



VECTOR DISEASE CONTROL INTERNATIONAL
GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

2017 ANNUAL OPERATIONS REPORT

Project Name: Greenfield/Deerfield Mosquito Surveillance Program

Contractor: Vector Disease Control International

Address: 1320 Brookwood Drive Suite H
Little Rock, AR 72202
Phone: 800-413-4445
Fax: 866-839-8595
Email: EHIBBARD@VDCI.NET

Report prepared by: *Emily Hibbard, MS Entomology, Contract Supervisor*

ORGANIZATION SETUP:

Town of Greenfield MA, Health Department

Alexeev Jones.....Director of Public Health
Email: Alexeev.Jones@greenfield-ma.gov

Town of Deerfield MA, Board of Health

Carolyn Ness..... Chair, Board of Health and Board of Selectmen
Email: csness@town.deerfield.ma.us



VECTOR DISEASE CONTROL INTERNATIONAL
GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

Vector Disease Control International

Emily Hibbard.....Contract Supervisor
Email: ehibbard@vdcnet.net

Nolan Fernandez.....Operations Coordinator
Email: nfernandez@umass.edu

Michael Lennon.....Application Specialist
Email: mlennon@aquaticcontroltech.com

Dr. Daniel Markowski.....National Operations Director
Email: dmarkowski@vdcnet.net

Cristina Flores.....Regional Operations Director
Email: cflores@vdcnet.net

Joe Onarato.....Business Development
Email: jonaroto@vdcnet.net

Administrative: Alexeev Jones, Carolyn Ness, Cristina Flores and Emily Hibbard

Biologist: Dan Markowski, Emily Hibbard

Entomologist: Emily Hibbard

Facilities: Nolan Fernandez, Emily Hibbard

Information Technology: Cristina Flores

Laboratory: Nolan Fernandez, Emily Hibbard

Operations: Nolan Fernandez, Emily Hibbard

Public Relations: Alexeev Jones, Carolyn Ness

For the year of this report, the following were maintained:

1 Vehicle



VECTOR DISEASE CONTROL INTERNATIONAL

GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

INTEGRATED PEST MANAGEMENT PLAN (IPM):

Current Services:

Adult mosquito surveillance

Arbovirus testing

Education, Outreach & Public Education

Definition: Integrated Pest Management (IPM) is a comprehensive strategy of pest management to achieve reduced levels of pest control using an effective and environmentally sensitive approach. Successful IPM plans rely on a combination of practices to reduce the need for reliance on chemical pesticide. This can be accomplished by using the most current and comprehensive information on the life cycle of the pest and their interaction with the environment.

Greenfield/Deerfield Mosquito Surveillance: The goal of VDCI's Greenfield/Deerfield mosquito surveillance program is to identify arboviral public health threats in the most ecologically responsible manner through continuous monitoring techniques and weekly disease testing. The current program is an adult surveillance only program and does not implement larval surveillance, larval or adult control.



VECTOR DISEASE CONTROL INTERNATIONAL

GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

LARVAL MOSQUITO SURVEILLANCE:

N/A

LARVAL MOSQUITO CONTROL:

N/A

ADULT MOSQUITO CONTROL:

N/A

SOURCE REDUCTION:

N/A

WATER MANAGEMENT/ DICH MAINTENANCE:

N/A

ADULT MOSQUITO SURVEILLANCE:

Purpose: The purpose is to sample adult mosquito populations to monitor for the presence of arboviruses. All adults collected are counted and identified to species.

Time frame: June – October

Trap Types Used:

Gravid traps

CDC light trap with CO₂

Types of adult mosquito surveillance traps:

Gravid Trap



miniature CDC light trap with CO₂





VECTOR DISEASE CONTROL INTERNATIONAL

GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

Trapping sites: Five long term trap sites were maintained throughout the season. Additional short term 24-hour traps were deployed randomly throughout the season. All sites were chosen based on historical mosquito nuisance complaints and suspected larval habitat.

Trapping sites:

Trap Type	Site	Town
CDC light trap with CO₂	Parkway Ave	Greenfield MA
CDC light trap with CO₂	Whately Road	Deerfield MA
CDC light trap with CO₂	Wapping Road	Deerfield MA
Gravid trap	Visitor's Center	Greenfield MA
Gravid Trap	FRTA	Greenfield MA



VECTOR DISEASE CONTROL INTERNATIONAL

GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

ADULT MOSQUITO SURVEILLANCE:

Species of concern:

Ae. albopictus (none collected)

Ae. vexans

Ae. cinereus

An. punctipennis

An. quadrimaculatus

Cq. perturbans

Cx. pipiens

Cx. restuans

Cx. salinarius

Cs. morsitans

Cs. melanura

Oc. canadensis

Oc. excrucians

Oc. intrudens

Oc. japonicus

Oc. triseriatus

Oc. trivittatus

Ps. ferox

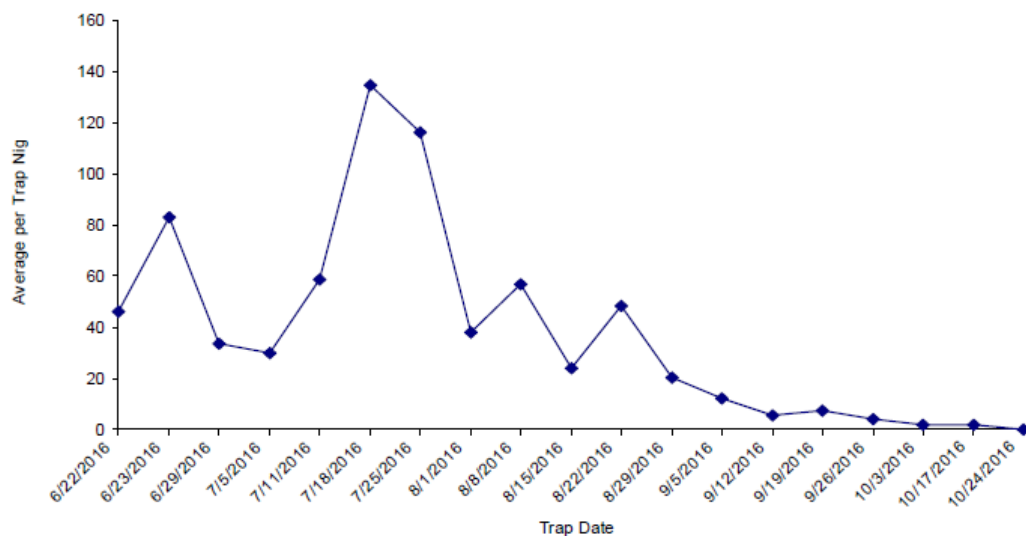
Ur. sapphirina

Total number trapped and identified: 10,617 mosquitoes



Adult Mosquito Surveillance Summary

Greenfield/Deerfield



Vector Disease Control International
11 John Road
Sutton, MA 01590
800-413-4445



VECTOR DISEASE CONTROL INTERNATIONAL

GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

ARBOVIRUS TESTING:

Purpose: The purpose of arbovirus testing is to identify mosquito borne diseases that may cause a threat to public health. In 2017 the Massachusetts Department of Public Health William A. Hinton State Laboratory Institute Arbovirus Surveillance Program offered the City of Northampton free mosquito submissions for testing. Mosquitoes were collected, identified and sorted by VDCI staff and shipped to the state laboratory for arboviral testing of West Nile Virus and Eastern Equine Encephalitis. Submissions were accepted and testing was performed from June 12, 2017 through September 21, 2017.

Testing: 161 pools totaling 5,895 mosquitoes were tested for arboviruses using RT-PCR analysis.

Results: 14 out of 161 pools tested positive for WNV. No pools tested positive for EEE. No human, avian, or equine illnesses were reported in Greenfield or Deerfield in 2017

DATA:

Data collected and maintained in the VDCI database and includes:

- Species identification
- Species distribution
- Population densities
- Mapping
- Arbovirus Testing Results

Reports and updates were also submitted to the Greenfield and Deerfield Health Departments

EDUCATION, OUTREACH, AND PUBLIC COORDINATION:

Educational materials are available through the Deerfield Board of Health website, the VDCI website as well as the MA Department of Public Health website:

<http://vdci.net/index.php>

<http://www.deerfieldma.us/board-health/pages/mosquito-information>



VECTOR DISEASE CONTROL INTERNATIONAL
GREENFIELD/DEERFIELD MOSQUITO SURVEILLANCE PROGRAM

www.mass.gov/dph/mosquito

INFORMATION TECHNOLOGY:

All data collected was maintained in the VDCI Great Mechanism Database. GPS equipment was used for all site visits and GIS mapping is available through VDCI's GIS department.

REVENUES & EXPENDITURES:

Privately funded in a joint contract by the Towns of Greenfield MA and Deerfield MA

SERVICE REQUESTS:

N/A

EXCLUSIONS:

N/A

SPECIAL PROJECTS:

N/A

CHILDREN AND FAMILIES PROTECTION ACT:

This program is not impacted by the Children and Families Protection Act

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT PROGRAM:

N/A

GENERAL COMMENTS:

N/A