STATE RECLAMATION AND MOSQUITO CONTROL BOARD
MASSACHUSETTS MOSQUITO CONTROL DISTRICT

ANNUAL OPERATIONS REPORT

2013 Year of Report Date of Report: 11/25/13

Project/District Name: Berkshire County Mosquito Control Project

Address: 19 Harris Street

City/Town: Pittsfield, MA Zip: 01201

Phone: (413) 447-9808 Fax: (413) 447-7185

E-mail: berkmc@bcn.net

Report prepared by: Christopher Horton

NPDES permit no. MAG87A026

If you have a mission statement, please include it here:

BERKSHIRE COUNTY MOSQUITO CONTROL PROJECT

The Berkshire County Mosquito Control Project was established in 1945 by the State of Massachusetts and is administered by the State Reclamation and Mosquito Control Board. The Berkshire County Mosquito Control Project Board of Commissioners is appointed by the State Reclamation and Mosquito Control Board to represent your community's interest.

The mission of the project is to provide sustained , effective control of mosquito populations through coordinated employment of a wide range of control methodologies.

Integrated Mosquito Management is the term given to the comprehensive mosquito prevention/control strategy that is used by the project . This strategy uses all available mosquito control methods singly or in combination to exploit the known vulnerabilities of mosquitoes in order to reduce their numbers to tolerable levels while maintaining a quality environment.

Integrated Mosquito Management methods are specifically tailored to safely counter each stage of the mosquito life cycle. Prudent mosquito management practices for the control of immature mosquitoes (larvae and pupae) include such methods as source reduction (water or vegetation management or other compatible land management uses), water sanitation practices as well as the use of EPA registered larvicides. When larval control measures are not feasible, or clearly inadequate, or when faced with imminent mosquito born disease,

application of EPA registered adulticides by applicators trained in the special handling characteristics of these products may be needed. Adulticide products are chosen based on efficacy against species targeted for control, resistance management concerns and minimization of potential environmental impact.

In IMM programs, all intervention measures are driven by a demonstrated need based on surveillance data and action thresholds. Applying any mosquito control measure on a pre-determined schedule absent a documented need is not acceptable practice in any Integrated Mosquito Management Program.

Any resident of a member town who would like more information, has a mosquito problem, or would like their property inspected for possible mosquito breeding sites should call (413) 447- 9808.

Christopher Horton, Superintendent

Wally Terrill , Chairman
Ryan Grennan, Commissioner
James McGrath, Commissioner

ORGANIZATION SETUP:

Please list your Commissioner's names:

Wally Terrill, Chairman
Ryan Grennan
James McGrath

Please list the Supt./Director's name: Christopher Horton
Please list the Supt./Director's contact phone number: (413) 447-9808
Please list your Asst. Supt./Asst. Director's name: N/A

Do you have a website? N/A If yes, please list the web address here: http://

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

Full time: 1
Part time:
Seasonal: 2
Other: (please describe)

Please break these down into the following areas:

Administrative staff: 0
Field staff: 3

Please check off all that apply, and list employee name(s) next to each category:
x Public relations Christopher Horton
x Information technology Christopher Horton
☐ Entomologist
☐ Wetland Scientist
☐ Biologist
x Education Christopher Horton
x Laboratory Christopher Horton
x Operations Christopher Horton, George Lowe, Daniel Sala
x Facilities Christopher Horton
x Other (please list) Equipment Maintenance Christopher Horton

For the year of this report, we maintained:
4 vehicles
modified wetland equipment (list type)
2 ULV sprayers (list type) London Fog 10-20 / Clarke Smartflow and Sentinel GIS System
Larval control equipment (list type)
Other (please be specific): 3 Backpack Mist Blowers

Comments: _____

How many cities & towns in your service area? 8
Please list: Clarksburg, Hinsdale, Otis, Pittsfield, Richmond, Sheffield, Stockbridge, Tyringham.

Any changes to your service area this year? The Town of Richmond was added to our service area in 2013
Please list cities/towns added or removed: Richmond added

***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.

x Larval mosquito control
x Adult mosquito control
x Source reduction
x Ditch maintenance
☐ **Open Marsh Water Management**
x Adult mosquito surveillance
x 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: To eliminate nuisance mosquitoes in district member communities and reduce the presence of possible disease vectors.

Please give the time frame for this program: April thru September

Describe the areas that this program is used: Woodland pools, marshlands, bogs, permanent water swamps, floodplains, and municipal drainage systems.

Do you use:
x **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 #275-50
Catch basins: Vectolex Packets #73049-20
Containers: Vectobac G #275-50
Other (please list):

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

Wetlands: 4 lbs. per acre
Catch basins: 1 packet per basin
Containers:
Other:

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

x Larval dip counts – please list trigger for application: 3-5 larvae per dip.
x Historical records
x Best professional judgment

Comments: _____

***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 adult mosquito populations in member towns.

Please give the time frame for this program: June 1st thru October 1st

Describe the areas that this program is used: Parks, Summer Camps, Campgrounds, Residential developments, District town streets, Recreational Venues. Also targeted areas where EEE and WNV have been isolated in mosquito populations.

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

Please list the names of the products used with EPA #:
1). DUET #1021-1795-8329
2). FLIT 10 EC #8329-67
3).
4).
5).
6).

Please list your application rates for each product:
1). DUET .62 oz. per acre
2). FLIT 10 EC .01 lb. per acre
3).
4).
5).
6).

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

The maximum frequency for adult applications is generally weekly.

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

x Landing rates - please list trigger for application 3-5 mosquitoes per minute
☐ Light trap data - please list trigger for application
x Complaint calls - please list trigger for application
x Arbovirus data
x Best professional judgment

Comments: Our service area is rural and we sometimes receive requests from isolated areas therefore we use professional judgment as a trigger for applications

***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: We have established a tire collection and recycling program which is available to member towns. When responding to service requests, if tires or containers are found in the area we will remove, treat, or explain to the individual the significance of containers as breeding habitat.

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

Comments: _____

DITCH MAINTENANCE

Do you have a ditch maintenance program? Yes

Please check all that apply:
x Inland/freshwater
☐ Saltmarsh

If yes, please describe:

Please check off all that apply INLAND DITCH MAINTENANCE:

x **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 9,190 linear feet
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?

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:	
Larvicide – catch basins:	**Pre and post dipping**
Larvicide-hand/small area breeding locations)	**Routine (scheduled surveillance of**
Ground ULV Adulticide:	**Pre and post landing rates and trap counts**
Source Reduction:	**Sites are monitored for larval development**
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):

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: 15

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

x Gravid traps
☐ Resting boxes
☐ CDC light traps ☐ Canopy
x CDC light traps w/CO_2 ☐ Canopy
☐ ABC light traps ☐ Canopy
☐ ABC light traps w/CO_2 ☐ Canopy
☐ NJ light traps ☐ Canopy
☐ NJ light traps w/CO_2 ☐ Canopy

Other (please describe):

Please describe the purpose of this program: Mosquito trapping is performed in member towns to monitor mosquito abundance and detect the presence of arbovirus in the area.

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

If yes, please describe how you chose these long-term sites. Each site that tests positive for either WNV or EEE is considered a long term trap site.

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

☐ *Ae. albopictus*
☐ *Ae. cinereus*
x *Ae. vexans*
x *An. punctipennis*
x *An. quadrimaculatus*
x *Cq. perturbans*
x *Cx. pipiens*
x *Cx. restuans*
☐ *Cx. salinarius*
x *Cs. melanura*
☐ *Cs. morsitans*
x *Oc. abserratus*
x *Oc. canadensis*
x *Oc. cantator*
x *Oc. excrucians*
☐ *Oc. fitchii*
x *Oc. j. japonicus*
☐ *Oc. punctor*
☐ *Oc. sollicitans*
☐ *Oc. stimulans*
☐ *Oc. taeniorhynchus*
x *Oc. triseriatus*
x *Oc. trivittatus*
☐ *Ps. ferox*
☐ *Ur. sapphirina*

☐ Other (please list):

Do you participate in the MDPH Arboviral Surveillance program? Yes

How many pools did you submit this year? 267

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

x West Nile Virus
x Eastern Equine Encephalitis
☐ Other Please list:

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

Please explain:

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

WNV: Low
EEE: Low

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

WNV: Moderate
EEE: Low

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:

Please check off all that apply:

x School based program
☐ Website
x PR brochures/handouts
x Community events
x Science fairs
x Meeting presentations
☐ Other (please describe):

Please give an estimate of attendance/participants in this program: over 100,000.

Please list some events you participated in for the year of this report: Television and radio interviews, board of health and select board meetings, street festivals, Big E, neighborhood cleanups, STEM conference, river cleanups.

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

Have you performed any research projects, efficacy, bottle assays, etc.? No

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: We have provided services and outreach to the following organizations: Berkshire Environmental Action Team, Berkshire Community College, Sheffield Land Trust, Stockbridge Land Trust. Services include surveillance trapping, adult mosquito control, and tire recycling. Outreach includes explanation of the methods and significance of our work and participation in various educational programs.

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: Continuing education workshops for pesticide applicators, NMCA meetings, NMCA field days, AMCA annual meeting.

Please list the certifications and degrees held by your staff: Pesticide commercial applicator and certified applicator licenses. Bachelors degree Natural Science.

Comments: _____

BIOLOGICAL CONTROL EFFORTS

Do you have a biological control program? Yes

If yes, please describe: One goal of ditch maintenance is to improve water quality and flow in drainage systems enhancing the distribution and variety of native mosquito predators.

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

Please check off all that apply:

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

What time frame during the year is this method employed? June thru September and during ditch maintenance.

Comments: _____

INFORMATION TECHNOLOGY

Does your program use (check all that applies):

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

Please describe your capabilities in these areas: Intermediate

Please describe your current GIS abilities: Equipped

Give details if possible on your GIS abilities: We are able to map and record larval and adult treatments, as well as service requests. All known breeding sites and catch basin locations are currently mapped and measured in our GIS database. All treatments for 2013 were recorded in the GIS database.

Please describe any changes/enhancements in this area from the previous year: 2013 has been the year of implementation for our GIS system which includes applications for larval and adult treatments as well as service requests.

Comments: _____

REVENUES & EXPENDITURES

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

Revenue $213,016 Expenditures $201,840

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

Clarksburg $4,108, Hinsdale $9,540, Otis $ 20,233, Pittsfield $122,597, Sheffield $22,108, Stockbridge $ 28,085.

Comments: _____

PESTICIDE USAGE

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

Product Name:Vectobac G
EPA Reg. #: 275-50
Application method: Hand
Targeted life stage: Larval
Total amount of concentrate applied: 5,750 lbs.
Comments: _____

Product Name: Vectolex WSP Packets
EPA Reg. #: 73049-20
Application method: Hand
Targeted life stage: Larval

Total amount of concentrate applied: 103.25 lbs.
Comments: _____

Product Name: DUET
EPA Reg. #: 1021-1795-8329
Application method: Truck mounted ULV sprayer
Targeted life stage: Adult
Total amount of concentrate applied: 178 gal.
Comments: _____

Product Name: FLIT 10EC
EPA Reg. #: 8329-67
Application method: Backpack mist blower
Targeted life stage: Adult
Total amount of concentrate applied: 6 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: _____

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? No

If yes, please explain, and attach maps or a web link if possible.

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 We have worked with local DPW officials to merge municipal drainage outflows into existing natural drainage systems.

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: We report all drainage problems, clogged culverts, broken pipes and tubes. We correct problems if possible.

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

If yes, please elaborate: We currently work with DPW's to maintain ditches and drainage outflows as requested.

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

If yes, please elaborate: Housatonic River Restoration (EPA)

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

If yes, please elaborate: We have attended planning meetings to advocate for mosquito management components to be included in the PCB removal and river restoration

project for the Housatonic River ("Rest of the River" from Fred Garner Park in Pittsfield to the Connecticut border.)

CHILDREN AND FAMILIES PROTECTION ACT

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

If yes, please explain: We maintain a list of school properties and daycare centers. These properties are excluded from larval and adult treatments.

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: Requirements of the law do complicated the implementation of our program. We understand the process necessary to apply pesticides under the Children and Families Protective Act.

Comments:

NPDES SECTION

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

If yes please list any corrective actions here: _____

GENERAL COMMENTS

Please list any comments not covered in this report: Budget FY 2013

A01 Salaries Inclusive	$67,161
A08 Overtime Pay	$3,000
B02 In State Travel	$100
B05 Training Registration and Membership	$ 250
D09 Fringe Benefits (Health Ins, Medicare Etc.)	$14,226
D20 Retirement Assessment	$13,600
E01 Office and Administrative Expenses	$500
E02 Printing Expenses and Supplies	$1,000

E06 Postage	$300
E19 Licenses, Vehicle/ Liability Ins., Tolls	$15,752
EE2 Conference Training and Registration	$250
F09 Clothing and Footwear	$300
F11 Laundry and Cleaning Supplies	$200
F24 Motorized Vehicle Repair	$1,500
G01 Space Rental	$15,072
G03 Electricity	$1,600
G05 Fuel for Vehicles	$8,000
G11 Natural Gas	$1,500
K11 Heavy Equipment, Trucks, Spray Equip	$1,500
L44 Vehicle Equipment Maintenance and Repair	$1,500
N64 Pesticides and Supplies	$33,500
U01 Telecommunications Services	$800
U07 Info Tech Equipment	$2,000
FY 13 Total Expenses	$ 201,840
FY13 Original Budget Submitted	$ 207,573
Rollover Funds FY 2012 Budget	$5,443
Final FY 13 Budget	$213,016