

**MASSACHUSETTS MOSQUITO CONTROL**  
**ANNUAL OPERATIONS REPORT**

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2008 Year of Report

Date of Report: 04/11/09

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

Address: 39 Industrial Dr.

City/Town: Hyde Park

Zip: 02136

Phone: 617-361-4954

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**Report prepared by: Bruce A. Landers**

If you have a mission statement, please include it here: Provide a scientifically based, cost effective program to control mosquitoes and the diseases they transmit

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**ORGANIZATION SETUP:**

Please list your Commissioner's names:

Francis W. Gens  
Anna Todesca  
Kimberly Martin  
Shan Shan Cai  
Robecca Robish

Please list the Supt./Director's name: Bruce A. Landers

Please list the Supt./Director's contact phone number: 617-361-4954

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

Do you have a website? No

If yes, please list the web address here: http://

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

Full time: 2

Part time:

Seasonal: 1

Other: (please describe)

Please break these down into the following areas:

Administrative staff: 1.5

Field staff: 1.5

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

- Public relations Bruce A. Landers
- Information technology same
- Entomologist same
- Wetland Scientist
- Biologist same
- Education same
- Laboratory same
- Operations same
- Facilities same
- Other (please list)

For the year of this report, we maintained:

3 vehicles

0 modified wetland equipment (list type)

2 ULV sprayers (list type) Cougar, Leco

2 Larval control equipment (list type) Solo 123 backpacks

Other (please be specific): Solo 423 motorized backpack mistblower

**Comments:** \_\_\_\_\_

How many cities & towns in your service area? 2

Please list: 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):

**Comments:** Ditch maintenance with hand tools only.

### LARVAL MOSQUITO CONTROL:

Do you have a larval mosquito suppression program? Yes

If yes, please describe the purpose of this program: To minimize the future adult mosquito population and minimize need to apply adulticides to control them

Please give the time frame for this program: March - October

Describe the areas that this program is used: Fresh and saltwater wetland and both natural and manmade

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:** Teknar HPD #70051-51

**Catch basins:** Vectolex WSP #73049-20 and Altosid Pellets WSP #2724-448

**Containers:** Vectolex WSP, Altosid WSP, Teknar HPD

**Other (please list):** Vectolex WSP and Altosid WSP can also be applied to small areas other than containers and catchbasins.

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

**Wetlands:** 1pint Teknar HPD in 2.5 gals.water/acre

**Catch basins:** 1 water soluble packet/basin

**Containers:** water soluble packet or squirt of Teknar HPD mix ( 1pt./2.5gal.water)

**Other:**

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

- Larval dip counts – please list trigger for application: Sample area to determine whether there are sufficient numbers to begin treating and then continue to sample and spray until larvae no longer are found
- Historical records
- Best professional judgment

**Comments:** Rainfall and monthly high tides on saltmarshes are tracked daily and breeding areas that are effected are subsequently sampled

**\*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 control mosquitoes at a level where residents can utilize their outdoor environment and to act to control disease vectors to protect public health should it become necessary

Please give the time frame for this program: May- September

Describe the areas that this program is used: Parks, residential areas

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+10ULV #1021-1688-8329
- 2). Flit-10EC #8329-67
- 3).
- 4).
- 5).
- 6).

Please list your application rates for each product:

- 1). 2 gals. Anvil 10+10 plus 3.5 gals. soybean oil @ either 1.5oz./min. or 3oz./min. (higher rate for open areas with 300ft. swath)
- 2). Flit-10EC is a barrier spray containing 6.5oz product./gal. water
- 3).
- 4).
- 5).
- 6).

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

Most areas get no adulticiding, some would get 2-4 treatments, a few located next to breeding areas receive more if needed. Without an emergency, there would be 7 day period between applications

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

- Landing rates - please list trigger for application Enough to make you stop what you're doing and go indoors.
- Light trap data - please list trigger for application Greater than 200/night
- Complaint calls - please list trigger for application Complaint calls get investigated
- Arbovirus data
- Best professional judgment

**Comments:** The more rain, particularly the number of larger storms and also the height of saltmarsh tides that occur that season are the most important factors in creating a need for adulticiding. 2008 did not produce the large hatches in July and August that required a lot of adulticiding.

**\*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: Abandoned tires can be treated with larvicides and/or reported to city public health

What time frame during the year is this method employed?

**Comments:** \_\_\_\_\_

## **DITCH MAINTENANCE**

Do you have a ditch maintenance program? Yes

Please check all that apply:

- Inland/freshwater  
 Saltmarsh

If yes, please describe: Remove blockages from ditches and culverts

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 300 ft.**  
**Mechanized cleaning**  
**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? spring

**Comments:** \_\_\_\_\_

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

## 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? Choose one

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 <sub>2</sub> | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> ABC light traps                              | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> ABC light traps w/CO <sub>2</sub>            | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> NJ light traps                               | <input type="checkbox"/> Canopy |
| <input type="checkbox"/> NJ light traps w/CO <sub>2</sub>             | <input type="checkbox"/> Canopy |

Other (please describe):

Please describe the purpose of this program: To evaluate both the size and species makeup of the mosquito population. Gravids also provide specimens for virus testing by State Labs

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

If yes, please describe how you chose these long-term sites. Near breeding areas

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

- |  |   |
|--|---|
| <input type="checkbox"/> <i>Ae. albopictus</i> | <input checked="" type="checkbox"/> <i>Ae. cinereus</i> |
|--|---|

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

Other (please list): **Most of the species not checked above are present but less of a problem than others.**

Do you participate in the MDPH Arboviral Surveillance program? Yes

How many pools do you submit weekly on average? 25

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:

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

**WNV: Moderate**

**EEE: Low**

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

**WNV: High**

**EEE: Low**

What time frame during the year is this method employed? June- September

**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: 2008 Program was minimal due to lack of requests. Most activity is cooperative with local public health

Please check off all that apply:

- School based program
- Website
- PR brochures/handouts
- Community events
- Science fairs
- Meeting presentations
- Other (please describe): Provide science and support for the Boston Public Health Commission's catchbasin treatment program.

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

Please list some events you participated in for the year of this report:

What time frame during the year is this method employed?

Have you performed any research projects, efficacy, bottle assays, etc.? Please select

If yes, please elaborate on your research projects:

Are you involved in any collaborations 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: NMCA Annual Meeting

Please list the certifications and degrees held by your staff: Supt. M.Ag Entomology . Secretary and Seasonal staff have BA degrees

**Comments:** \_\_\_\_\_

## **BIOLOGICAL CONTROL EFFORTS**

Do you have a biological control program? No

If yes, please describe:

Is this program the introduction of mosquito predators or the enhancement of habitat for native predators?

Please check off all that apply:

- Predatory fish
- Predatory invertebrates
- Other (please describe):

What time frame during the year is this method employed?

**Comments:** \_\_\_\_\_

## **INFORMATION TECHNOLOGY**

Does your program use (check all that apply):

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

Please describe your capabilities in these areas:

Please describe your current GIS abilities: Beginner

Give details if possible on your GIS abilities:

Please describe any changes/enhancements in this area from the previous year:  
Purchased sprayer that maps its spray route

**Comments:** \_\_\_\_\_

## REVENUES & EXPENDITURES

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

\$202,022.95

Comments: Revenues: \$234,637.97

## 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: Teknar HPD  
EPA Reg. #: 70051-51  
Application method: Non-motorized backpack  
Targeted life stage: Larvae  
Total amount of concentrate applied: 7gal.  
Comments: \_\_\_\_\_

Product Name: Vectolex WSP  
EPA Reg. #: 73049-20  
Application method: Hand  
Targeted life stage: Larvae  
Total amount of concentrate applied: 768  
Comments: \_\_\_\_\_

Product Name: Altosid Pellets WSP  
EPA Reg. #: 2724-448  
Application method: Hand  
Targeted life stage: Larvae  
Total amount of concentrate applied: 605  
Comments: \_\_\_\_\_

Product Name: Anvil 10+10 ULV  
EPA Reg. #: 1021-1688-8329  
Application method: Leco or Cougar ULV by truck  
Targeted life stage: Adult  
Total amount of concentrate applied: 13.2 gal.  
Comments: \_\_\_\_\_

Product Name: Flit -10EC  
EPA Reg. #: 8329-67

Application method: Motorized backpack  
Targeted life stage: Adult  
Total amount of concentrate applied: 1.4 gal.  
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: \_\_\_\_\_

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 weblink if possible. These areas receive only BTI larvicides such as Teknar HPD

## **SPECIAL PROJECTS**

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

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? No

If yes, please elaborate: Not in 2008 season

Have you worked with these departments on long term solutions? 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: Avoid schools during school year

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:

### **GENERAL COMMENTS**

Please list any comments not covered in this report: \_\_\_\_\_