

**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 SACRAMENTO - YOLO MOSQUITO & VECTOR CONTROL DISTRICT			
B. Mailing Address 8631 BOND ROAD			
C. City ELK GROVE, CA	D. County SACRAMENTO	E. State CA	F. Zip Code 95624
G. Contact Person DAVID BROWN	H. Email address dabrown@fightthebite.net	I. Title MANAGER	J. Phone 916-685-1022

**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	

**RECEIVED**

**AUG 29 2011**

DIVISION OF WATER QUALITY

**IV. RECEIVING WATER INFORMATION**

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

- Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.  
 Name of the conveyance system: \_\_\_\_\_
- Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.  
 Owner's name: VARIOUS- SEE ATTACHMENT A  
Name of the conveyance system: APPLICATIONS MAY BE MADE TO VARIOUS CONVEYANCE SYSTEMS WITHIN SACRAMENTO OR YOLO COUNTIES
- Directly to river, lake, creek, stream, bay, ocean, etc.  
 Name of water body: VARIOUS- SEE ATTACHMENT A- APPLICATIONS HISTORICALLY HAVE BEEN MADE TO HIGH WATER MARKS OF COSUMNES, SACRAMENTO, OR AMERICAN RIVERS  
\* A map showing the affected areas for items 1 to 3 above may be included. AND THEIR TRIBUTARIES

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  
SEE ATTACHMENT B

C. Period of Application: Start Date JAN 1      End Date DEC 31

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. ATTACHMENT C

**VIII. FEE**

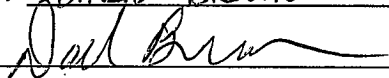
Have you included payment of the filing fee (for first-time enrollees only) with this submittal?

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: DAVID BROWN

B. Signature: 

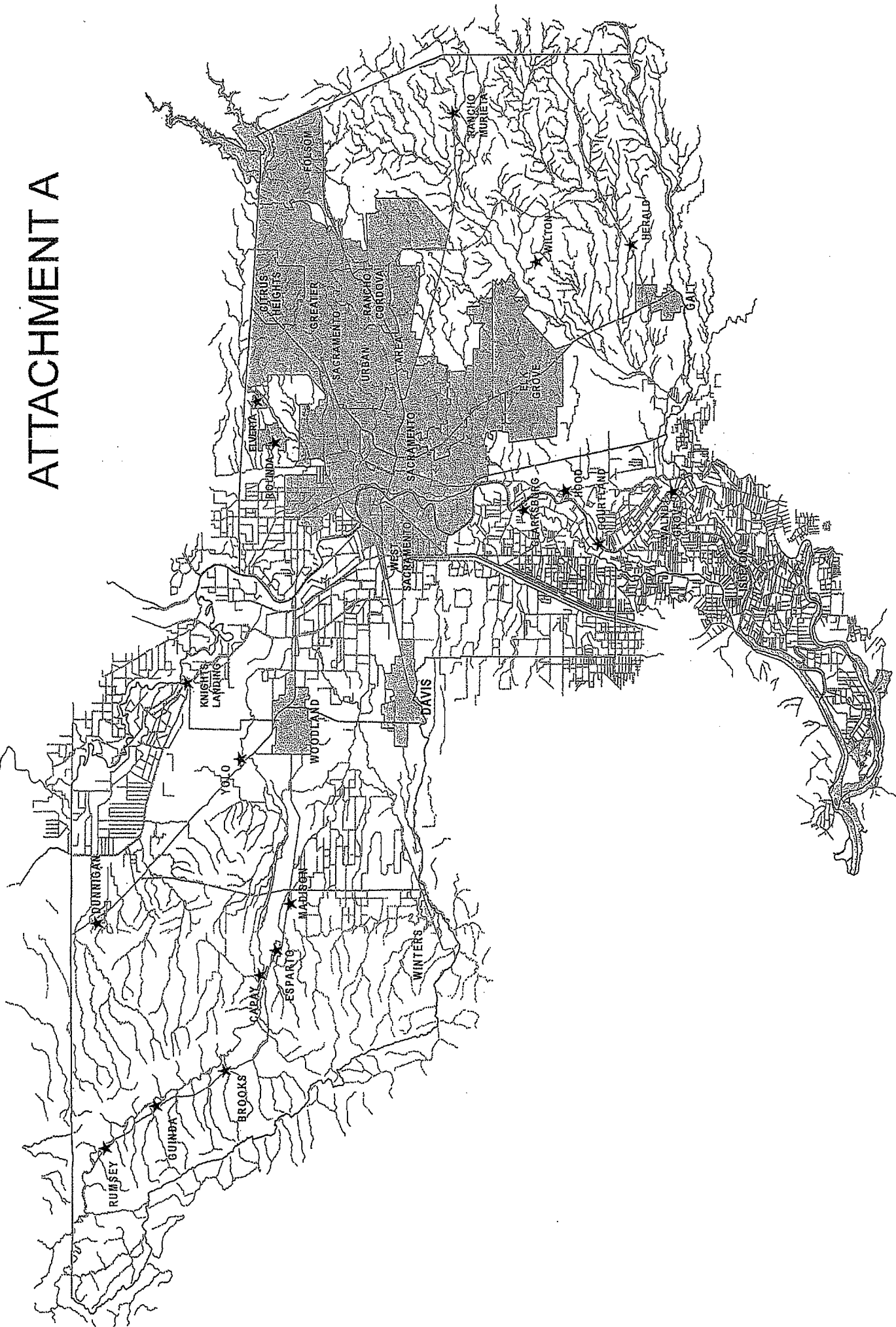
Date: AUGUST 26, 2011

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 #:

# ATTACHMENT A



**Attachment B**

**Sacramento-Yolo MVCD NOI**

**V. Pesticide Application Information**

**B. List of Larvicides that may be used under NPDES Permit. Products found in Attachment F of Permit**

Name	Active Ingredient
Aquabac xt	Bacillus thuringiensis var. israelensis
Vectobac 12AS	Bacillus thuringiensis var. israelensis
Vectobac G	Bacillus thuringiensis var. israelensis
Vectobac WDG	Bacillus thuringiensis var. israelensis
Aquabac 200 g	Bacillus thuringiensis var. israelensis
Vectobac Technical Powder	Bacillus thuringiensis var. israelensis
Teknar HP-D	Bacillus thuringiensis var. israelensis
Vectolex CG	Bacillus sphaericus
Vectolex WSP	Bacillus sphaericus
Spheratax SPH (50G)WSP	Bacillus sphaericus
Spheratax SPH (50G)	Bacillus sphaericus
Vectomax G	Bacillus thuringiensis var. israelensis, Bacillus sphaericus
Vectomax CG	Bacillus thuringiensis var. israelensis, Bacillus sphaericus
Vectomax WSP	Bacillus thuringiensis var. israelensis, Bacillus sphaericus
FourStar Briquets	Bacillus thuringiensis var. israelensis, Bacillus sphaericus
FourStar SBG	Bacillus thuringiensis var. israelensis, Bacillus sphaericus
Altosid XR Briquets	S-methoprene
Altosid Pellets / Altosid WSP	S-methoprene
Altosid ALL	S-methoprene
Altosid ALL Concentrate	S-methoprene
Altosid XR-G	S-methoprene
Altosid SBG	S-methoprene
Mosquito Larvicide GB-1111	Petroleum Oil
BVA 2 Mosquito Larvicide Oil	Mineral Oil
BVA Spray 13	Refined Petroleum Distillate
Agnique MMF	Poly (oxy-1,2-ethanediyl), $\alpha$ -(C <sub>16-20</sub> branched and linear alkyl)- $\omega$ -hydroxy
Agnique MMF G	Poly (oxy-1,2-ethanediyl), $\alpha$ -(C <sub>16-20</sub> branched and linear alkyl)- $\omega$ -hydroxy
Abate 2-BG	Temephos
5% Skeeter Abate	Temephos
Natular 2EC	Spinosad
Natular G	Spinosad
Natular XRG	Spinosad
Natular XRT	Spinosad

**Adulticides**

Pyroicide Mosquito Adulticiding Conc	Pyrethrins / Piperonyl butoxide, technical
Evergreen Crop Protection EC 60-6	Pyrethrins / Piperonyl butoxide, technical
Pyrenone Crop Spray	Pyrethrins / Piperonyl butoxide, technical
Prentox Pyronyl Crop Spray	Pyrethrins / Piperonyl butoxide, technical
Pyroicide Mosquito Adulticiding Conc	Pyrethrins / Piperonyl butoxide, technical
Aquahalt	Pyrethrins / Piperonyl butoxide, technical
Pyroicide Mosquito Adulticide 7453	Pyrethrins / Piperonyl butoxide, technical
Pyrenone 25-5 Public Health Insecti	Pyrethrins / Piperonyl butoxide, technical
Prentox Pyronyl Oil Concentrate #52	Pyrethrins / Piperonyl butoxide, technical
Prentox Pyronyl Oil Concentrate	Pyrethrins / Piperonyl butoxide, technical

Permanone 31-66	Permethrin / Piperonyl butoxide, technical
Kontrol 30-30 Concentrate	Permethrin / Piperonyl butoxide, technical
Aqualuer 20-20	Permethrin / Piperonyl butoxide, technical
Aqua-Reslin	Permethrin / Piperonyl butoxide, technical
Aqua-Kontrol Concentrate	Permethrin / Piperonyl butoxide, technical
Kontrol 4-4	Permethrin / Piperonyl butoxide, technical
Biomist 4+12	Permethrin / Piperonyl butoxide, technical
Permanone RTU 4%	Permethrin / Piperonyl butoxide, technical
Prentox Perm-X UL 4-4	Permethrin / Piperonyl butoxide, technical
Allpro Evoluer 4-4	Permethrin / Piperonyl butoxide, technical
Biomist 4+4	Permethrin / Piperonyl butoxide, technical
Kontrol 2-2	Permethrin / Piperonyl butoxide, technical
Scourge 18%+54% MF Formula II	Resmethrin / Piperonyl butoxide, technical
Scourge 4% + 12% MF Formula II	Resmethrin / Piperonyl butoxide, technical
Anvil 10+10	Sumithrin / Piperonyl butoxide, technical
AquaANVIL	Sumithrin / Piperonyl butoxide, technical
Duet Dual-Action	Prallethrin/Sumithrin / Piperonyl butoxide, technical
Anvil 2+2	Sumithrin / Piperonyl butoxide, technical
Zenivex E20	Etofenprox
Trumpet EC	Naled
Fyfanon	Malathion

NPDES Government Contact List

Attachment C

City of Davis, City Manager	Paul Navazio	<a href="mailto:pnavazio@cityofdavis.org">pnavazio@cityofdavis.org</a>
City of Woodland, City Manager	Mark Deven	<a href="mailto:cm1@cityofwoodland.org">cm1@cityofwoodland.org</a>
City of Sacramento, City Manager	Gus Vina	<a href="mailto:gvina@cityofsacramento.org">gvina@cityofsacramento.org</a>
City of Winters, City Manager	John Donlevy, Jr.	<a href="mailto:john.donlevy@cityofwinters.org">john.donlevy@cityofwinters.org</a>
City of Folsom, City Manager	Kerry Miller	<a href="mailto:kmiller@folsom.ca.us">kmiller@folsom.ca.us</a>
City of Galt	Jason Behrmann	<a href="mailto:jbehrmann@ci.galt.ca.us">jbehrmann@ci.galt.ca.us</a>
City of Citrus-Heights	Henry Tingle	<a href="mailto:citymanager@citrusheights.net">citymanager@citrusheights.net</a>
City of Rancho Cordova	Ted Gaebler	<a href="mailto:tgaebler@cityofranhocordova.org">tgaebler@cityofranhocordova.org</a>
Isleton	Bruce Pope	po box 716 Isleton, CA 95641-0716
west sacramento	Toby Ross	1110 W. Capitol Ave. 3rd floor, West Sacramento, CA 95691.
Elk grove	Laura Gill	8401 Laguna Palms Way, Elk Grove, CA 95758
California Dept of Water Resources Division of Land and ROW	Juan Mercado	<a href="mailto:jmercado@water.ca.gov">jmercado@water.ca.gov</a>
Cosumnes River Preserve (CRP)	Harry McQuillen	<a href="mailto:harry_mcquillen@ca.blm.gov">harry_mcquillen@ca.blm.gov</a>
California Dept. of Fish and Game Yolo Bypass Wildlife Area	Dave Feliz	<a href="mailto:dfeliz@dfg.ca.gov">dfeliz@dfg.ca.gov</a>
DFG, Lands Program	Heidi West	<a href="mailto:HWESI@dfg.ca.gov">HWESI@dfg.ca.gov</a>
USFWS, Stone Lakes National Wildlife Refuge	Bart McDermott	<a href="mailto:bart_mcdermott@fws.gov">bart_mcdermott@fws.gov</a>
Yolo County Flood Control and Water Conservation District	Tim O'Halloran	<a href="mailto:toholloran@ycfcwcd.org">toholloran@ycfcwcd.org</a>
Cal Trans District 3		
Yolo County Resource Conservation District		
United States Bureau of Reclamation	Kathy Schroeder	<a href="mailto:kschroeder@usbr.gov">kschroeder@usbr.gov</a>
United States Bureau of Reclamation	Ned Gruenhagen	<a href="mailto:ngruenhagen@usbr.gov">ngruenhagen@usbr.gov</a>
State of California Dept. of Parks and Recreation, Gold Fields District	Jim Michaels	<a href="mailto:jmiche@parks.ca.gov">jmiche@parks.ca.gov</a>
Cosumnes Community Services District	Jeff Ramos	<a href="mailto:jefframos@yourcsd.com">jefframos@yourcsd.com</a>
United States Fish and Wildlife (USFWS)	Kathy Brown	<a href="mailto:kbrown@ustfws.gov">kbrown@ustfws.gov</a>
United States Department of Agriculture Natural Resources Conservation Service (NRCS)	Dean Kwasny	<a href="mailto:dean.kwasny@ca.usda.gov">dean.kwasny@ca.usda.gov</a>
Yolo County Board of Supervisors	Mike McGowan	<a href="mailto:mike.mcgowan@yolocounty.org">mike.mcgowan@yolocounty.org</a>

Yolo County Board of Supervisors	Helen MacLeod Thomson	<a href="mailto:helen.thomson@yolocounty.org">helen.thomson@yolocounty.org</a>
Yolo County Board of Supervisors	Matt Rexroad	<a href="mailto:matt@rexroad.com">matt@rexroad.com</a>
Yolo County Board of Supervisors	Jim Provenza	<a href="mailto:jim.provenza@yolocounty.org">jim.provenza@yolocounty.org</a>
Yolo County Board of Supervisors	Duane Chamberlain	<a href="mailto:duane.chamberlain@yolocounty.org">duane.chamberlain@yolocounty.org</a>
Sacramento County Board of Supervisors	Phil Serna	<a href="mailto:sermap@sacounty.net">sermap@sacounty.net</a>
Sacramento County Board of Supervisors	Jimmie R. Yee	<a href="mailto:jyee@sacounty.net">jyee@sacounty.net</a>
Sacramento County Board of Supervisors	Susan Peters	<a href="mailto:susanpeters@sacounty.net">susanpeters@sacounty.net</a>
Sacramento County Board of Supervisors	Roberta MacGlashan	<a href="mailto:macglashanr@sacounty.net">macglashanr@sacounty.net</a>
Sacramento County Board of Supervisors	Don Nottoli	<a href="mailto:nottolid@sacounty.net">nottolid@sacounty.net</a>
Sacramento Co. Agriculture Dept.	Frank Carl	<a href="mailto:agcomm@sacounty.net">agcomm@sacounty.net</a>
Yolo Co. Agriculture Dept	John Young	<a href="mailto:john.young@yolocounty.org">john.young@yolocounty.org</a>

Reclamation District 3 P.O. Box 1011, Walnut Grove, CA 95690 (916) 776-1945  
 Reclamation District 317 P.O. Box 338, Walnut Grove, CA 95690 (916) 776-2544  
 Reclamation District 341 18419 State Highway 160, Rio Vista, CA 94571 (916) 777-4244  
 Reclamation District 349 District Office P.O. Box 368, Courtland, CA 95615 (916) 775-1516  
 Reclamation District 369 13952 Main Street, Locke, CA 95690 (916) 776-1684  
 Reclamation District 407 P.O. Box 338, Walnut Grove, CA 95690 (916) 776-2544  
 Reclamation District 551 1515 13th Ave., Sacramento, CA 95818 (916) 775-1337  
 Reclamation District 554 P.O. Box 248, Walnut Grove, CA 95690  
 Reclamation District 556 P.O. Box 1046, Walnut Grove, CA 95690 (916) 776-2092  
 Reclamation District 563 P.O. Box 470, Walnut Grove, CA 95690-0470 (916) 776-2544  
 Reclamation District 765 8780 Auburn-Folsom Rd, Granite Bay, CA 95746 (916) 782-1177  
 Reclamation District 755 11275 State Highway 160, Courtland, CA 95615 (916) 775-1379  
 Reclamation District 785 429 First Street, Woodland, CA 95695 (530) 662-2859  
 Reclamation District 787 41758 County Rd, #112, Knights Landing, CA 95645 (530) 735-6274  
 Reclamation District 800 P.O. Box 115, Elk Grove, CA 95759 (916) 685-9461  
 Reclamation District 813 P.O. Box 557, Courtland, CA 95615 (916) 871-4060  
 Reclamation District 827 429 First Street, Woodland, CA 95695 (530) 662-2859  
 Reclamation District 900 P.O. Box 673, West Sacramento, CA 95691 (916) 371-1483  
 Reclamation District 999 38563 Netherlands Rd, Clarksburg, CA 95612-5003 (916) 775-2144  
 Reclamation District 1000 1633 Garden Highway, Sacramento, CA 95833 (916) 922-1449  
 Reclamation District 1002 962 Lambert Road, Courtland, CA 95615 (916) 775-1674  
 Reclamation District 1600 429 First Street, Woodland, CA 95695 (530) 662-2859  
 Reclamation District 1601 2360 West Twitchell Island Rd, Rio Vista, CA 94571 (916) 257-4241  
 Reclamation District 2035 45332 County Road 25, Woodland, CA 95776 (530) 662-9080  
 Reclamation District 2067 P.O. Box 338, Walnut Grove, CA 95690 (916) 776-2544



Reclamation District 2093 116 New Montgomery St, San Francisco, CA 94105 (415) 495-5660  
Reclamation District 2110 P.O. Box 1151, Walnut Grove, CA 95690 (916) 683-1767  
Reclamation District 2111 P.O. Box 248, Walnut Grove, CA 95690 (916) 776-1701  
Reclamation District 2120 1325 J Street, Sacramento, CA 95814 (916) 557-7708  
Brannan-Andrus LM Dist P.O. Box 338, Walnut Grove, CA

SACRAMENTO-YOLO  
MOSQUITO  
& VECTOR  
CONTROL  
DISTRICT

MAILING ADDRESS  
SACRAMENTO COUNTY  
8631 BOND ROAD  
ELK GROVE, CA 95624

YOLO COUNTY  
1234 FORTNA AVENUE  
WOODLAND, CA 95695

1.800.429.1022  
FIGHTtheBITE.net

March 1, 2011

Dear Agency,

The Sacramento-Yolo Mosquito and Vector Control District (District) may be making larvicide and or adulticide applications to waters of the US under your jurisdiction for mosquito reduction purposes. Applications will be posted and can be viewed on our website at [www.fightthebite.net](http://www.fightthebite.net). The District is required to notify all Government Agencies that may be affected by these applications under the requirements of the General NPDES Permit for Biological and Residual Pesticide Discharges from Vector Control Applications. Please contact Gary Goodman at 800-429-1022 if you have additional questions.

Sincerely,



Gary Goodman  
Assistant Manager  
Sacramento-Yolo MVCD

## Sacramento-Yolo Mosquito & Vector Control District (District) 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::**

Please see Agency Boundary Map. Typical and historically treated sites will include most if not all water bodies in the Yolo Bypass, areas of high water marks along the Cosumnes, Sacramento and American River corridors, intermittent creeks, and other associated waterways and surface waters that could be affected by the Districts applications.

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

Decisions to use pesticides for control of mosquitoes include, but are not limited to, growth stage of mosquito, habitat that may affect efficacy of certain pesticides, inability to implement BMP (such as draining or management of water) in a timely fashion to prevent emergence, adult mosquito counts and/or virus activity that require widespread ultra low volume application, etc....

Details of these factors can be found in the Sacramento-Yolo MVCD's Mosquito and Mosquito-Borne Disease Management Plan; Appendices I and II  
[http://www.fightthebite.net/download/Mosquito\\_Management\\_Plan.pdf](http://www.fightthebite.net/download/Mosquito_Management_Plan.pdf)

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:**

The following list of products may be used by the District for larval or adult control. This list is from Attachment E and F within the NPDES Permit for Biological and Residual Pesticide Discharges to Waters of the U.S. for Vector Control Applications. All of these products may be applied by ground (hand, truck, ATV, backpack, hand can, etc) or by air (helicopter or fixed wing aircraft) according to label directions.

**List of Permitted Larvicide Products**

Larvicide Product Name	Registration Number
Vectolex CG Biological Larvicide	73049-20
Vectolex WDG Biological Larvicide	73049-57
Vectolex WSP Biological Larvicide	73049-20
Vectobac Technical Powder	73049-13

<b>Larvicide Product Name</b>	<b>Registration Number</b>
Vectobac-12 AS	73049-38
Aquabac 200G	62637-3
Teknar HP-D	73049-404
Vectobac-G Biological Mosquito Larvicide Granules	73049-10
Vectomax CG Biological Larvicide	73049-429
Vectomax WSP Biological Larvicide	73049-429
Vectomax G Biological Larvicide/Granules	73949-429
Zoecon Altosid Pellets	2724-448
Zoecon Altosid Pellets	2724-375
Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator	2724-392
Zoecon Altosid XR Entended Residual Briquets	2724-421
Zoecon Altosid Liquid Larvicide Concentrate	2724-446
Zoecon Altosid XR-G	2724-451
Zoecon Altosid SBG Single Brood Granule	2724-489
Mosquito Larvicide GB-1111	8329-72
BVA 2 Mosquito Larvicide Oil	70589-1
BVA Spray 13	55206-2
Agnique MMF Mosquito Larvicide & Pupicide	53263-28
Agnique MMF G	53263-30
Abate 2-BG	8329-71
5% Skeeter Abate	8329-70
Natular 2EC	8329-82
Natular G	8329-80
Natular XRG	8329-83
Natular XRT	8329-84
FourStar Briquets	83362-3
FourStar SBG	85685-1
Aquabac xt	62637-1
Spheratax SPH (50 G) WSP	84268-2
Spheratax SPH (50 G)	84268-2

### List of Permitted Adulticide Products

Adulticide Product Name	Registration Number
Pyroicide Mosquito Adulticiding Concentrate for ULV Fogging 7395	1021-1570
Evergreen Crop Protection EC 60-6	1021-1770
Pyrenone Crop Spray	432-1033
Prentox Pyronyl Crop Spray	655-489
Pyroicide Mosquito Adulticiding Concentrate for ULV Fogging 7396	1021-1569
Aquahalt Water-Based Adulticide	1021-1803
Pyroicide Mosquito Adulticide 7453	1021-1803
Pyrenone 25-5 Public Health Insecticide	432-1050
Prentox Pyronyl Oil Concentrate #525	655-471
Prentox Pyronyl Oil Concentrate or 3610A	655-501
Permanone 31-66	432-1250
Kontrol 30-30 Concentrate	73748-5
Aqualuer 20-20	769-985
Aqua-Reslin	432-796
Aqua-Kontrol Concentrate	73748-1
Kontrol 4-4	73748-4
Biomist 4+12 ULV	8329-34
Permanone RTU 4%	432-1277
Prentox Perm-X UL 4-4	655-898
Allpro Evoluer 4-4 ULV	769-982
Biomist 4+4	8329-35
Kontrol 2-2	73748-3
Scourge Insecticide with Resmethrin/Piperonyl Butoxide 18%+54% MF Formula II	432-667
Scourge Insecticide with Resmethrin/Piperonyl Butoxide 4%+12% MF Formula II	432-716
Anvil 10+10 ULV	1021-1688
AquaANVIL Water-based Adulticide	1021-1807
Duet Dual-Action Adulticide	1021-1795
Anvil 2+2 ULV	1021-1687
Zenivex E20	2724-791
Trumpet EC Insecticide	5481-481
Fyfanon ULV Mosquito	67760-34

**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 site that holds water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the District's preferred solution, and whenever possible the District works with property owners to effect long-term solutions to reduce or eliminate the need for continued applications as described in the District's Mosquito Reduction Best Management Practices Document [http://www.fightthebite.net/download/ecomagement/SYMVCD\\_BMP\\_Manual.pdf](http://www.fightthebite.net/download/ecomagement/SYMVCD_BMP_Manual.pdf). Mosquito breeding sources and areas that require adult mosquito control are difficult to predict from year to year based on the weather and environmental conditions variations. However, typical sources treated by this District include: permanent/semi-permanent/seasonal wetlands, rice fields, irrigated crops and associated water conveyance systems, storm drains, river seepage and creeks within aerial ULV spray blocks.

Please see Agency Boundary Map and response to Question Number 1.

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

With any mosquito or other vector source, the District's first goal is to look for ways to eliminate the source, or, if that is not possible, for ways to reduce the vector potential. The most commonly used methods and their limitations are included in the District's Mosquito Reduction Best Management Practices Document [http://www.fightthebite.net/download/ecomagement/SYMVCD\\_BMP\\_Manual.pdf](http://www.fightthebite.net/download/ecomagement/SYMVCD_BMP_Manual.pdf).

An example of an alternative is the District's use of *Gambusia affinis* in rice fields, wetlands, irrigation drains and neglected swimming pools on a yearly basis. The District's Ecological Management Department also identifies mosquito breeding sites throughout the District and works with property owners and land managers to incorporate District BMPs to reduce or eliminate mosquito breeding habitat. Sites where BMP's have been applied to include, but are not limited to, drains and ditches, rice field and wetland postponement of (re)-flooding, draining of duckclub habitat, vegetation management that provides water movement, discing, and legal abatement. These practices have been used in agricultural areas, wildlife areas (such as the Vic Fazio Wetlands) and other similar areas where appropriate and efficacious to control mosquitoes.

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

<i>Material</i>	<i>Pounds</i>	<i>Gallons</i>
Methoprene 20%		21.44
Methoprene 5%		26.00
Poly-w-hydroxy (agnique)		45.95

Liquid		
Poly-w-hydroxy (agnique) Granule	2770.57	
Methoprene Briquets 30 day	110.45	
Methoprene Pellets	10699.94	
Methoprene Granule 7-day	2115.00	
Methoprene Briquets 120 day	3922.77	
Methoprene Granule 21 day	22604.53	
10% Sumethrin		1135.24
Bti Granule	345003.68	
5% Pyrethrin		110.58
6% Pyrethrin		879.22
Petroleum Distillate		247.49
Spinosad 30 day Pellet	1379.21	
Spinosad Briquet	1839.48	
4.75% Deltamethrin		2.60
Naled		118.10
Bti Liquid		2473.52
Bti WDG	370.89	
Bs Granule	3119.84	
Bs WDG	9.50	
Bti/Bs Granule	16631.09	

The above totals represent all pesticide applications within the District boundaries for 2010. Determining application totals for sources designated as, Waters of the U.S., is difficult due to yearly variability. Actual applications made to Waters of the U.S. will likely be less then described above.

**7. Representative monitoring locations\* and the justification 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:**

The District's Ecological Management Department reviews post BMP implementation source pesticide application data to determine efficacy and compliance of BMP treatment. Examples that have resulted in the reduction of pesticide applications is the delay in fall flooding for duck club habitat, delay in flooding for rice field stubble breakdown, beaver dam management and discing and vegetation management on the Yolo Bypass refuge.

Delays in fall habitat flooding have allowed the District to utilize single brood larvicide applications in place of higher concentrated residual larvicide applications on numerous wetlands located within the District.

Discing and vegetation management performed on a sample field on the Yolo Bypass Wildlife area showed a 7 times reduction of immature mosquitoes on

vegetation removal plots as compared to heavily vegetated control plots within the same field. Post beaver dam management project evaluations on two urban creeks have shown 89% and 100% reduction in larviciding acres between 2008 and 2010.

For a detailed explanation of other BMP's used by the District, please see the District's Mosquito Reduction Best Management Practices Document [http://www.fightthebite.net/download/ecomagement/SYMVCD\\_BMP\\_Manual.pdf](http://www.fightthebite.net/download/ecomagement/SYMVCD_BMP_Manual.pdf).

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

**a. measures to prevent pesticide spill**

District staff monitors application equipment on a daily basis to ensure it remains in proper working order. Spill mitigation devices are placed in all spray vehicles and pesticide storage areas to respond to spills. Employees are trained on spill prevention and response annually.

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

Spray equipment is calibrated each year and is a part of the MOU with CDPH. However, the pesticide label and associated registration by USEPA and CDPR are the authority of how much product can be legally applied to control the target

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

Applicators are required to complete pesticide training on an annual basis. Records are kept of these training sessions for review by the local agricultural commissioner and/or CDPH. Employees certified by the CDPH must perform at least 20 hours of Continuing Education units to maintain their certification.

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

The District will calibrate truck and hand larviciding equipment each year to meet application specifications. Supervisors review spray records daily to ensure appropriate amounts of material are being used. ULV equipment is calibrated for output and droplet size to meet label requirements. Aerial larviciding equipment is calibrated by the Contractor. Aerial adulticide equipment is calibrated at a minimum of once per year and as needed based on efficacy results and total amount of product used per event. Droplet sizes are monitored by the District to ensure droplets meet label requirements. Airplanes used in urban ULV applications and the primary airplane used for



rural ULV spraying is equipped with advanced guidance and drift management equipment to ensure the best available technology is being used to place product in the intended spray area. If a secondary airplane is used in rural ULV applications it will be equipped with an advanced guidance system.

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

Please see District's Mosquito Reduction Best Management Practices Document

[http://www.fightthebite.net/download/ecomanagement/SYMVCD\\_BMP\\_Manual.pdf](http://www.fightthebite.net/download/ecomanagement/SYMVCD_BMP_Manual.pdf)

**10. Identification of the problem.**

The District's BMPs are described in a flow chart that can be found in the Districts Mosquito Reduction Best Management Practices Document and the District's Mosquito and Mosquito- Borne Disease Management Plan.; Appendix I and II

[http://www.fightthebite.net/download/Mosquito\\_Management\\_Plan.pdf](http://www.fightthebite.net/download/Mosquito_Management_Plan.pdf) AND [http://www.fightthebite.net/download/ecomanagement/SYMVCD\\_BMP\\_Manual.pdf](http://www.fightthebite.net/download/ecomanagement/SYMVCD_BMP_Manual.pdf)

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

Please see Sacramento-Yolo MVCD's Mosquito and Mosquito-Borne Disease Management Plan; Appendix I and II

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

Please see Sacramento-Yolo MVCD's Mosquito and Mosquito-Borne Disease Management Plan; Appendix I and II

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

Any site that holds water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the District's preferred solution, 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 District's Mosquito Reduction Best Management Practices Document.

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

This information is located in the Sacramento-Yolo MVCD's Mosquito and Mosquito-Borne Disease Management Plan, Appendices I and II. The District utilizes 178 mosquito surveillance traps on a weekly basis to obtain appropriate mosquito abundance and disease activity data to guide control decisions.

## **11. Examination of Pesticide Use Alternatives**

- a. Evaluating management and treatment options that may impact water quality, non-target organisms, vector resistance, feasibility, and cost effectiveness, such as:**

- **No action**
- **Source prevention**
- **Mechanical or physical source reduction methods**
- **Cultural methods**
- **Biological control agents**
- **Pesticides**

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

Implementing preferred alternatives depends on a variety of factors including availability of agency resources, cooperation with stakeholders, coordination with other regulatory agencies, and the anticipated efficacy of the alternative. If a pesticide-free alternative does not sufficiently reduce the risk to public health, pesticides are considered, beginning with the least amount necessary to effectively control the target vector.

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

This is described in the District's existing integrated vector management (IVM) program, as well as the practices described in our Mosquito and Mosquito-Borne Disease Management Plan and Mosquito Reduction Best Management Practices Document.

[http://www.fightthebite.net/download/Mosquito\\_Management\\_Plan.pdf](http://www.fightthebite.net/download/Mosquito_Management_Plan.pdf)

[http://www.fightthebite.net/download/ecomanagement/SYMVCD\\_BMP\\_Manual.pdf](http://www.fightthebite.net/download/ecomanagement/SYMVCD_BMP_Manual.pdf)

In addition, the District may utilize legal abatement authority to mitigate mosquito production.

## **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 proper spraying techniques and equipment, taking account of weather conditions and the need to protect the environment.**

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

### **13. Website for Public Notice**

[www.fightthebite.net](http://www.fightthebite.net)

### **E. Pesticide Application Log**

**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:**

**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(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 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.

District utilizes hand held and laptop data collection devices to input necessary and practical application permit data into our database.

Please see sample log of technician work day labeled Attachment A.

#### **References:**

Mosquito and Mosquito-Borne Disease Management Plan. 2005. Sacramento-Yolo Mosquito and Vector Control District. Download from <http://www.fightthebite.net/mosquito-management-plan/>

Mosquito Reduction Best Management Practices. Available from Sacramento-Yolo Mosquito & Vector Control District, by download from [http://www.fightthebite.net/download/ecomanagement/SYMVCD\\_BMP\\_Manual.pdf](http://www.fightthebite.net/download/ecomanagement/SYMVCD_BMP_Manual.pdf) or calling 800-429-1022

MVCAC NPDES Coalition Monitoring Plan. [In development at the time of this draft]

Task	Employee	Complaint	Timestart	Timeend	
2011-Jul-05 Inspect	Low Area		09:22:00	09:29:00	0.12 Hr
GRCP - Pasture #2 - looks like they were doing work out here, tractor ruts about - think they closed the valve on southside - now water leaking through other valves, what a mess - Cx larvae 2nds - pupae 10p/d Treatment - agnique gran 10lbs/A Dips 8 Larvae 60 Per Dip 7.5 Landing Rate / mins Standing water Rainguage Current Area Usedef1 Userdef2 Breeding					
Cx species E 1 2 3 4 P A Predominant Age % of Larvae <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> 1-2 <input type="radio"/> N/A <input type="radio"/> 3-4 <input type="radio"/>					
Larvicide	Low Area		09:32:00	09:59:00	0.45 Hr
Agnique Granular	17.500 lb	1.750 acre	Ground	PUMP	Low Area Live

**ATTACHMENT A**

**SAMPLE LOG FOR APPLICATIONS**

# RECEIPT

DATE 08/29/11 NO. 243051

RECEIVED FROM Matthew - DWA

ADDRESS \_\_\_\_\_

\_\_\_\_\_ \$ 136

FOR Sacramento, Yolo Mosquito & Vector Control

ACCOUNT		
AMT. OF ACCOUNT		
AMT. PAID		
BALANCE DUE		

- CASH
- CHECK
- MONEY ORDER

\_\_\_\_\_ 44291 \_\_\_\_\_  
BY [Signature]

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