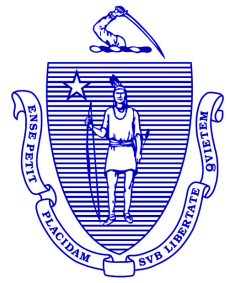


MASSACHUSETTS MOSQUITO CONTROL

ANNUAL OPERATIONS REPORT



Year Report Covers: 2024 Date of Report: 01/29/2025

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

Address: 9 Airport Rd

City/Town: Edgartown

Zip: 02539

Phone: 540-216-9618

Fax:

E-mail: biologist@dukescounty.org

Report prepared by: *Patrick Roden-Reynolds*

NPDES permit no.

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

ORGANIZATION SETUP:

Commissioner names:

_____	_____
_____	_____
_____	_____

Superintendent/Director name:

Superintendent/Director contact phone number:

Asst. Superintendent/Director name:

District/Project website: <http://https://www.mvboh.com/mosquito>

Twitter handle: @

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

Other social media accounts:

Staffing levels for the year of this report:

Full time: 1

Part time:

Seasonal:

Other: (please describe)

Of the above, how many are:

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

- ☐ Administrative
- ☒ Biologist Patrick Roden-Reynolds
- ☐ Educator
- ☐ Entomologist
- ☐ Facilities
- ☐ Information technology
- ☐ Laboratory
- ☐ Operations
- ☐ Public relations
- ☐ Wetland scientist
- ☐ Other (please describe)

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

- Modified wetland equipment (list type)
- Larval control equipment (list type)
- ULV sprayers (list type)
- Vehicles

Other (please be specific):

Comments: Personal vehicle used with mileage reimbursed. No official department vehicle available

How many cities and towns are in your service area?* 6

Alphabetical list: Aquinnah, Chilmark, Edgartown, Oak Bluffs, Tisbury, West Tisbury

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:

What months is this program active?

Describe the types of areas where you use this program:

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
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> 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	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
				Choose one	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> 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:
☐ Other (please describe):

Comments: _____

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

ADULT MOSQUITO CONTROL:

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

Describe the purpose of this program:

What is the time frame for this program?

Describe the types of areas where you use this program:

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

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

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)
☐ Light trap data (Describe trigger for application)

Comments: _____

Please attach maps of your service areas (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:

What time frame during the year is this method employed?

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:

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

Maintenance Type	Estimate of cumulative length of culverts, ditches, swales, etc. maintained (ft)
<input type="checkbox"/> Culvert cleaning	
<input type="checkbox"/> Hand cleaning	
<input type="checkbox"/> Mechanized cleaning	
<input type="checkbox"/> Stream flow improvement	
<input type="checkbox"/> Other (please list):	

Comments: _____

For saltmarsh ditch maintenance, check off all that apply:

Maintenance Type	Estimate of cumulative length of ditches maintained (ft)
<input type="checkbox"/> Hand cleaning	
<input type="checkbox"/> Mechanized cleaning	
<input type="checkbox"/> Other (please list):	

Comments: _____

What time frame during the year is this method employed?

Comments: _____

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

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:

Ground ULV Adulticide:

Larvicide – catch basins:

Larvicide-hand/small area

Open Marsh Water Management:

Source Reduction:

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):

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

Research Project	Details
Bottle assays	
Efficacy testing	
Other:	
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: Participate in MDPH arbovirus surveillance program

What months is this program active? July, August, September, October

Check off all trap types used this past season by your program:

Trap Type	Canopy? (check box for yes)	Number of traps (leave blank if zero)
<input type="checkbox"/> ABC light trap	<input type="checkbox"/>	
<input type="checkbox"/> ABC light trap w/CO ₂	<input type="checkbox"/>	
<input type="checkbox"/> CDC light trap	<input type="checkbox"/>	
<input type="checkbox"/> CDC light trap w/CO ₂	<input type="checkbox"/>	
<input checked="" type="checkbox"/> Gravid trap		6
<input type="checkbox"/> Landing rate test		
<input type="checkbox"/> NJ light trap	<input type="checkbox"/>	
<input type="checkbox"/> NJ light trap w/CO ₂	<input type="checkbox"/>	
<input type="checkbox"/> Ovitrap		
<input type="checkbox"/> Resting box		
<input type="checkbox"/> Other (please describe):		
<input type="checkbox"/> Other (please describe):		
<input type="checkbox"/> Other (please describe):		

Do you maintain long-term trap sites in any of your areas? No

If yes, how many:

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

- | | |
|---------------------------------------------------------|-------------------------------------------------------------|
| <input type="checkbox"/> <i>Ae. albopictus</i> | <input type="checkbox"/> <i>Oc. abserratus</i> |
| <input type="checkbox"/> <i>Ae. cinereus</i> | <input type="checkbox"/> <i>Oc. canadensis</i> |
| <input type="checkbox"/> <i>Ae. vexans</i> | <input type="checkbox"/> <i>Oc. cantator</i> |
| <input type="checkbox"/> <i>An. punctipennis</i> | <input checked="" type="checkbox"/> <i>Oc. j. japonicus</i> |
| <input type="checkbox"/> <i>An. quadrimaculatus</i> | <input type="checkbox"/> <i>Oc. sollicitans</i> |
| <input type="checkbox"/> <i>Cq. perturbans</i> | <input type="checkbox"/> <i>Oc. taeniorhynchus</i> |
| <input checked="" type="checkbox"/> <i>Cx. pipiens</i> | <input type="checkbox"/> <i>Oc. triseriatus</i> |
| <input checked="" type="checkbox"/> <i>Cx. restuans</i> | <input type="checkbox"/> <i>Oc. trivittatus</i> |
| <input type="checkbox"/> <i>Cx. salinarius</i> | <input type="checkbox"/> <i>Ps. ferox</i> |
| <input type="checkbox"/> <i>Cs. melanura</i> | <input type="checkbox"/> <i>Ur. sapphirina</i> |
| <input type="checkbox"/> <i>Cs. morsitans</i> | |
| <input type="checkbox"/> Others (please list): | |

Do you participate in the MDPH Arboviral Surveillance program? Yes

How many pools do you submit weekly on average? 3

Total number of adult mosquito pools submitted to DPH this past season: 66

Number of adult mosquito pools collected but not submitted to DPH ("Unsubmitted"): 0

Total number of adult mosquitoes submitted to DPH this past season: 589

Number of adult mosquitoes collected this season but not submitted to DPH: 83

Number of ovitrap collections this season, if any: 0

Any other trap collections of note (please describe):

Number of traps in your service area **placed by MDPH**: 0

Were these long-term trap sites or supplemental trapping sites? supplemental

Which arboviruses were found in your area during this past mosquito season? Enter the number of positive pools and/or cases below:

Arbovirus	Positive Mosquito Pools	Equine Cases	Human Cases
<input type="checkbox"/> Eastern Equine Encephalitis (EEE)			
<input checked="" type="checkbox"/> West Nile Virus (WNV)	2	0	0
<input type="checkbox"/> Other (please list):			

Comments: _____

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	Low

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: Educate the public on mosquito prevention and safety

What time frame during the year is this method employed? May-October

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):

Estimate the audience reached this year using the education/outreach methods above: 500
Comments:

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

1. Agricultural Soceity Fair
2. HarvestFest at Agricultural Society
3. Local public health fairs

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
- ☐ Another state agency (DCR, DPH, etc.)
- ☐ Environmental groups
- ☐ Industry

List any training/education your staff received this year:

Please list the certifications and degrees held by your staff: Master of Science

Comments: _____

INFORMATION TECHNOLOGY (IT)

Does your program use (check all that apply):

- ☐ Aerial Photography
- ☒ Databases
- ☐ Dataloggers (monitoring for temperature, etc.)
- ☐ GIS mapping (Describe: _____)
- ☒ 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 enter your approved budgets for the current, previous, and future fiscal years.

	Date of Fiscal Year	Approved Budget	Notes
Previous	2023	1500	
Current	2024	3000	
Future	2025		

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):

Comments: _____

SERVICE REQUESTS

How many service requests did you receive this season? 0

How many were for larviciding?

How many were for adulticiding?

Was this an increase or decrease over last season? Choose one

Comments:

EXCLUSIONS

How many exclusion requests did you receive this season? 0

Was this an increase or decrease over last season? Choose one

Do you have large areas of pesticide exclusion, including priority habitat? Choose one

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:

- ☐ Work with groups as described above on long term solutions?
Describe:
- ☐ Conduct or participate in any cooperative research or restoration projects?
Describe:
- ☐ 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? No

If yes, please explain:

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: _____