

Annual Operations Report

Year Report Covers: 2025

Date of Report: 1/27/26

Project/District Name: Pioneer Valley Mosquito Control District

Count of Cities and Towns in Service Area: 25

Alphabetical List of Cities/Towns: Amherst, Bernardston, Buckland, Chicopee, Deerfield, E. Longmeadow, Erving, Gill, Granby, Greenfield, Hadley, Heath, Holyoke, Leyden, Northampton, Northfield, Montague, Palmer, Rowe, Shelburne, Shutesbury, South Hadley, Southampton, Sunderland, and West Springfield.

Were there any changes to your service area this year? Yes

Municipality added: Montague - October 2025

Municipality removed: None

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Report Prepared By: John Briggs

Mission Statement, if available:

ORGANIZATION SETUP

Commissioner Names: Jeanne Galloway, Gregory Lewis, Andrew Lover, and Carolyn Ness

Superintendent/Director Name: John Briggs

Asst. Superintendent/Director Name:

District/Project Website: <https://www.mass.gov/info-details/pioneer-valley-mosquito-control-district>

Please list below any additional social media accounts: LinkedIn

Staffing levels for the year of this report:

Full time: 1

Part time: 0

Seasonal: 1.5

Other: (please describe)

Of the above, how many are:

(Please check off all that apply, and list how many are Full Time, Part Time, Or Seasonal)

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Administrative | <input checked="" type="checkbox"/> Facilities | <input checked="" type="checkbox"/> Public relations |
| <input type="checkbox"/> Biologist | <input checked="" type="checkbox"/> Information technology | <input type="checkbox"/> Wetland scientist |
| <input checked="" type="checkbox"/> Educator | <input checked="" type="checkbox"/> Laboratory | <input checked="" type="checkbox"/> Other (please describe) |
| <input checked="" type="checkbox"/> Entomologist | <input checked="" type="checkbox"/> Operations | GIS Specialist |

Comments:

During the season, the following were maintained:

Count	Equipment Type	Type(s)
0	Modified wetland equipment	NA
2	Larval control equipment	Backpack Sprayers
0	ULV sprayers	NA
0	Electric Vehicles	NA
2	Gas Powered Vehicles	Pickup Truck and SUV
	Other:	

Comments:

INTEGRATED PEST MANAGEMENT (IPM):

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

- | | |
|--|--|
| <input type="checkbox"/> Adult mosquito control | <input checked="" type="checkbox"/> Larval mosquito surveillance |
| <input checked="" type="checkbox"/> Adult mosquito surveillance | <input type="checkbox"/> Open Marsh Water Management |
| <input type="checkbox"/> Ditch maintenance | <input checked="" type="checkbox"/> Research |
| <input checked="" type="checkbox"/> Education, Outreach & Public education | <input type="checkbox"/> Source reduction |
| <input checked="" type="checkbox"/> Larval mosquito control | <input type="checkbox"/> Other (Please List:) |

Comments:

LARVAL MOSQUITO SURVEILLANCE

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

Describe the purpose of this program:

To monitor populations of vector mosquito species capable of transmitting arboviruses.

What months is this program active?

April through September

Describe the process of monitoring / sampling:

Larval habitats are monitored during the season by collecting samples (approximately five dips per flagged area). If mosquito genus and species cannot be reliably identified in the field, specimens are transported to the laboratory for identification. Sampling data are entered into the QField app and stored securely in the cloud.

Describe the habitat that is being sampled:

Permanent and ephemeral wetlands, as well as artificial containers.

What environmental conditions (vegetation, water quality, predators) are observed?

While the focus is primarily on monitoring mosquito larval densities and documenting the presence of predatory species (e.g., dragonfly nymphs, diving beetles, backswimmers, etc.), other notable and relevant fauna and flora are also documented, along with any unusual environmental conditions related to water quality, pollution/trash, or wildlife mortality.

How frequently are sites monitored?

The timing and frequency of larval site monitoring are determined by targeted species' habitat, seasonal conditions, weather constraints, and staff availability.

Comments:

ADULT MOSQUITO SURVEILLANCE

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

Describe the purpose of this program: To monitor and assess populations of vector mosquito species and the prevalence of arboviruses.

What months is this program active? April through 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)
ABC light trap	<input type="checkbox"/>	
ABC light trap w/CO ₂	<input type="checkbox"/>	
CDC light trap	<input type="checkbox"/>	
CDC light trap w/CO ₂	<input checked="" type="checkbox"/>	24-40 per week
Gravid trap	<input checked="" type="checkbox"/>	24-30 per week
Landing rate test	<input type="checkbox"/>	
NJ light trap	<input type="checkbox"/>	
NJ light trap w/CO ₂	<input type="checkbox"/>	
Ovitrap	<input type="checkbox"/>	
Resting box	<input checked="" type="checkbox"/>	2 rotated throughout season.
Other (please describe): CDC with CO ₂ and BG lure		1-2 per week.
Other (please describe):		
Other (please describe):		

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

If yes, how many:

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

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

Do you participate in the **MDPH Arboviral Surveillance program**? (yes/no): Yes

How many pools did you submit weekly on average? 39

Total number of adult mosquito pools submitted to DPH this past season: 700

Number of adult mosquito pools collected but not submitted to DPH ("Unsubmitted"): 1359

Total number of adult mosquitoes submitted to DPH this past season: 16067

ADULT MOSQUITO SURVEILLANCE

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

Number of Ovitrap collections this season, if any: 0

Any other trap collections of note (please describe): A total of 1505 Cx. erraticus were collected during the 2025 season.

Number of traps in your service area placed by **MDPH**: 406 traps were placed in non-member communities within the service area. Were these long-term trap sites or supplemental trapping sites? Yes or No: Long-term and supplemental trap sites.

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

Comments:

Arbovirus	+ Mosquito Pools	Equine Cases	Human Cases
<input checked="" type="checkbox"/> Eastern Equine Encephalitis (EEE)	1	0	0
<input checked="" type="checkbox"/> West Nile Virus (WNV)	53	0	1
<input type="checkbox"/> Other (please list):			

For each arbovirus listed below, please list number of municipalities at each risk level in your project area at both the start and peak of the season (say "all" if all municipalities are at same risk level):

Arbovirus	Start of Season	Peak of Season
EEE	Low Risk: 38 (55%)	Moderate Risk: 4 (6%)
WNV	Low Risk: All (100%)	Moderate Risk: 37 (54%)

Comments:

LARVAL MOSQUITO CONTROL:

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

Describe the purpose of this program: To reduce populations of both invasive and vector mosquito species capable of transmitting arboviruses.

What months is the program active? April through September

Describe the types of areas where you use this program: Permanent and ephemeral wetlands, as well as artificial containers such as catch basins, discarded tires, and unmaintained swimming pools.

Do you use:

- Aerial applications. Describe operations:
- Portable applications. Describe operations: Backpack sprayers are used to treat larval habitats with dry granular formulations.
- Other (please list):

LARVAL MOSQUITO CONTROL

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

- Best professional judgment. Describe: Proximity to sensitive locations such as schools, parks, senior housing, or areas with elevated risk.
- Historical records
- Larval dip counts – Describe trigger for application: 1 larva per 5 dips
- Other (please describe):

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	Target Life Stage	Habitat Type	Total Product Applied
FourStar 90-Day Bti Briquets	83362-3	1 briquet per basin	Hand	Larval	<input checked="" type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	2403 briquets
FourStar 45-Day Bti Briquets	83362-3	1 briquet per basin	Hand	Larval	<input checked="" type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	2468 briquets
FourStar Bti CRG	85685-4	7.5 lbs per acre	Backpack sprayer and hand	Larval	<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input checked="" type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	141.19 lbs
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	
					<input type="checkbox"/> Catch basins <input type="checkbox"/> Containers <input type="checkbox"/> Wetland <input type="checkbox"/> Other (please list):	

ADULT MOSQUITO CONTROL:

If you have an adult mosquito control program, please fill out the section below, otherwise 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. Describe operations:
- Portable applications. Describe operations:
- Truck applications. Describe operation:
- Other (please list):

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

Product Name	EPA #	Application Rate(s)	Application Method	Total 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

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

Tire Removal

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, otherwise 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:

Water Management/ Ditch Maintenance

For saltwater 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?

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, otherwise 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:

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

MEASURES OF EFFACACY

Describe monitoring efficacy 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):

Larval habitats treated during the season are monitored using observational data collected both before and after treatment. All data are entered into the QField app and stored securely through QField Cloud. These data are then analyzed to determine the efficacy of the treatments.

Provide or list standard steps, criterion, or protocols regarding the documentation of efficacy (pre and post data), and resistance testing (if any):

Research Project	Details
Bottle assays	
Efficacy testing	
Other:	
Other:	

EDUCATION, OUTREACH & PUBLIC RELATIONS

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

Describe the purpose of this program:

Education and outreach are central to the District's mission to reduce arbovirus risk across Franklin, Hampden, and Hampshire Counties. By engaging directly with the public, we have the opportunity to share information about mosquitoes and the diseases they can transmit, promote source reduction, and help residents learn practical steps to protect themselves and lower the risk of illness

What time frame during the year is this method employed?

Year round.

Check off all education/outreach methods that were performed by your program this year:

- | | |
|---|---|
| <input checked="" type="checkbox"/> Development/distribution of brochures, handouts, etc. | <input checked="" type="checkbox"/> Presentations at meetings |
| <input checked="" type="checkbox"/> Door-to-door canvassing (door hangers, speaking to property owners, etc.) | <input type="checkbox"/> School-based programs, science fairs, etc. |
| <input type="checkbox"/> Facebook page, Twitter, or other social media | <input checked="" type="checkbox"/> Tabling at events (local events, annual meetings, etc.) |
| <input type="checkbox"/> Mailings (Describe target audience(s):) | <input checked="" type="checkbox"/> Website |
| <input checked="" type="checkbox"/> Media outreach (interviews for print or online media sources, press releases, etc.) | <input type="checkbox"/> Other (please describe): |

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

There are no quantifiable data available on audience reach, as attendance counts, distribution logs, and unique web analytics cannot be reliably collected.

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

1. Webinar/Listening Session with the Town of Shutesbury and Valley Health Collaborative: Speaker
2. Cooperative Public Health Service's Spring Meeting: Speaker
3. Deerfield Flood Resiliency Workshop for Property Owners and Residents: Speaker

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

Please list any certifications and degrees held by your staff: John Briggs, B.S. in Environmental Science

List any training/education your staff received this year: NMCA Annual Meeting, NMCA Field Day, and MDAR Invasive Species Webinar

INFORMATION TECHNOLOGY (IT)

Does your program use (check all that apply):

- Aerial Photography
- Databases
- Dataloggers (monitoring for temperature, etc.)
- GIS mapping (Describe:) QGIS and QField
- GPS equipment
- Smartphones
- Tablets/Toughbook
- Other (please describe):

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

REVENUES & EXPENDITURES

Please enter your approved budgets for the previous, current, and future fiscal years.

	Date of Fiscal Year	Approved Budget
Previous	FY25	\$129243.43
Current	FY26	\$147642.34
Future	FY27	\$150678.50

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): Pioneer Valley MCD is funded through voluntary appropriations from the budgets of 25 participating communities. Each participating community is required to pay an annual fee of \$5250.00. Member municipalities have the option to opt into larval mitigation services at an additional cost.

Comments:

SERVICE REQUESTS

How many service requests did you receive this season?

How many were for larviciding?

How many were for adulticiding?

Was this an increase or decrease over last season?

Comments:

EXCLUSIONS

How many exclusion requests did you receive this season? 25

Was this an increase or decrease over last season? Yes or No: Decrease

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

Comments:

SPECIAL PROJECTS

Did your program perform any of the following special projects?

Project	Description
<input type="checkbox"/> Inspectional services (inspections at sewage treatment facilities, review of subdivision plans, etc.)	
<input type="checkbox"/> 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.	
<input type="checkbox"/> Work with groups as described above on long-term solutions.	
<input type="checkbox"/> Conduct or participate in any cooperative research or restoration projects?	
<input type="checkbox"/> Participate in any state/regional/national workgroups or panels, or attend any meeting pertaining to the above?	
<input type="checkbox"/> Work on any biological control projects, such as enhancement of habitat for native predators, release of predatory fish or invertebrates, etc.?	
<input type="checkbox"/> Other	

GENERAL COMMENTS

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