp.webs.com/our-services

ADULT MOSQUITO CONTROL:

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

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

Describe the types of areas where you use this program: Truck mounted ULV sprayers are used at suburban residential neighborhoods with a relatively dense configuration of streets. A backpack mistblower is used when needed in thick vegetation that surrounds a wetland.

What is the time frame for this program? June through September

Describe the types of areas where you use this program: see above

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

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

Product Name	**EPA #**	**Application Rate(s)**	**Application Method**	**Total finished product applied**
Anvil 10 + 10	1021-1688-8329	0.0024 lbs. per acre	truck mounted ULV sprayer	1 gallon
Mavrik Perimeter	2724-478	0.1 fl. oz. per gal. of water	backpack mistblower	0.0078 gallons (1 oz.)

Please describe the maximum amounts or frequency used in a particular time frame such as season and areas
In 2016, two neighborhoods were sprayed once.

What is your trigger for adulticiding operations? (check all that apply)
☒ Arbovirus data
☐ Best professional judgment
☐ Complaint calls (Describe trigger for application:)
☒ Landing rates (Describe trigger for application 1 mosquito per minute)
☒ Light trap data (Describe trigger for application 100-200 mammal biting mosquitoes)
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 map of your service area (or a website link to that map).

SOURCE REDUCTION (Tire Removals)

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

Please describe your program: Vacant lots and open space areas are checked and any discarded rimless tires that are located are taken to a tire recycling center. In 2016, there were 537 tires that were collected and taken to a recycling facility.

What time frame during the year is this method employed? Tires are collected throughout the year but mostly in late fall, winter, and early spring.

Comments: _____

WATER MANAGEMENT/DITCH MAINTENANCE

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

Please check all that apply:
☒ Inland/freshwater
☐ Saltmarsh
Please describe your program: 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 involves following protocols contained in the Massachusetts Best Management Practice and Guidance for Freshwater Mosquito Control.

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

Maintenance Type	**Estimate of cumulative length of culverts, ditches,**

	swales, etc. maintained (ft)
☐ Culvert cleaning	
☒ Hand cleaning	1,500 ft.
☐ Mechanized cleaning	
☐ Stream flow improvement	
☐ Other (please list):	

Comments: _____

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

Maintenance Type	Estimate of cumulative length of ditches maintained (ft)
☐ Hand cleaning	
☐ Mechanized cleaning	
☐ Other (please list):	

Comments: _____

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

Comments: _____

Please attach a map of ditch maintenance areas (or a website link to that map). http://scmcp.webs.com/our-services

OPEN MARSH WATER MANAGEMENT

If you have an Open Marsh Water Management program, please fill out the section below, else skip ahead to the next section.

Describe the purpose of this program:

What months is this program active?

Please give an estimate of total square feet or acreage:

Comments: _____

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

MONITORING (Measures of Efficacy)

Describe monitoring efforts for each of the following:

Aerial Larvicide – wetlands: Pre-application surveys were conducted at 2 sites. Considering the data, aerial application occurred at one site and post-application surveys were

conducted at 1 site. Arcview GIS maps of targeted wetlands are prepared prior to the application. Ag-Nav maps recorded during the application are reviewed to determine coverage.

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.

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. A 12 week study evaluating the efficacy of Bacillus sphaericus was done this year. We focused on 80 catch basins and found over 80% control for the first 8 weeks.

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

Open Marsh Water Management:

Source Reduction: Inspections of open space areas and vacant lots are done to monitor for the presence of discarded tires.

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.

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

Research Project	Details
Bottle assays	
Efficacy testing	Bacillus sphaericus efficacy in catch basins
Other: resistance testing	Culex spp. resistance to Bacillus sphaericus
Other:	

ADULT MOSQUITO SURVEILLANCE

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

Describe the purpose of this program: 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. Ovitraps are used primarily to search for Aedes albopictus.

What months is this program active? May through October

Check off all trap types currently in use by your program:

- ☐ ABC light traps
- ☐ ABC light traps w/CO_2
- ☐ CDC light traps
- ☒ CDC light traps w/CO_2
- ☒ Gravid traps
- ☒ Landing rate tests
- ☐ NJ light traps
- ☐ NJ light traps w/CO_2
- ☒ Ovitraps
- ☐ Resting boxes
- ☐ Other (please describe):

- ☐ Canopy
- ☐ Canopy
- ☐ Canopy
- ☐ Canopy

- ☐ Canopy
- ☐ Canopy

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

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. Light traps are also used near large salt marsh areas to monitor primarily brackish water species and to determine the presence of Oc. sollicitans and Oc. taeniorhynchus. 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:

- ☒ *Ae. albopictus*
- ☒ *Ae. cinereus*
- ☒ *Ae. vexans*
- ☒ *An. punctipennis*
- ☒ *An. quadrimaculatus*
- ☒ *Cq. perturbans*
- ☒ *Cx. pipiens*
- ☒ *Cx. restuans*
- ☒ *Cx. salinarius*
- ☒ *Cs. melanura*
- ☒ *Cs. morsitans*
- ☐ Other (please list):
- ☒ *Oc. abserratus*
- ☒ *Oc. canadensis*
- ☒ *Oc. cantator*
- ☒ *Oc. j. japonicus*
- ☒ *Oc. sollicitans*
- ☒ *Oc. taeniorhynchus*
- ☒ *Oc. triseriatus*
- ☒ *Oc. trivittatus*
- ☒ *Ps. ferox*
- ☐ *Ur. sapphirina*

Do you participate in the MDPH Arboviral Surveillance program? Yes
How many pools do you submit weekly on average? Trapping was done over 14 weeks. The Project submitted 138 pools between 6/22/2016 and 9/28/2016. Over that time span an average of 9.86 pools were submitted per week.

Number of traps in your service area **placed by MDPH**: 17
Were these long-term trap sites or supplemental trapping sites? supplemental

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

Arbovirus	Positive Mosquito Pools	Equine Cases	Human Cases
☐ Eastern Equine Encephalitis (EEE)			
☒ West Nile Virus (WNV)	36		1
☐ Other (please list):			

Comments: 17 positve pools submitted by SCMCP and 19 positive pools submitted by MDPH

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

Arbovirus	Start of Season	End of Season
EEE	remote	remote
WNV	low	high

Comments: _____

EDUCATION, OUTREACH & PUBLIC RELATIONS

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

Describe the purpose of this program: The 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.

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

Check off all education/outreach methods that were performed by your program this year:
☐ Development/distribution of brochures, handouts, etc.
☐ Door-to-door canvassing (door hangers, speaking to property owners, etc.)
☐ Facebook page, Twitter, or other social media
☐ Mailings (Describe target audience(s):)
☒ Media outreach (interviews for print or online media sources, press releases, etc.)
☒ Presentations at meetings
☐ School-based programs, science fairs, etc.
☒ Tabling at events (local events, annual meetings, etc.)
☒ Website
☒ Other (please describe): Public notification is coordinated through the Boston Public Health Commission (BPHC) prior to helicopter applications of Bti to wetland areas and neighborhood truck mounted aerosol applications of Anvil to control mosquitoes.

Estimate the audience reached this year using the education/outreach methods above:
Comments:

List your program's top 3 education/outreach activities for this year:

1. Coordinate with the Boston Public Health Commission (BPHC) to notify residents, interested groups, City departments and the media of planned helicopter Bti larval control applications and neighborhood truck mounted aerosol applications of Anvil to control adult mosquitoes. Provided mosquito larvae and information to the BPHC outreach coordinator, who staffed a table at local events.
2. A presentation to the Boston Board of Health on mosquito survey and control activities related to Zika virus.
3. Multiple events in Chelsea including a presentation at the Senior Center that was translated by a Spanish interpreter and taped for Chelsea local access cable television, a presentation to the Region 4B Medical Reserve Corps that was taped for Chelsea local access cable television and a tabling exhibit at an event entitled Science in the Park.

Were you involved in any collaborations with the following partners this year? Provide details below, including a list of technical reports, white/grey papers, journal publications, trade magazine articles, etc:
☐ Academia
☒ Another mosquito control district/project The Project worked co-operatively with the East Middlesex Mosquito Control Project. The cooperation included shared administration, training on adult mosquito surveillance, mechanical repair of sprayers, helicopter larval control and outreach efforts. The two Projects collaborated on a paper on catchbasin larval surveillance

and control that was presented at the annual meeting of the Northeastern Mosquito Control Association.
☐ Another state agency (DCR, DPH, etc.)
☒ Environmental groupsThe Project collaborated with the Boston Urban Wild Program on mosquito monitoring and the collection of discarded tires.
☐ Industry

List any training/education your staff received this year: Three employees attended the Northeastern Mosquito Control Association meeting. Two employees attended the NMCA workshop for Field Workers. Brian Farless attended the American Mosquito Control Association annual meeting. David Henley attended a ZIKA symposium at UMass Boston. David Henley and Brian Farless attended talks on mosquitoes and ticks in Bedford, MA with talks by Catherine Brown, Massachusetts State Lab and Larry Dapsis, Cape Cod Extension Program. Two employees completed Diversity Training through PACE (Performance and Career Enhancement).

Please list the certifications and degrees held by your staff: David Henley is a Certified Pesticide Applicator. Brian Farless, Michael Radley, Connor Delaney, and Brendan Riske are Licensed Pesticide Applicators. Kelly Palmer is a Permitted Catchbasin Applicator. David Henley has a B.B.A. in Management. Brian Farless has a B.S. in Communication. Michael Radley has a B.S. in Resource Economics. Connor Delaney has a B.S. in Environmental Studies. Brendan Riske has a B.A. in Global Studies.

Comments: _____

INFORMATION TECHNOLOGY (IT)

Does your program use (check all that apply):
☒ Aerial Photography
☒ Databases
☐ Dataloggers (monitoring for temperature, etc.)
☒ GIS mapping (Describe: Create maps using ESRI ArcGIS software for media purposes in-house use and for the helicopter company that handles out aerial applications)
☒ GPS equipment
☒ Smartphones
☐ Tablets/Toughbooks
☐ Other (please describe):

Describe any changes/enhancements in IT from the previous year:

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

Comments: _____

REVENUES & EXPENDITURES

Please provide the amounts for your approved budgets for the current, previous, and future fiscal years. Please note if the budget for the next fiscal year is an estimate, or put "n/a" if it is not yet available.

Fiscal Year	Approved Budget
2016	$265,264
2017	$265,264

List each member municipality, along with the corresponding (cherry sheet) funding assessment dollar amount, for the current fiscal year (or provide a web link to this information):
Boston - $255,237, Chelsea - $10,027. There was an additional assessment for Boston and Chelsea to fund the expenses of the State Reclamation & Mosquito Control Board.

Comments: _____

SERVICE REQUESTS

How many service requests did you receive this season? 23
How many were for larviciding? 10
How many were for adulticiding? 5

Was this an increase or decrease over last season? Increase

Comments: The Suffolk County Mosquito Control Project will respond to residents who request that an adjacent or nearby wetland be checked for mosquito larvae or to investigate obstructions in waterways. Decisions on adult mosquito spraying are based on mosquito and arbovirus surveillance data. A citizen request for adult mosquito spraying is considered supplemental information, which may influence the shape of the area where wide area spraying has been planned based on mosquito and arbovirus surveillance.

EXCLUSIONS

How many exclusion requests did you receive this season? 2

Was this an increase or decrease over last season? Stayed steady

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. Massachusetts Audubon, Boston Nature Center and Wildlife Sanctuary

SPECIAL PROJECTS

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

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

  Describe:

- ☒ Work with DPW departments or other local or state officials to address stormwater systems, clogged culverts, or other areas identified as man-made mosquito problem areas

  Describe: The Project coordinated catchbasin applications with the Boston and Chelsea Public Works Dept. catchbasin cleaning programs. Met with an engineer from the Boston Water and Sewer Commission to review underground stormwater structures and stormwater flow through the system.

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

  Describe:

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

  Describe: Received training from Eric Olson, PhD of Brandeis University on the protocol to measure deer tick populations.

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

  Describe:

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

  Describe:

CHILDREN AND FAMILIES PROTECTION ACT (CFPA)

Is your program impacted by the CFPA? Yes

If yes, please explain: Per the provisions of the Act, the Project excludes schools, group 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 rates with the CFPA within your program area, please list here:

Describe any difficulties you have had with the implementation of your program due to the CFPA, please elaborate here:

Comments:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT PROGRAM

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

If yes, please list any corrective actions here: _____

GENERAL COMMENTS

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