RECEIVED
APR 17 2012
DIVISION OF WATER QUALITY

ATTACHMENT G – NOTICE OF INTENT

WATER QUALITY ORDER NO. 2011-0002-DWQ
GENERAL PERMIT NO. CAG 990004

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 ☒ A. New Applicator ☐ B. Change of Information: WDID# _____

☐ C. Change of ownership or responsibility: WDID# _____

II. DISCHARGER INFORMATION

A. Name FRESNO MOSQUITO AND VECTOR CONTROL DISTRICT			
B. Mailing Address 2338 E MCKINLEY AVE			
C. City FRESNO	D. County FRESNO	E. State CA	F. Zip Code 93703
G. Contact Person TIM PHILLIPS	H. Email address fmvcd@pacbell.net	I. Title DISTRICT MANAGER	J. Phone (559)268-6565

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: FRESNO IRRIGATION DISTRICT, FRESNO MET. FLOOD CONTROL
Name of the conveyance system: FID CANAL SYSTEM, FMFCD STORM SEWER SYSTEM

3. Directly to river, lake, creek, stream, bay, ocean, etc.
☒ Name of water body: SAN JOAQUIN RIVER

* 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 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: X Vector Larvae X Adult Vector

B. Pesticides Used: List name, active ingredients and, if known, degradation by-products

C. Period of Application: Start Date APRIL 2012 End Date DECEMBER 31, 2012

D. Types of Adjuvants Added by the Discharger:

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 PAP 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 General Permit, including developing and implementing a monitoring program, will be complied with."

A. Printed Name: JIM PHILLIPS

B. Signature: Jim Phillips Date: April 13, 2012

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 #:

Fresno Mosquito and Vector Control District

2338 E. Mckinley

Fresno CA 93703

www.fresnomosquito.org

Phone (559) 268-6565

Fax (559) 268-8918

Pesticide Application Plan

(PAP)

February 2012

FRESNO MOSQUITO & VECTOR CONTROL DISTRICT

PESTICIDE APPLICATION PLAN (PAP)

1. **Description of all target areas, if different from the water body of the target area, in to which larvicides and adulticides are being planned to be applied or may be applied to control vectors. The description shall include adjacent areas, if different from the water body of the target areas;**

   The Fresno Mosquito and Vector Control District (FMVCD or District) is responsible for controlling mosquito activity in the central section of Fresno County. The San Joaquin River serves as the northern boundary of the District and is the principal water of the U.S. where larvicides or adulticides may be applied.

   Please see Attachment 1 for map of District.

2. **Discussion of the factors influencing the decision to select pesticide applications for vector control;**

   FMVCD implements an Integrated Vector Management (IVM) Program to determine if, and when, a pesticide application is appropriate. Surveillance is the first procedure used to determine if a vector species is present and the population thereof. If it is found that a population of a species is present that can cause a nuisance or threat to human health, then control measures will begin. First option is to eliminate or reduce the breeding source's ability to produce vector activity. If source elimination is not possible then biological control methods are explored. Finally, chemical options are considered when the previous options are proven non-effective.

3. **Pesticide products or types expected to be used and if known, their degradation by-products, the method in which they are applied, and if applicable, the adjuvants and surfactants used;**

   Please see Attachments E and F within NPDES Permit for Biological and Residual Pesticide Discharges to Waters of the U.S. From Vector Control Applications. Products will be applied by backpack, hand-can, truck and aircraft.

4. **Description of all the application areas and the target areas in the system that are being planned to be applied or may be applied. Provide a map showing these areas;**

Any water source that is stagnant for 96 hours (4 days) or more can potentially become a breeding site that requires treatment. Typical types of breeding sources that are treated by the District each year are: irrigated agricultural crops, swimming pools, ornamental ponds, agricultural waste-water ponds, urban gutters, catch basins, storm drains and San Joaquin river seepage.

Please see Attachment 1 for map of District.

5. **Other control methods used (alternatives) and their limitations;**

FMVCD is continually working with home owners to find viable ways of reducing, if not eliminating, mosquito activity on their property. However, those efforts may be limited due to financial cost or feasibility of the project. The District also has a public education program to inform the citizens in the area on the importance of mosquito control, and how they can eliminate sources around their residences. Resources such as local media, local fair, schools, and town hall meetings are used to reach the community. The public education program is limited to those who receive the information and are willing to apply the lessons in their daily life. Mosquito fish (*Gambusia affinis*) are another control method that the FMVCD utilizes extensively. Unfortunately, the use of mosquito fish is limited due to environmental issues, water quality and availability of mosquito fish.

6. **How much product is needed and how is this amount determined;**

Please see Attachment 2: Pesticide Use Records.

Each individual source is inspected by District personnel and then the method of control or amount of material required is determined. Due to yearly variables and the uniqueness of each breeding site, to predict the amount needed would be difficult. Attachment 2 shows the total amount of pesticides that were applied during the 2011 year to all breeding sources, including those that could be considered waters of the U.S.

7. **Representative monitoring locations* and the justifications for selecting these locations;**

Please see the MVCAC NPDES Coalition Monitoring Plan.

8. **Evaluation of available BMPs to determine if there are feasible alternatives to the selected pesticide application project that could reduce potential water quality impacts; and**

District personnel review post treatment BMPs at each site to evaluate pesticide efficacy. Extensive surveillance is part of the review process including larval counts and

adult trapping. Pesticide selection is based on the results of the review and compatibility with environmental conditions.

9. **Description of the BMPs to be implemented:**

a. **measures to prevent pesticide spill;**

All District field personnel receive spill prevention and response training each year. Personnel have access to spill kits at all times and supervisors make visual inspections of spray equipment weekly, checking for leaks and potential hazards.

b. **measures to ensure that only a minimum and consistent amount used;**

District spray equipment is calibrated each year and District supervisors review treatment data every day, checking for proper application rates.

c. **a plan to educate Coalition's or Discharger's staff and pesticide applicator on any potential adverse effects to waters of the U.S. from the pesticide application;**

Field personnel are given pesticide training each year, water quality issues will be included.

d. **descriptions of specific BMPs for each spray mode, e.g. aerial spray, truck spray, hand spray, etc.;**

FMVCD calibrates truck mounted and handheld spray equipment each year. Ultra-low volume (ULV) equipment is also calibrated for flow rate and droplet analysis each year. Supervisors review treatment data daily to ensure proper application rates are followed. Aerial applications are calibrated by the contractor.

e. **descriptions of specific BMPs for each pesticide used; and**

All District field personnel are trained to follow the label requirements of each product. Please see the *Best Management Practices for Mosquito Control in California* (pp. 27-30) for general pesticide application BMPs and the CDPR website, http://www.cdpr.cagov/docs/label/labelque.htm, for the currently approved pesticide labels for application BMPs for specific products.

f. **descriptions of specific BMPs for each type of environmental setting (agricultural, urban, and wetland).**

With both agricultural and urban sources the first BMP option is source reduction. In an agricultural setting BMPs such as removing vegetation from a waste water lagoon or reducing the number of days irrigation water remains in a field can diminish the amount of pesticide use.

In an urban setting source reduction and public education programs are very successful. Once homeowners are aware of the importance of mosquito control and simply removing the water from typical backyard sources (e.g. bird baths, fountains, unmaintained pools, etc.) will eliminate mosquito activity, or they can call a district to assist them, minimal pesticide use is required.

In wetland sources, source reduction may not be an option due to ecological limits. However, the second option, biological control may be a viable option. If conditions are positive mosquito fish can control mosquito activity and dramatically reduce the amount of pesticide required.

10. **Identification of the problem. Prior to first pesticide application covered under this General Permit that will result in a discharge of biological and residual pesticides to waters of the U.S., and at least once each calendar year thereafter prior to the first pesticide application for that calendar year, the Discharger must do the following for each vector management area:**

a. **If applicable, establish densities for larval and vector populations to serve as action threshold(s) for implementing pest management strategies;**

Due to the many variables that influence a technician's decision if a source should be treated, it is difficult to assign a numerical value to take action. The following is a list of criteria considered before action is taken:

- Mosquito species present
- Mosquito stage of development
- Nuisance or disease potential
- Disease activity
- Mosquito abundance
- Flight range
- Proximity to populated area
- Size of source
- Presence/absence of natural predators

- Presence of sensitive/endangered species or habitats

b. **Identify target vector species to develop species-specific pest management strategies based on developmental and behavioral considerations for each species;**

The target species for the FMVCD are *Aedes* sp., *Anopheles* sp., *Culex* sp., and *Culiseta* sp. For further information please see the *Best Management Practices for Mosquito Control in California* (pp. 31-34) and the *California Mosquito-borne Virus Surveillance and Response Plan* (pp. 8-10).

c. **Identify known breeding areas for source reduction, larval control program, and habitat management; and**

There are numerous breeding sites throughout the District and the methods of IVM are utilized at each site. Please see description in **item 2** above.

d. **Analyze existing surveillance data to identify new or unidentified sources of vector control problems as well as areas that have recurring vector problems.**

The FMVCD has an extensive surveillance program to gather data on both larval and adult populations. The District utilizes New Jersey light traps, gravid traps, and CO2 baited traps to analyze adult activity. To monitor mosquito-borne disease activity the District examines report results on dead birds, squirrels, horses, and human infection cases. The District also incorporates GIS technology and aerial photography to survey new and existing sources.

11. **Examination of Alternatives. Dischargers shall continue to examine alternatives to pesticide use in order to reduce the need for applying larvicides that contain temephos and for spraying adulticides. Such methods include:**

a. **Evaluating the following management options, in which the impact to water quality, impact to non-target organisms, vector resistance, feasibility, and cost effectiveness should be considered:**

- No action
- Prevention
- Mechanical or physical methods
- Cultural methods
- Biological control methods
- Pesticides

If there are no alternatives to pesticides, dischargers shall use the least amount of pesticide necessary to effectively control the target pest.

The FMVCD only takes action at those sources that can potentially cause a nuisance or health threat to the human or animal population. If it is found that a source does not support a population or species that could cause a nuisance or health concern, the District believes that the "no action" is a viable rotational tool to combat pesticide resistance. The District's public outreach is the best option to prevent potential mosquito activity. Individuals who have received information from the program are able to implement the lessons around their homes and neighborhoods. Simple acts such as removing water from a container or vegetation surrounding a pond and stocking it with mosquito fish would alleviate the need of pesticide use. When pesticide use is required products are selected that will achieve control at proper label rates and have the least potential of compromising water quality. As detailed in the table in **item 6**, FMVCD did not use temephos during 2011 and total adulticide amounts were minimal.

b. Applying pesticides only when vectors are present at a level that will constitute a nuisance.

As stated in **item 11a**, FMVCD only takes action at those sources were it is determined that vector activity has the potential to either create a nuisance, or health threat to humans or animals.

12. Correct use of pesticides

Coalition's or Discharger's use of pesticides must ensure that all reasonable precautions are taken to minimize the impacts caused by pesticide applications. Reasonable precautions include using the right spraying techniques and equipment, taking account of weather conditions and the need to protect the environment.

FMVCD follows all the laws and regulations of the Department of Pesticide Regulation's (DPR), California Department of Public Health (CDPH) Cooperative Agreement, and the pesticide product label. All field personnel are given proper application techniques as part of their pesticide training annually. Also, subjects such as drift and target area are included in the training.

13. **If applicable, specify a website where public notices required in Section VIII.B, may be found.**

www.fresnomosquito.org

E. **Pesticide Application Log**

The Discharger shall maintain a log for each pesticide application. The application log shall contain, at minimum, the following information, when practical, for larvicide or adulticide applications:

1. Date of application
2. Location of the application and target area (e.g., address, crossroads, or map coordinates);
3. Name of applicator;
4. The names of the water bodies treated if known/ named (i.e., canal, creek, lake, etc.);
5. Application details, such as when the application started and stopped, pesticide application rate and concentration, water flow rate of 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:

The FMVCD has an existing data recording system in place that will meet the requirements of the application log.

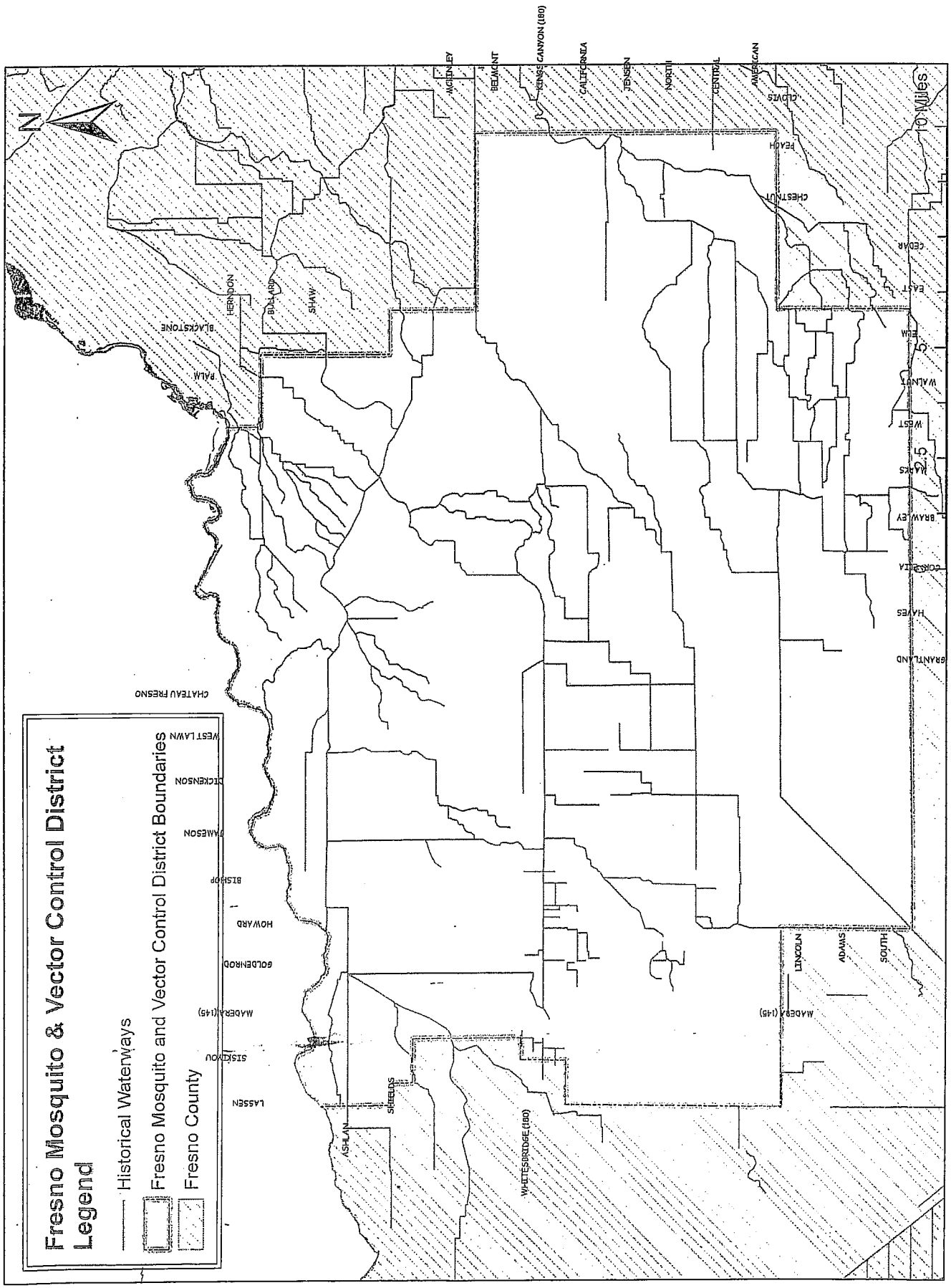
References:

Best Management Practices for Mosquito Control in California. 2010. Available by download from the California Department of Public Health—Vector-Borne Disease Section at http://www.westnile.ca.gov/resources.php under the heading *Mosquito Control and Repellent Information*. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the Fresno Mosquito and Vector Control District at (559) 268-6565.

California Mosquito-borne Virus Surveillance and Response Plan. 2010. [Note: this document is updated annually by CDPH]. . Available by download from the California Department of Public Health—Vector-Borne Disease Section at http://www.westnile.ca.gov/resources.php under the heading *Response Plans and Guidelines*. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the Fresno Mosquito and Vector Control District at (559) 268-6565.

Monitoring Plan for Mosquito Larvicides and Adulticides (MVCAC NPDES Coalition Monitoring Plan). 2011. Copies may be requested by calling the Mosquito and Vector control Association of California [MVCAC] at (916) 440-0826 or the Fresno Mosquito and Vector Control District at (559) 268-6565.

ATTACHMENT 1



FRESNO MOSQUITO AND VECTOR CONTROL DISTRICT

2011 CALENDAR YEAR INSECTICIDE INVENTORY

PRODUCT NAME	ACTIVE INGREDIENT	MANUFACTURER	EPA REG NUM	AMOUNT USED	UNIT
AGNIQUE MMF MOSQUITO LARVICIDE & PUPICIDE	Poly(oxy-1,2-ethanediyl,-(c16-20 branched and linear alkyl)-w-hydroxy (100%)	COGNIS CORPORATION	53263-28	9877	OZ
AGNIQUE MMF G	Poly(oxy-1,2-ethanediyl,-(c16-20 branched and linear alkyl)-w-hydroxy (100%)	COGNIS CORPORATION	53263-30	63	LB
AGNIQUE MMF MOSQUITO G PACKETS	Poly(oxy-1,2-ethanediyl,-(c16-20 branched and linear alkyl)-w-hydroxy (100%)	COGNIS CORPORATION	53263-28	48	PACKETS
ALTOSID LIQUID LARVICIDE	S-METHOPRENE	WELLMARK INTERNATIONAL	2724-392	3	OZ
ALTOSID GRANULES	S-METHOPRENE	WELLMARK INTERNATIONAL	2724-392	16	OZ
ALTOSID BRIQUETS	S-METHOPRENE	WELLMARK INTERNATIONAL	2724-375	17841	BRIQ
ALTOSID XR BRIQUETS	S-METHOPRENE	WELLMARK INTERNATIONAL	2724-421	279	BRIQ
BVA 2 MOSQUITO LARVICIDE OIL	MINERAL OIL	BVA OILS	70589-1	1599	GAL
DIMILIN 25W INSECT GROWTH REGULATOR	Diflubenzuron	CHEMTURA	400-465	160	OZ
NATULAR 2EC	Saccharopolyspora spinosa (sp)	CLARKE MOSQUITO CONTROL	8329-82	767	OZ
PYRENONE 25-5 PUBLIC HEALTH INSECTICIDE	PBO/Pyrethrin	BAYER	432-1050	149	OZ
RODEO / AQUAMASTER AQUATIC HERBICIDE	Glyphosate 53.8 %	MONSANTO	524-343	1281	OZ
SUMMIT BTI BRIQUETS	Bac. thuring. var. israelensis	VALENT BIOSCIENCES	6218-47	11	BRIQ
SUSPEND SC	Deltamethrin	AVENTIS	432-763	6	OZ
VECTOBAC 12AS BIOLOGICAL LARVICIDE	Bac. thuring. var. israelensis	VALENT BIOSCIENCES	73049-38	9325	OZ
VECTOBAC TECHNICAL POWDER	Bac. thuring. var. israelensis	VALENT BIOSCIENCES	73049-13	1622	OZ
VECTOBAC G BIOLOGICAL LARVICIDE GRANULES	Bac. thuring. var. israelensis	VALENT BIOSCIENCES	73049-10	15	LB
VECTOBAC WDG BIOLOGICAL LARVICIDE	Bac. thuring. var. israelensis	VALENT BIOSCIENCES	73049-56	27	OZ
VECTOLEX CG BIOLOGICAL LARVICIDE	Bac. Sphaericus	VALENT BIOSCIENCES	73049-20	59	LB
VECTOLEX CG BIOLOGICAL LARVICIDE WSP	Bac. Sphaericus	VALENT BIOSCIENCES	73049-20	15291	PACKETS
VECTOLEX WDG BIOLOGICAL LARVICIDE	Bac. Sphaericus	VALENT BIOSCIENCES	73049-57	3	LB

Attachment 2: Pesticide Use Records

FRESNO MOSQUITO AND VECTOR CONTROL DISTRICT
NOTICE OF INTENT 2012
MAILING LIST OF NOTIFIED GOVERNMENT AGENCIES

CA DEPARTMENT OF FISH AND GAME REGION 4

CAL TRANS DISTRICT 6

CITY OF FRESNO CITY MANAGER

CITY OF KERMAN CITY MANAGER

SAN JOAQUIN RIVER CONSERVANCY

FRESNO AGRICULTURAL COMMISSIONER

FRESNO COUNTY BOARD OF SUPERVISORS CHAIRMAN

FRESNO COUNTY RESOURCES DIVISION PARKS

FRESNO COUNTY SPECIAL DISTRICTS ADMINISTRATOR

FRESNO IRRIGATION DISTRICT MANAGER

FRESNO METROPOLITAN FLOOD CONTROL DISTRICT MANAGER

US ARMY CORP OF ENGINEERS SACRAMENTO DISTRICT

US BUREAU OF RECLAMATION S-C CAL AREA OFFICE

Fresno Mosquito and Vector Control District

2338 East McKinley Avenue
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Telephone (559) 268-6565
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www.fresnomosquito.org

Tim Phillips
District Manager

Gary A. Byde
Assistant Manager

C. Julia Laciste
Office Manager

Rory D. McAbee
Biologist

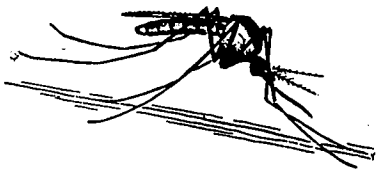
April 13, 2012

NOTICE OF INTENT TO APPLY PUBLIC HEALTH PESTICIDES FOR VECTOR CONTROL PURPOSES TO SURFACE WATERS AND WATERS OF THE USA WITHIN THE FRESNO MOSQUITO AND VECTOR CONTROL DISTRICT

The Fresno Mosquito and Vector Control District (FMVCD) is a public health agency that protects Fresno County residents and visitors within its borders from mosquitoes and mosquito-borne diseases. FMVCD is an independent special district that operates under the California Health and Safety Code §§2000-2093. We conduct ongoing surveillance of mosquitoes in order to determine the threat of disease transmission and to direct our control activities. FMVCD practices a program of integrated vector management (IVM) which includes surveillance for mosquitoes, source reduction, biological control, larviciding and adulticiding as indicated by surveillance, resistance monitoring, disease surveillance in vectors and reservoirs of mosquito-borne pathogens, and public education.

Certified vector control technicians may control mosquitoes by using public health pesticides that are registered for use by the California Environmental Protection Agency (Cal EPA) and the United States Environmental Protection Agency (EPA).

FMVCD is now required to obtain a Statewide General National Pollutant Discharge Elimination System (NPDES) permit to apply public health pesticides due to a recent decision by the Sixth Circuit Court of Appeals. In its January 2009 ruling on National Cotton Council, et al. vs. EPA, the Court (1) vacated the EPA's 2006 rule that said NPDES permits were not required for applications of pesticides in, over and near waters of the USA when in compliance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) label and (2) determined that pesticides are pollutants. Consequently, point source discharges to waters of the USA from the application of pesticides will require NPDES permits in accordance with the Court's mandate effective on October 31, 2011.



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District Manager

Gary A. Byde
Assistant Manager

C. Julia Laciste
Office Manager

Rory D. McAbee
Biologist

The NPDES permit requires that we notify potentially affected government agencies before the first application of aquatic pesticides each calendar year. This is the notification letter advising you that public health pesticides will be used to control mosquitoes within the FMVCD boundaries during 2012.

The following includes the names of pesticides that FMVCD may apply: Agnique MMF, Agnique MMF G, Altosid Liquid Larvicide, Altosid Briquets, Altosid XR Briquets, Altosid Pellets WSP, BVA 2 Mosquito Larvicide Oil, Natular T30, Natular 2EC, Pyrenone Crop Spray, Pyrenone 25-5, Scourge 18+54, VectoBac G, VectoBac TP, VectoBac 12AS, VectoBac WDG, VectoLex CG, VectoLex WDG, VectoLex WSP, Spheratax (50)WSP.

In addition, the FMVCD may use any product listed in Appendix E or Appendix F of the Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Biological and Residual Discharges to Waters of the United States from Vector Control Applications (General Permit no. CAG 990004) as listed on the State Water Resources Control Board website.

These pesticides are used to protect public health by controlling the development and populations of mosquitoes. Applications will be made within FMVCD boundaries from January 1 through December 31, 2012. There are no known water use restrictions or precautions during treatment.

Interested persons may contact Tim Phillips at (559) 268-6565 for additional information. This notification shall be posted on the FMVCD website: www.fresnomosquito.org.

Sincerely,

Tim Phillips

Tim Phillips, District Manager
Fresno Mosquito and Vector Control District
fmvcd@pacbell.net