

Durham Mosquito Abatement District
PO Box 386
Durham, CA 95938

State Water Resources Control Board
Division of Water Quality
PO Box 100 Sacramento, CA 95812-0100

May 15, 2016

Attention: Vector Control "Permit Application Department"

Subject: Application for General Permit CAG 990004 – NOI and PAP Document submittal by the Oroville Mosquito Abatement District

Dear Sirs,

Please find the Notice of Intent and Pesticide Application Plan (NOI / PAP) for the Durham Mosquito Abatement District dated May 12, 2016 attached.

Additionally, a check for \$241.00 is included to cover the filing fee expense for this first time enrollee.

If you have any questions, please contact Aaron Amator, Manager of the Durham Mosquito Abatement District at (530) 345-2875.

Sincerely,

Aaron Amator, District Manager

ATTACHMENT E – NOTICE OF INTENT

**WATER QUALITY ORDER 2016-XXXX-DWQ
GENERAL PERMIT CAG990004**

**STATEWIDE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
FOR BIOLOGICAL AND RESIDUAL PESTICIDE DISCHARGES
TO WATERS OF THE UNITED STATES
FROM VECTOR CONTROL APPLICATIONS**

I. NOTICE OF INTENT STATUS (see Instructions)

Mark only one item	<input checked="" type="checkbox"/> A. New Applicator	<input type="checkbox"/> B. Change of Information: WDID# _____
	<input type="checkbox"/> C. Change of ownership or responsibility: WDID# _____	
	<input type="checkbox"/> D. Enrolled under Order 2011-0002-DWQ: WDID# _____	

II. DISCHARGER INFORMATION

A. Name <i>Durham Mosquito Abatement District</i>			
B. Mailing Address <i>PO Box 386</i>			
C. City <i>Durham</i>	D. County <i>Butte</i>	E. State <i>CA</i>	F. Zip Code <i>95938</i>
G. Contact Person <i>Aaron Amator</i>	H. Email address <i>aamad@stormnet.com</i>	I. Title <i>District Manager</i>	J. Phone <i>(530) 345-2875</i>

III. BILLING ADDRESS (Enter Information only if different from Section II above)

A. Name			
B. Mailing Address			
C. City	D. County	E. State	F. Zip Code
G. Email address	H. Title	I. Phone	

IV. RECEIVING WATER INFORMATION

A. Biological and residual pesticides discharge to (check all that apply)*:

1. Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.
Name of the conveyance system: _____

2. Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.
Owner's name: _____
Name of the conveyance system: _____

3. Directly to river, lake, creek, stream, bay, ocean, etc.
Name of water body: Butte Creek, Durham Slough, Little Dry Creek, Hamlin Slough

* A map showing the affected areas for items 1 to 3 above may be included.

B. Regional Water Quality Control Board(s) where application areas are located
(REGION 1, 2, 3, 4, 5, 6, 7, 8, or 9): Region 5
(List all regions where pesticide application is proposed.)

A map showing the locations of A1-A3 in each Regional Water Board shall be included.

V. PESTICIDE APPLICATION INFORMATION

A. Target Organisms: Vector Larvae Adult Vector

B. Pesticides Used: List name, active ingredients and, if known, degradation by-products
Zoecon Alfotel Pellets, methoprene
CoCo Bear Oil, Mineral oil
BVA 2 Mosquito Larvicide oil, mineral oil
Alpro Evoleur 4-4 ULV, Permethrin and PBO
Pyrethrin 25-5 Public Health Spray, Pyrethrins and PBO

C. Period of Application: Start Date January 1, 2016 End Date December 31, 2016

D. Types of Adjuvants Added by the Discharger: none

VI. PESTICIDES APPLICATION PLAN

A. Has a Pesticides Application Plan been prepared?*

Yes No

If not, when will it be prepared? _____

* A copy of the Pesticides Application Plan shall be included with the NOI.

B. Is the applicator familiar with its contents?

Yes No

VII. NOTIFICATION

Have potentially affected governmental agencies been notified?
 Yes No

* If yes, a copy of the notifications shall be attached to the NOI.

VIII. FEE

Have you included payment of the filing fee (for first-time enrollees only) with this submittal?
 Yes NO NA

IX. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure 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 or imprisonment. Additionally, I certify that the provisions of the Order, including developing and implementing a monitoring program, will be complied with."

A. Printed Name: Aaron Amator

B. Signature: [Handwritten Signature]

Date: 5-16-16

C. Title: Manager

X. FOR STATE WATER BOARD USE ONLY

WDID:	Date NOI Received:	Date NOI Processed:
Case Handler's Initial:	Fee Amount Received: \$	Check #:

Durham Mosquito Abatement District
PO Box 386
Durham, CA 95938

National Pollution Discharge Elimination System Pesticide Application Plan

This Pesticide Application Plan (PAP) is consistent with the philosophy and actions of The District. It is not significantly different from previous PAPs beginning with 2012.

A map of the program area is included. The map specifies waters of the US that may receive pesticide drift associated with adult mosquito spraying inside the District boundaries.

A: Description of Target Area

For a map of District Boundaries, see Attachment 1: Durham MAD Boundaries

General description of district boundaries

The Durham MAD encompasses 64 square miles in Butte County, California including the town of Durham, CA.

Description of district boundaries:

Northern boundary: An east / west line along the section boundary lines, 3 miles north of Pentz Road.

Southern boundary: An east / west line approximately 1/4 mile south of Shippee Road.

Eastern boundary: A north / south line running along US Highway 99.

Western boundary: A north / south line running through Troxel Road.

No known water of the United States is treated directly by the Durham MAD. There is a potential for spray drift to reach waters of the United States during adulticide activity inside the District. The waters of the United States within the periphery of the district: Butte Creek, Little Dry Creek, Durham Slough, Hamlin Slough

The district does not access any property owned by a Federal, State, or local agency containing a water of the United States. Further the District does not ask or receive permission to work in any such area.

B. Factors influencing pesticide applications

(See Best Management Practices for Mosquito Control in California (CDPH – 2010))

Larval Control Decision Process (Alternatives considered)

Best Management Practices

Sites are surveyed prior to any action to determine if mosquito larvae are present or if it is likely that the site will produce mosquito larvae in the foreseeable future.

The first option considered is elimination of the site through physical action (ie. filling a tire rut with sand or draining an unused swimming pool).

The second BMP implemented as an alternative to pesticide use is biological control of mosquito larvae with mosquitofish (*Gambusia affinis*)

The next BMP alternative is larval control with pesticides, after all alternative actions have been considered. If a mosquito larval development source cannot be addressed through source elimination or mosquito fish, a least toxic option pesticide is considered (i.e. methoprene (Altosid)).

If mosquito pupae are present in a larval development site, control with the least toxic option (Altosid) must be rejected as an option and the site is treated with CocoBear or BVA 2 oil.

Adult Control Decision Process (Alternatives considered)

Best Management Practices

When considering adult mosquito control - the District always considers the option of not spraying, or spraying only a portion of the district. The District will only spray when conditions indicate it is a necessary, and will always spray the smallest area that will ensure an efficacious application.

Adult mosquito control is a last resort option that is utilized only in accordance with one or more of the following Best Management Practice criterion:

Surveillance (mosquito population)

Mosquito trap data indicates a large population of adult mosquitoes

Telephone calls to the district indicate a significant level of mosquito annoyance

Surveillance (mosquito species and disease risk)

When species captured and / or the documented presence of mosquito vectored disease activity in the region (See California Mosquito-Borne Virus Surveillance and Response Plan) indicate there is an elevated risk of mosquito-vectored disease transmission to humans.

Once the District has determined that following Best Management Practices are implemented during planning and execution of the application:

Determine the smallest area that can be sprayed to achieve an efficacious application

Plan application to cover the area as efficiently as possible

Implement the application only when weather conditions are appropriate and mosquito populations are active

C. Types of Pesticides Used and Application Methods

All pesticides are applied in accordance with label directions.

Mosquito larvicides

Zoecon Altosid Pellets EPA Registration #: 2724-448

Altosid (methoprene) pellets – may be used to prevent mosquito larvae from maturing and emerging as adults from a known larval development source. Pellets are applied through a power backpack blower / spreader. Briquettes are applied singly by hand.

CocoBear oil EPA Registration #: 8329-93

BVA 2 Mosquito Larvicide Oil EPA Registration #: 70589-1

Surface Oils - These are physical control products applied when late instar mosquito larvae or mosquito pupae are present. A pressurized hand can is used to apply oil as needed.

Adulticides

Allpro Evoluer 4-4 ULV EPA Registration #: 769-982

Active ingredients are permethrin and PBO

Adulticides are applied as an ultra-low volume aerosol spray through truck mounted Grizzly or London Fog brand ULV sprayers. Applications take place during the evening or early morning, beginning at sunset or ending at sunrise, during the time when the sun is below the horizon.

D. Description of Anticipated Application Areas

Products may be applied anywhere within district boundaries:

Larval control: Larval sources within the district include residential (ie. pools, boats, animal troughs) and rural sources (ie. natural ponds, irrigation ditches, rice fields, irrigated pastures).

Adult control: Adulticides may be applied anywhere within district boundaries.

E. Other Best Management Practices Utilized by the District

Public education is a mosquito control Best Management Practice continually employed by the District. Specific activities include working with local newspaper to print articles

about mosquitoes, mosquito-borne diseases, and eliminating back-yard mosquito sources. District personnel also work directly with residents and business owners to eliminate problems like excess irrigation, clogged storm drains, unmaintained pools, and removal of miscellaneous containers that may hold water.

For a more comprehensive listing of all Best Management Practices considered, please see Best Management Practices for Mosquito Control in California. Pesticides use is always a last resort (as previously discussed), after physical and biological control have failed to adequately control the problem.

F. Anticipated Pesticide Use

This is only an estimate of use within reportable areas based on actual use during the past several seasons. Actual use may be greater or less than the estimate depending on weather, precipitation, and many other factors that cannot be anticipated.

Adulticide

Evoleur 4+4	25 gallons
Pyrenone 25-5 Public Health Spray	10 gallons

Larvicide

Altosid pellets	None anticipated
Mosquito larval control oil (BVA-2 or CocoBear)	None anticipated

G. Monitoring Locations

The District will continue its practice of informal visual monitoring and will report future applications to waters of the United States, including GIS coordinates as required in the updated NPDES permit.

H. Evaluation of BMPs

BMP's will be evaluated based on a combination of re-checks of application sites for mosquito larvae, telephone calls, surveillance trap data, and spot checks of standing water for mosquito larvae.

Please see the Best Management Practices for Mosquito Control in California.

I. Description of BMPs to be Implemented

Please see the Best Management Practices for Mosquito Control in California

Section 2

D. Best Management Practices (BMPs)

The District's BMPs are described in the Best Management Practices for Mosquito Control in California and the California Mosquito-Born Virus Surveillance and Response Plan

Subsection 1:

a. Thresholds

Larval: Presence of larvae is sufficient to warrant control measure

Adult: Citizen mosquito annoyance calls Landing rate counts Pesticide application to control adult and larval mosquitoes is also dependent on mosquito species, proximity to population centers, and disease activity.

b. Species specific management plan

Genera: Anopheles and Culiseta: Winter to early spring mosquitoes Altosid briquettes are used beginning in February

Adult spraying may be necessary depending on population

Culex and floodwater Aedes: Summer and fall mosquitoes

Physical control, biological control, larviciding, and adult control as needed

c. Known larval development sites

Any sites that hold water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the District's preferred method, and whenever possible the District works with property owners to implement long-term solutions to reduce or eliminate the need for continued applications as described in the Best Management Practices for Mosquito Control in California.

d. Analyze existing surveillance data to identify new sources

This is included in the Best Management Practices for Mosquito Control Practices in California and the California Mosquito-Borne Virus Surveillance and Response Plan that the District uses. The District collects adult mosquito surveillance data and dead bird reports to guide mosquito control activities.

Subsection 2

a. This describes the District's existing mosquito management program, as well as the practices described in the Best Management Practices for Mosquito Control in California that are used by this agency.

Subsection 3

- a. Application error and spill reporting
- b. Staff pesticide application and spill training

This is an existing practice of the District, and is required to comply with Department of Pesticide Regulation's (DPR) requirements and the terms of our Cooperative Agreement with the California Department of Public Health. All pesticide applicators receive annual safety and spill training in addition to their regular continuing education.

Section E

The Discharger shall maintain a log for each pesticide application. The application log shall contain, at a minimum, the following information, when practical, for larvicide or adulticide applications: 1. Date of application; 2. Location of the application and target areas (e.g., address, crossroads, or map coordinates); 3. Name of applicator; 4. The names of the water bodies treated if known / named (ie., canal, creek lake, etc.); 5. Application details, such as when the application started and stopped, pesticide application rate and concentration, water flow rate of the target area, surface water area, volume of water treated, pesticide(s) and adjuvants used by the Discharger, and volume or mass of each component discharged;

This is an existing practice of the District as required to comply with DPR regulations and our CDPH Cooperative Agreement requirements.

References:

Best Management Practices for Mosquito Control in California. 2010. Available from the California Department of Public Health-Vector-Borne Disease Section, (916 552- 9730 or by download from <http://www.westnile.ca.Qov/resources.php> under the heading Mosquito Control and Repellent Information.

California Mosquito-borne Virus Surveillance and Response Plan. 2010. [Note: this document is updated annually by CDPH]. Available from the California Department of Public Health-Vector-Borne Disease Section, (916) 552-9730 or by download from <http://www.westnile.ca.Qov/resources.php> under the heading Mosquito Control and Repellent Information.

MVCAC NPDES Coalition Monitoring Plan.