



Notice of Intent (NOI)

for coverage under the **Pesticide General Permit (PGP)**
 for discharges from the application of pesticides to waters
 of the State of Vermont

Submission of this completed NOI constitutes notice that the Operator identified in Section B intends to be authorized to discharge pollutants to waters of the State, identified in Section C, under Vermont's Pesticide General Permit (PGP). Submission of this NOI constitutes notice that the party identified in Section B of this form has read, understands, and meets the eligibility conditions per Part 1 of the PGP; agrees to comply with all applicable terms and conditions of the permit; and understands that continued authorization under the PGP is contingent on maintaining eligibility for coverage. To be granted coverage, all information required on this form must be completed. Please read and ensure compliance with all permit conditions, including the requirement to prepare a Pesticide Discharge Management Plan (PDMP) prior to NOI submittal, except for applications made in response to a declared pest emergency situation, per Part 6 (defined in Appendix A) of the PGP.

A. Notice of Intent Status

1. Mark whether this is an original request for coverage under the PGP or if this is a change of information for a discharge already covered under the PGP. If this is a change of information, supply the NPDES permit tracking number for the discharge below.

Original NOI Submission NOI Change of Information Prior permit tracking number (if known): _____

B. Operator Information

1. Name: Lemon Fair Insect Control District
 2a. Mailing Address: 2 PO Box 24
 2b. Town: Bridport 2c. State: VT 2d. Zip: 05734
 3. Phone: 802 453-7237 4. Email: ddodge10708@gmail.com
 5. Contact Name: Craig Zondag
 6. Contact Phone: 802 453 7237 7. Contact Email: dragonfleyczgal@gmail.com
 8. Operator (Entity) Type: Federal State Local Insect Control District
 Other _____

C. Pest Management Area

1. Pest Management Area Name: Lemon Fair Valley
 2. Pesticide Use Pattern(s):
 Mosquito & Other Flying Insect Pest Control Weed & Algae Pest Control
 Forest Canopy Pest Control Animal Pest Control

3a. Project location Address (include a location map):
 3b. Town: Cornwall, Bridport, Weybridge 3c. County: Addison
 4. Latitude: 5. Longitude:
 6. SPAN: Enter the 11 - digit number that is printed on the property tax bill for the applicable parcel(s). Projects that involve more than 1 parcel shall list all applicable SPANs.
 a. totality of all 3 Towns e.
 b. f.
 c. g.
 d. h.

D. Receiving Waters	
1. Name of receiving water(s): <u>Lemon Fair River, Otter Creek</u>	
<input checked="" type="checkbox"/> Coverage requested for all waters within location identified above <input type="checkbox"/> Coverage requested for all waters within location identified above except for: _____ <input type="checkbox"/> Coverage requested specifically for the following waters within location identified above: _____	
2a. Outstanding Resource Waters (See PGP, Part 1.1.2.2; Vermont Water Quality Standards Appendix H): Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
2b. If yes, please provide name of Outstanding Resource Water(s):	
2c. Provide a rationale for determination that pesticide discharge is necessary to protect water quality, the environment, and/or public health and that any such discharge will not degrade water quality or will degrade water quality only on a short-term or temporary basis. Please submit this information in a supporting document.	
3. Discharges to Water Quality Impaired Waters (See PGP Part 1.1.2.1) Operators are not eligible for coverage under this permit for any discharges from a pesticide application to waters of the State if the waters are identified as impaired by a substance that is either an active ingredient of the pesticide designated for use or is a degradate of such an active ingredient.	
Check one (provide supporting evidence for either on the location map):	
<input checked="" type="checkbox"/> Waters are not impaired by any substance that is either an active ingredient of a pesticide to be discharged or a degradate of such an active ingredient. <input type="checkbox"/> Waters are on a current state list as being impaired by a substance which is either an active ingredient of a pesticide to be discharged or a degradate of such an active ingredient; however, evidence is attached documenting that the waters are no longer impaired.	
E. Public Notice Requirement	
A copy of this complete NOI will be provided to the municipal clerk for posting in the municipality in which the project is located in accordance with the PGP, Section 1.2.4. If the project and the related discharge(s) are located within different municipalities, then the completed NOI will be filed with the municipal clerks within each municipality. The municipal clerk shall post the completed NOI. A copy of this NOI will also be posted on DEC's webpage.	
Information for the Municipal Clerk regarding posting instructions can be found on Page 3 of this NOI.	
E. Certification Relating to the Accuracy of the Information Submitted	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further certify that the applicant has sufficient title, right or interest in the property where the proposed activity occurs.	
Operator: <u>Christine Chapline</u>	Title: <u>LFCD Secretary</u>
Signature: <u>Christine Chapline</u>	Date: <u>4/8/18</u>

*10 V.S.A. § 1263 Effective January 1, 2018;
(b) When an application is filed under this section, the Secretary shall proceed in accordance with chapter 170 of this title. The Secretary may require any applicant to submit any additional information that the Secretary considers necessary and may refuse to grant a permit, or permission to discharge under the terms of a general permit, until the information is furnished and evaluated.
PGP NOI proceeded in accordance with Type 4 procedures under 10 V.S.A. Chapter 170 upon receipt of this application.

INFORMATION FOR MUNICIPAL CLERK * 10 V.S.A. §1263(b) provides for the public notice of an applicant's intent to discharge pollutants to waters of the State. Please post this notice and instruction sheet in a conspicuous place for 10 days from the date received.	
PUBLIC COMMENT * Public comments concerning this NOI must be submitted within 10 days of receipt of this Notice by the Municipal Clerk. Comments should address how the application complies or does not comply with the terms and conditions of the PGP. All written comments received within the timeframe described above will be considered by the Department of Environmental Conservation in its final ruling to grant or deny authorization to discharge under the PGP. Send written comments to: Department of Environmental Conservation Watershed Management Division Main Building, Second Floor 1 National Life Drive Montpelier, VT 05620-3522 <i>Please cite the NOI permit tracking number in any correspondence.</i>	SUBMITTING THIS FORM To submit this NOI, forms may be mailed to: Department of Environmental Conservation Watershed Management Division Main Building, Second Floor One National Life Drive Montpelier, VT 05620-3522
APPEALS <u>Renewable Energy Projects – Right to Appeal to Public Service Board</u> If this decision relates to a renewable energy plant for which a certificate of public good is required under 30 V.S.A. §248, any appeal of this decision must be filed with the clerk of the Vermont Public Service Board pursuant to 10 V.S.A. §8506 within 30 days of the date of this decision. The appellant must file with the Clerk an original and six copies of its appeal. The appellant shall provide notice of the filing of an appeal in accordance with 10 V.S.A. §8504(c)(2), and shall also serve a copy of the Notice of Appeal on the Vermont Department of Public Service. For additional information, see the Rules and General orders of the Public Service Board available at www.psb.vermont.gov or via telephone: (802) 828-2358. The address for the Public Service Board is 112 State Street, Montpelier, VT 05620-2701 <u>All Other Projects – Right to Appeal to Environmental Court</u> Pursuant to 10 V.S.A. Chapter 220, any appeal of this decision must be filed with the clerk of the Environmental Court within 30 days of the date of the decision. The Notice of Appeal must specify the parties taking the appeal and the statutory provision under which each party claims party status; must designate the act or decision appealed from; must name the Environmental Court; and must be signed by the appellant or their attorney. In addition, the appeal must give the address or location and description of the property, project or facility with which the appeal is concerned and the name of the applicant or any permit involved in the appeal. The appellant must also serve a copy of the Notice of Appeal in accordance with Rule 5(b)(4)(B) of the Vermont Rules for Environmental Court Proceedings. Additional information is available at: www.vermontjudiciary.org or via telephone: (802) 951-1740. The address for Environmental Court is 32 Cherry Street, 2nd Floor, Suite 303, Burlington, VT 05401 A copy of PGP may be obtained from the Watershed Management Division's website at: http://dec.vermont.gov/watershed	
<i>For Department Use Only</i>	
VERMONT DEPARTMENT OF ENVIRONMENTAL CONSERVATION AUTHORIZATION TO DISCHARGE	
A determination has been made that the proposed discharge to waters of the State of Vermont qualifies for coverage under the Vermont NPDES Pesticide General Permit (PGP). Subject to the terms and conditions of the PGP and the NOI, the Applicant is hereby authorized to discharge to waters of the State. Dated this _____ day of _____, 2017 Emily Boedecker Commissioner Department of Environmental Conservation By: _____ Lakes and Ponds Management and Protection Program	

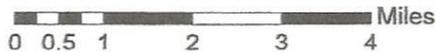
NYPDES PGP Notice of intent D2c: Provide a rationale ...

Swarms of nuisance mosquitoes in the towns covered by the Lemon Fair Insect Control district have at times made outdoor activities nearly impossible for some residents. The Lemon Fair Insect Control District uses only the biological larvicides, Bti and/or Bs in its mosquito abatement program. Biological larvicides are the preferred method for controlling nuisance mosquitoes because they have a long history of having no impact on water quality and no environmental repercussions, including no impact on non-target species. Bti and Bs toxins are specific to mosquitoes and blackflies. The granules used as carrier are natural and biodegradable.

LFICD Mosquito District



Legend	
	PEM_NWI_Wetlands_pos
	PSE_NWI_Wetlands_pos
	PFD_NWI_Wetlands_pos
	PFO_NWI_Wetlands_pos



1:40,000

1 in = 0.63 miles



Alan C. Graham
created 3/22/2012

Pesticide Discharge Management Plan

for:

Project Name: Lemon Fair Insect Control District
Pest Management Area(s)/General Location: Cornwall, Weybridge, Bridport
City, State: VT

Decision-maker(s):

Company or Organization Name: Lemon Fair Insect Control District
Name: Craig Zondag
Address: P.O. Box 24
City, State, Zip Code: Bridport VT 05734
Telephone Number: ② 802 453 7237 ① 802 349-6126 (district cell phone)
Email: dragonfleyezgal@gmail.com

PDMP Contact(s):

Company or Organization Name: Lemon Fair Insect Control District
Name: David Dodge
Address: P.O. Box 24
City, State, Zip Code: Bridport, VT
Telephone Number: 802 462-3898
Email: ddodge10708@gmail.com

PDMP Preparation Date:

MM/DD/YYYY: 04/10/18

SECTION 1: Operator Information

Instructions (see PGP Part 1.0):

- Describe the Pest Management Area(s) and identify the type(s) of Pesticide Use Patterns, Operator type, and if there will be a discharge to water quality impaired waters.

Note: An "Operator" is defined in Appendix A of the PGP to mean any entity associated with the application of pesticides that results in a discharge to Waters of the United States that meets either of the following two criteria: (1) any entity who performs the application of a pesticide or who has day-to-day control of the application (i.e., they are authorized to direct workers to carry out those activities); or (2) any entity with control over the decision to perform pesticide applications including the ability to modify those decisions. Operators identified in (1) above are referred to in the permit as Applicators while Operators identified in (2) are referred to in the permit as Decision-makers. As defined, more than one Operator may be responsible for complying with this permit for any single discharge from the application of pesticides.

A "Pest Management Area" is defined in Appendix A of the PGP to mean the area of land, including any water, for which an Operator has responsibility for and is authorized to conduct pest management activities as covered by the PGP permit (e.g. for an Operator who is a mosquito control district, the pest management area is the total area of the district). The Pest Management Area could include contiguous and non-contiguous sites.

1. Provide a description of the Pest Management Area(s): *Potash, Lemon Fair and Otter Creek River environs in Weybridge, Cornwall and Bridport.*
2. Identify the Pesticide Use Patterns for this Pest Management Area that trigger the requirement to develop a PDMP. (check all that apply). Note: Decision-makers, that are a large entity, are required to develop a PDMP if they are required to submit an NOI. See Part 5.0 of the PGP for exceptions.
 - a. Mosquitoes and Other Flying Insect Pests
 - b. Weeds and Algae
 - c. Animal Pests
 - d. Forest Canopy Pests
3. Operator Type (check one):
 - a. Federal Government
 - b. State Government
 - c. Local Government
 - d. Mosquito control district (or similar)
 - e. Irrigation control district (or similar)
 - f. Weed control district (or similar)
 - g. Other: If other, provide brief description of type of Operator:

SECTION 2: PDMP Team

Instructions (see PGP Part 6.1.1):

List the Decision-maker, person or organization that prepared the PDMP and/or responsible for revising the PDMP, and the person or organization that will prepare and address corrective actions, adverse incident, and spills. Indicate respective responsibilities, where appropriate.

1. Decision-maker: *Any entity with control over the decision to perform pesticide applications including the ability to modify those decisions.*

Company or Organization Name:	
Name:	Craig Zondag
Address:	P.O. Box 24
City, State, Zip Code:	Bridport VT 05734
Telephone Number:	802 453-7237 802 349-6126 (distinct cell phone)
Email address:	dragonfleyezgal@gmail.com
Area of Control (if more than one Operator at site):	

2. PDMP Contact: *Person(s) who should be contacted regarding PDMP questions.*

Company or Organization Name:	
Name:	David Dodge
Address:	
City, State, Zip Code:	same
Telephone Number:	802 462-3898
Email address:	ddodge.10708@gmail.com
Area of Control (if more than one Operator at site):	

3. This PDMP was Prepared by: *Person(s) responsible for developing and revising the PDMP.*

Company or Organization Name:	
Name:	Christine Chapline
Address:	
City, State, Zip Code:	same
Telephone Number:	802 462-3760
Email address:	jds mcc@aol.com
Area of Control (if more than one Operator at site):	

4. Please include any additional team members and their responsibilities.

Team Member Name(s)	Individual Responsibilities

SECTION 3: Problem Identification

3.1 Pest Problem Description

Instructions (see PGP Part 6.1.2):

- Describe the pest problem, including identification of the target pest(s), source of the pest problem, and source of data used to identify the problem in Parts 3.2.1, 3.2.2, 3.2.3, and 3.2.4 of the PGP.

Note: The response will be one or more paragraphs, depending on the nature and complexity of the project. The source of the pest problem may be unknown. DEC does not expect the Decision-maker(s) to conduct long term studies to determine the source of the pest problem.

1. Provide a brief summary of the pest problem in the table.

Summary of Pest Problem

Target Pest <i>Note: Use common name</i>	Source of the pest problem	Data Source (e.g. survey conducted in 2016)
mosquitoes	flood plains	larval surveys 2008-2017 adult trapping 2016-2017

2. Provide a description of the pest problem.

Nuisance mosquitoes originating in the floodplains of the Lemon Fair and Otter Creek ~~rivers~~ and Potash watersheds. The LFICD targets mosquito larva only.

3.2 Action Threshold(s)

Instructions (see PGP Part 6.1.2):

- Describe the action threshold(s) for pest(s) in the pest management area, including data used in developing the action threshold(s) and method(s) to determine when the action threshold(s) has been met.

Note: An action threshold is the point at which pest populations or environmental conditions necessitate that pest control action be taken based on economic, human health, aesthetic, or other effects. An action threshold may be based on current and/or past environmental factors that are or have been demonstrated to be conducive to pest emergence and/or growth, as well as past and/or current pest presence. Action thresholds are those conditions that indicate both the need for control actions and the proper timing of such actions.

1. Provide a summary of the action threshold(s) in the table.

Summary of Action Threshold(s)

Target Pest	Action Thresholds
Mosquitoes	Average of 20 mosquito larva in a 1 pint dip (over 10 dips representing a 200 acre area)

2. Provide a description of the action threshold(s).

Pest Management Objective: to knock back mosquito larva before they hatch ^{can fly}

Target Pest: floodplain mosquitoes

Action Threshold: 20 larva / pint dip

Basis for the action threshold: State entomologist and mosquito district experience

Method to determine when the action threshold has been met: counting and averaging larva caught in a 1 pint dipper in at least 10 dips
representing 200 acres of floodplain

3.3 General Location Map

Instructions (see PGP Part 6.1.2):

- Provide a general location map (e.g., U.S. Geological Survey (USGS) quadrangle map) that identifies the geographic boundaries of the area to which the plan applies and location of the waters of the State
- To improve readability of the map, some detailed information may be kept as an attachment to the site map and pictures may be included as deemed appropriate.

Include a copy of the general location map for this facility as an attachment labeled **3.3 General Location Map**.

3.4 Water Quality Standards

Instructions (see PGP Part 6.1.2):

- Document waters impaired for pesticide(s) or any degradates for which there may be a discharge. Note: Operators are not eligible for coverage under the PGP for any discharges from a pesticide application to waters of the State if the water is identified as impaired by a substance which either is an active ingredient in that pesticide or is a degradate of such an active ingredient, per PGP Part 1.1.2.1.
- Indicate the location of all waters, including wetlands, on the general location map.
- Document any Outstanding Resource Waters and any water(s) impaired for a specific pesticide or any related degradates to which there may be a discharge.

Note: Decision-maker is not required to make a water quality standard (WQS) determination.

Vermont's Water Quality Standards are available at:

http://dec.vermont.gov/sites/dec/files/documents/wsmd_water_quality_standards_2016.pdf

If applicable, provide a summary of waters impaired for pesticides.

Not applicable

SECTION 4: Pest Management Options Evaluation

Instructions (see PGP Part 6.1.3):

- Document your evaluation of the pest management options, including combination of the pest management options, to control the target pest(s) in the following sections:
 - No Action
 - Prevention
 - Mechanical/Physical Methods
 - Cultural Methods
 - Biological Control Agents
 - Pesticides
- In your evaluation, you must consider the impact to water quality, impact to non-target organisms, feasibility, and cost effectiveness.

Note: All six pest management options may not be available for a specific use category and/or treatment area. However, the PDMP must include documentation of how the six pest management options were evaluated. The PGP does not require the use of the least toxic alternative or that non-pesticide methods be tried first. Combinations of various pest management options are frequently the most effective Pest Management Measures over the long term. The goal should be to emphasize long-term control rather than a temporary fix. "Pest Management Measure" is defined to be any practice used to meet the effluent limitations that comply with manufacturer specifications, industry standards and recommended industry practices related to the application of pesticides, relevant legal requirements and other provisions that a prudent Operator would implement to reduce and/or eliminate pesticide discharges to waters of the State.

1. Provide a description of the pest management options (include impact to water quality, impact to non-target organisms, feasibility, cost effectiveness and any relevant previous Pest Management Measures).

- Target Pest: Mosquitoes
- No Action: results in residential complaints; potential disease vectors
- Prevention: We target larva before they mature to nuisance stage
- Mechanical/Physical Methods: No practical options
- Cultural Methods: We work with residents to reduce mosquito habitat.
- Biological Control Agents: Used exclusively and have no impact on water
- Pesticides: Not used ~~by us~~ by the LFCD (no chemical pesticides) ^{quality or non-targets}

2. Provide a summary of Pest Management Measures that will be or are implemented to meet the technology-based effluent limitations.

Target Pest: Mosquitoes

Pest Management Measures:

We will strictly follow the product labels regarding concentration of product applied and intervals between treatments.

SECTION 5: Response Procedures

5.1 Spill Response Procedures

5.1.1 Spill Containment

Instructions (See PGP Part 6.1.4):

- Document the procedure for expeditiously stopping, containing, and cleaning up leaks, spills, and other releases to Waters of the United States.
- Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the PDMP team.

The products are solid, granules or briquettes, so not likely to leak. Bags of products are relatively small and spills can be cleaned up with common tools such as broom or shovel. The products are not toxic.

5.1.2 Spill Notification

Instructions (See PGP Part 6.1.4):

- Document the procedure for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies.

The products we use are non-hazardous ~~are~~ but in case of a major spill we would call the appropriate state employee (Dominique Golliot)

5.2 Adverse Incident Response Procedures

5.2.1 Responding to an Adverse Incident

Instructions (See PGP Part 6.1.4):

- Document the procedures for responding to any adverse incident resulting from pesticide applications.

Post application surveys are taken in the field. If there is an adverse or unusual occurrence we would notify contacts at the VAA and DEC.

5.2.2 Notification of an Adverse Incident

Instructions (See PGP Part 6.1.4):

- Document the procedures for notification of the adverse incident, both internal to the Decision-maker's agency/organization and external. Contact information for state/federal permitting agency, nearest emergency medical facility, and nearest hazardous chemical responder must be in locations that are readily accessible and available.

The products we use are not considered hazardous. Emergency medical: Porter Hospital

SECTION 6: Signature Requirements

Instructions (see PGP Part 6.1.5):

- The following certification statement must be signed and dated to certify that the PDMP is in accordance with the PGP Appendix B, Subsection B.11.

Note: This certification must be re-signed whenever necessary to address any of the triggering conditions for corrective action in Part 7.1 or when a change in pest control activities significantly changes the type or quantity of pollutants discharged.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the application of pesticides, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Christine Chapline Title: LFICD Secretary
Signature: Christine Chapline Date: 4/8/18

Repeat as needed for multiple Decision-makers at the site.

Lemon Fair Insect Control District
Addendum to PDMP Section 3.2 Action Thresholds

The Lemon Fair Insect Control District has been collecting mosquito larval survey data in the towns of Bridport and Cornwall since 2007 and in Weybridge since 2009. During these years, the LFICD has worked in conjunction with the Vermont Agency of Agriculture to establish representative larval dipping sites along the Lemon Fair, Potash and Otter Creek floodplains that are best suited to monitor mosquito activity along these waterways. We currently have mapped 20 designated sites encompassing approximately 2500 acres to monitor and treat as necessary.

In 2013, the Vermont State Entomologist and the VAA established a threshold of an average of 50 larva per 1 pint dip over 10 dips from a site representative of approximately 200 acres, based on the personal experience and observations of the State Entomologist. The larvicide product (Vectobac GS, Bti) concentration was set by the VAA at the minimum amount recommended on the product label, 5 lbs./acre. This larval threshold is very high and the larvicide concentration is low compared with treatment threshold protocols from mosquito districts in other states, however these are the thresholds that the LFICD worked with from 2013 to 2016. A combination of the high treatment threshold set by the VAA and dry conditions (and possibly because of a knockdown of deposited mosquito eggs from treatments in the preceding years) resulted in no aerial treatments in the years 2014-2016. In 2015, the LFICD sold its airplane, with the plan to hire an out-of-state helicopter service if the treatment threshold is observed in sufficient acreage to warrant aerial treatment (a minimum of 1000 acres was set by the helicopter company). Larval monitoring at established sites continued and hot spots on small acreages that met threshold larval levels were treated from the ground. Missed hatches too far along to treat and emergent adults were sometimes observed during routine larval surveys, which led to the conclusion that the lack of treatment was leading to overlapping hatches and that we needed to be more aggressive with larvicide treatments early on. This led to a change in our 2017 Grant Agreement with the VAA that now specifies a threshold of 20 larva/dip, based on a more nuanced approach to treatment that has de-emphasized aerial treatments of large acreages and emphasizes more concentrated treatments of problem areas. The lower threshold allows the LFICD to more effectively control mosquitoes in problem areas that have been identified over years of survey data, with a goal of avoiding unnecessary and costly widespread applications of larvicide over large areas. Application rates will also now be dictated by the product label recommendations for the particular issues, such as maturity level of the observed larva.

Integrated Pest Management practices were put into effect, again in conjunction with and under a Grant Agreement with the Vermont Agency of Agriculture, starting in 2015. These IPMs include monitoring rainfall amounts and also flood water levels at specified sites; setting up a hotline for citizen complaints of nuisance mosquitoes, following up with site visits and advice to landowners for reducing mosquito habitat on their properties; and public outreach and education. We have received several

hotline calls/year and our Field Coordinator has followed up on each call. Citizen complaints have helped us to identify useful sites for adult trapping.

In 2016, the LFICD began setting up adult mosquito traps in known hotspots and also in random spots to monitor adult activity and to try to correlate larval observations with adult activity. The trapped mosquito species are identified in our lab and we have also begun identifying mosquito species from larva in the floodplains. This data will not only help us to identify the problem areas within our towns, but to identify disease vector species and to extrapolate whether or not they may be coming from the floodplains as opposed to containers such as tire bunkers. Also beginning in 2016, a longer lasting (45 day, as opposed to 4 day) Bti/Bs product (applied by hand) was approved by the VAA for our use. This will cut down on the amount of overall larvicide applications needed to control mosquitoes in problem areas and hard to reach areas. Per agreement with the VAA, we will also be allowed to treat with a higher concentration of larvicide if we observe higher instars (instars 3 and 4, which are more resistant to the larvicide) of mosquito larva (however, not to exceed the recommended maximum on the product label). The LFICD will continue to work with the VAA to establish optimal thresholds for efficient mosquito control.

Synopsis of mosquito larva survey data resulting in treatment 2009-2017:

No specified threshold:

2009: 5096 acres treated in approximately 7 events between 4/27/09-8/3/09

2010: 1784 acres treated in 2 events between 6/13/10-7/1/10

2011: 5256 acres treated in 5 events between 5/20/11-8/18/11

2012: 2690 acres treated in 3 events between 4/28/12 and 6/1/12

50 larva/dip threshold:

2013: 720 acres in 2 events between 5/27/13 and 7/25/17. An average of >50 larva/dip were observed in 4-5 sites on both occasions.

2014: no aerial treatments; 9 acres treated by hand

2015: no aerial or ground treatments

2016: no aerial or ground treatments

20 larva/dip threshold:

2017: 256 acres treated by air in 1 event, 9 acres treated by hand in 1 event. An average of >50 larva/dip were observed in 1 site for each treatment.

Larval survey raw data from 2015-2017 and adult trapping data from 2016-2017 are included on our website, www.lficd.org under Data and Specs. The larval data includes dates, locations and larval counts pre- and post-treatment. The adult mosquito data includes dates, locations, counts and identified species. The website will be updated with new data as it is obtained.