

ATTACHMENT 1 WATER QUALITY ORDER 2022-0077-EXEC

GENERAL NPDES PERMIT FOR BIOLOGICAL AND RESIDUAL
PESTICIDE DISCHARGES FROM VECTOR CONTROL APPLICATIONS
ORDER 2016-0039-DWQ NPDES NO. CAG990004

Attachment E - NOTICE OF INTENT

**WATER QUALITY ORDER 2016-0039-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

- A. New Applicator
- B. Change of Information: WDID# 554AP00019
- C. Change of ownership or responsibility: WDID# _____
- D. Enrolled under Order 2011-0002-DWQ: WDID# _____

II. DISCHARGE INFORMATION

- A. Name Delta Mosquito & Vector Control District
- B. Mailing Address 1737 W Houston Avenue
- C. City Visalia
- D. County Tulare
- E. State Ca
- F. Zip Code 93291
- G. Contact Person Dr Mustapha Debboun
- H. Email address mdebboun@deltamvcd.org
- I. Title General Manager
- J. Phone (559)732-8606

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

- A. Name _____
- B. Mailing Address _____
- C. City _____
- D. County _____
- E. State _____

ATTACHMENT 1 WATER QUALITY ORDER 2022-0077-EXEC

GENERAL NPDES PERMIT FOR BIOLOGICAL AND RESIDUAL
PESTICIDE DISCHARGES FROM VECTOR CONTROL APPLICATIONS
ORDER 2016-0039-DWQ

NPDES NO. CAG990004

- 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: See Attach IV.A2 _____

Name of the conveyance system: _____

3. Directly to river, lake, creek, stream, bay, ocean, etc.

Name of water body: See Attach IV .A3 _____

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

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. Attach IV .B

V. PESTICIDE APPLICATION INFORMATION

A. Target Organisms:

Vector Larvae

Adult Vector

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

See Attach V.B

C. Period of Application:

Start Date January 1 End Date December 31

ATTACHMENT 1 WATER QUALITY ORDER 2022-0077-EXEC

GENERAL NPDES PERMIT FOR BIOLOGICAL AND RESIDUAL
PESTICIDE DISCHARGES FROM VECTOR CONTROL APPLICATIONS
ORDER 2016-0039-DWQ NPDES NO. CAG990004

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? Attach VII

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

B. Is the applicator familiar with its contents?

Yes No

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: Dr Mustapha Debboun

B. Signature: _____ Date: _____

C. Title: General Manager

X. FOR STATE WATER BOARD USE ONLY

WDID: _____ Date NOI Received: _____ Date NOI Processed: _____

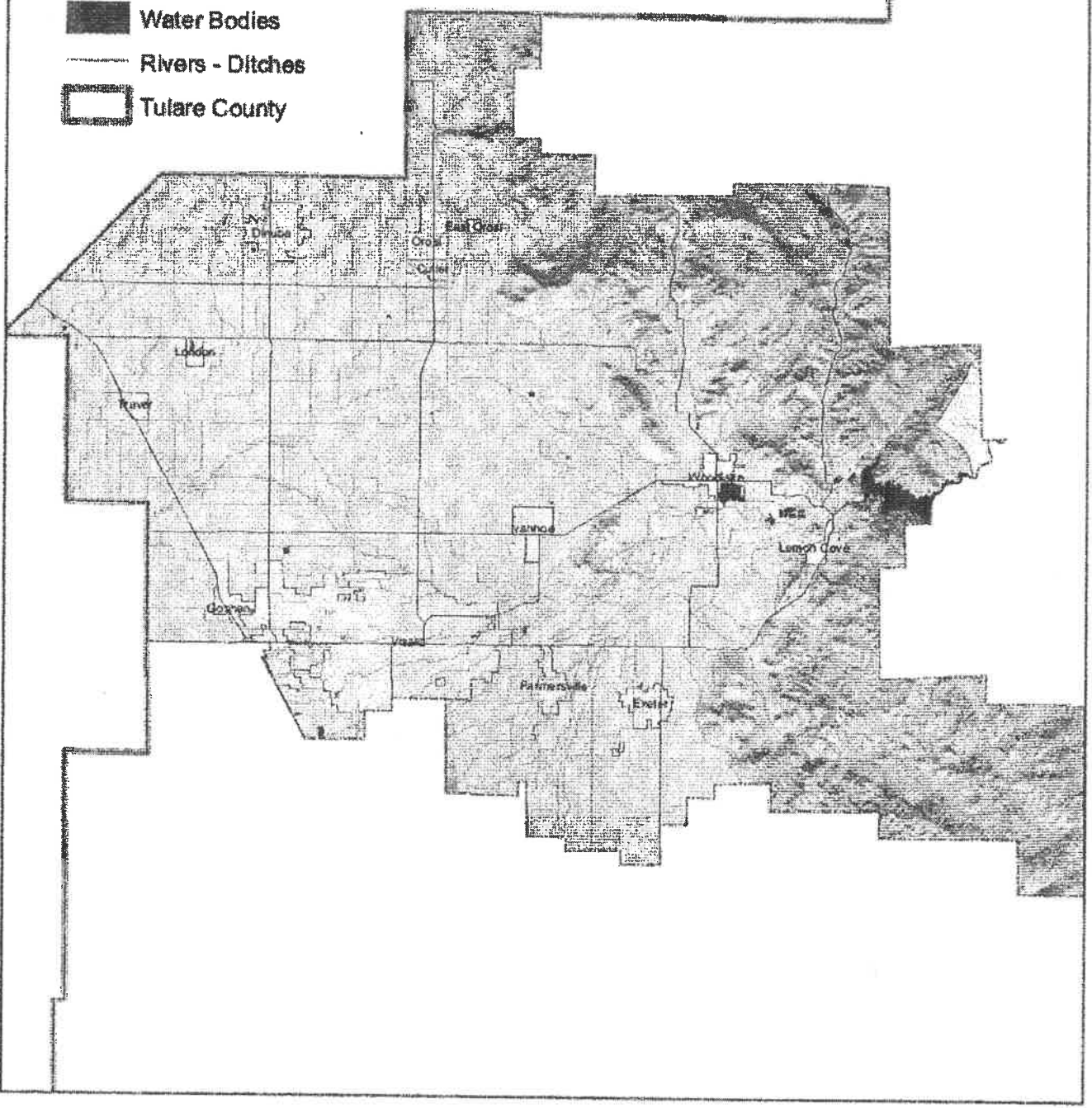
ATTACHMENT 1 WATER QUALITY ORDER 2022-0077-EXEC

GENERAL NPDES PERMIT FOR BIOLOGICAL AND RESIDUAL
PESTICIDE DISCHARGES FROM VECTOR CONTROL APPLICATIONS
ORDER 2016-0039-DWQ NPDES NO. CAG990004

Case Handler's Initial: _____ Fee Amount Received: \$ _____ Check#: _____

Attachment IV.B

- Highways
- Water Bodies
- Rivers - Ditches
- Tulare County



Attachment IV B - locations of receiving waters

Attachment V.B Pesticides used

Pesticide	Active Ingredient	EPA Reg #
Agnique Liquid Gal	Poly(oxy-1,2-ethanediyl),a-(C16-20branched and linearalkyl)-w-hydroxy	53263-28-AA
Agnique Liquid Oz	Poly(oxy-1,2-ethanediyl),a-(C16-20branched and linearalkyl)-w-hydroxy	53263-28-AA
Agnique MMF G	Poly(oxy-1,2-ethanediyl),a-(C16-20branched and linearalkyl)-w-hydroxy	5326-330-AA
Altosid Briq 150 day	(S) - Methoprene	2724-421-ZA
Altosid Briq 30 day	(S) - Methoprene	2724-375-ZA
Altosid Liquid	(S) - Methoprene	2724-392-ZA
Altosid Pellets WSP	(S) - Methoprene	2724-448-ZC
Altosid - Sand Mix	(S) - Methoprene	2724-392-ZA
Altosid XRG	(S) - Methoprene	2724-451-ZA
Natular 2EC	Spinosad (A&D)	8329-82-AA
Natular G30	Spinosad (A&D)	8329-83-AA
Coco Bear	Mineral Oil	8329-93
Kontrol Larvacide	Mineral Oil	73748-10
BVA2 larvacide	Mineral Oil	70589-1-AA
Pyrenone 25-5	Permethrin; Piperonyl Butoxide	432-1050-ZA
Aqua Reslin	Permethrin; Piperonyl Butoxide	432-796-ZA
Aqualuer 20-20	Permethrin; Piperonyl Butoxide	769-985-AA
Pyronyl 525	Permethrin; Piperonyl Butoxide Technical	655-471-AA
In2Mix	Pyriproxyfen, Beauveria bassiana strain GHA	91720-1
Sumilarv 0.5G	2-[1-Methyl-2-(4-phenoxyphenoxy) ethoxyl] pyridine	1021-2819
VectoBac 12AS	Bacillus thuringiensis isrealensis	73049-38-AA
VectoBac Granules	Bacillus thuringiensis isrealensis	73049-10-AA
FourStar SBG	Bacillus sphaericus, Bacillus thuringiensis isrealensis	85685-1-AA
FourStar 180	Bacillus sphaericus	83362-3
VectoLex Granules	Bacillus sphaericus	73049-20-AA
VectoLex WSP	Bacillus sphaericus	73049-20-ZA

Attachment IV.A.2 canals, ditches, constructed facilities

Alta East Branch Canal	canal-perennial, ditch, or aqueduct	Mill Creek Ditch	canal-perennial, ditch, or aqueduct
Andrews Ditch	canal-perennial, ditch, or aqueduct	Modoc Ditch	canal-perennial, ditch, or aqueduct
Banks Ditch	canal-perennial, ditch, or aqueduct	Monson Ditch	canal-perennial, ditch, or aqueduct
Bishop Canal	canal-perennial, ditch, or aqueduct	Montague Ditch	canal-perennial, ditch, or aqueduct
Bowhay Ditch	canal-perennial, ditch, or aqueduct	Negro Slough	canal-intermittent, ditch, or aqueduct
Button Ditch	canal-perennial, ditch, or aqueduct	North Fork Persian Ditch	canal-perennial, ditch, or aqueduct
Buttonwillow Ditch	canal-perennial, ditch, or aqueduct	Oakes Ditch	canal-intermittent, ditch, or aqueduct
California Vineyard Ditch	canal-perennial, ditch, or aqueduct	Packwood Canal	canal-intermittent, ditch, or aqueduct
Cary Hunter Ditch	canal-perennial, ditch, or aqueduct	Pennebaker Ditch	canal-intermittent, ditch, or aqueduct
Catron Ditch	canal-intermittent, ditch, or aqueduct	Persian Ditch	canal-perennial, ditch, or aqueduct
Ceaser Ditch	canal-perennial, ditch, or aqueduct	Rice Ditch	canal-intermittent, ditch, or aqueduct
Clark Ditch	canal-perennial, ditch, or aqueduct	Sand Ridge Aqueduct Ditch	canal-per, ditch, or aqueduct
Clough Ditch	canal-perennial, ditch, or aqueduct	Smith Mountain Ditch	canal-perennial, ditch, or aqueduct
Consolidated Peoples Ditch	canal-int, ditch, or aqueduct	Sontag Ditch	canal-intermittent, ditch, or aqueduct
Cross Creek Waste Way	canal-intermittent, ditch, or aqueduct	Tout Ditch	canal-intermittent, ditch, or aqueduct
Davis Ditch	canal-intermittent, ditch, or aqueduct	Tulare Colony Ditch	canal-intermittent, ditch, or aqueduct
Evans Ditch	canal-perennial, ditch, or aqueduct	Tulare Ditch	canal-perennial, ditch, or aqueduct
Floyd Ditch	canal-perennial, ditch, or aqueduct	Tulare Irrigation Canal	canal-intermittent, ditch, or aqueduct
Foothill Ditch	canal-intermittent, ditch, or aqueduct	Van Noy Ditch	canal-intermittent, ditch, or aqueduct
Friant Kern Canal	canal-perennial, ditch, or aqueduct	Watchumna Ditch	canal-intermittent, ditch, or aqueduct
Gray Ditch	canal-intermittent, ditch, or aqueduct	Wilson Dinuba Ditch	canal-perennial, ditch, or aqueduct
Horsman Ditch	canal-perennial, ditch, or aqueduct	Wilson Ditch	canal-intermittent, ditch, or aqueduct
Kennedy School House Ditch	canal-per, ditch, or aqueduct	Wilson Hunter Ditch	canal-perennial, ditch, or aqueduct
Ketchum Ditch	canal-intermittent, ditch, or aqueduct	Wutchumna Ditch	canal-perennial, ditch, or aqueduct
King Ditch	canal-intermittent, ditch, or aqueduct		
Kirk Ditch	canal-perennial, ditch, or aqueduct		
Locust Ditch	canal-intermittent, ditch, or aqueduct		
Locust Grove Ditch	canal-intermittent, ditch, or aqueduct		
Loper Ditch	canal-perennial, ditch, or aqueduct		
Lovel Ditch	canal-perennial, ditch, or aqueduct		
Mathews Ditch	canal-perennial, ditch, or aqueduct		
Mc Clanahan Ditch	canal-intermittent, ditch, or aqueduct		
Mc Gee Ditch	canal-perennial, ditch, or aqueduct		

continued,,

Attachment IV.A.2 Owners

<p>Luis Patlan, City Manager City of Dinuba 405 E. El Monte Way</p>	<p>Three Rivers Com. Services Dist P.O. Box 423 Three Rivers, CA 93271</p>	<p>Hills Valley Irrigation District P.O. Box 911 Visalia, CA 93279</p>
<p>Randy Groom, City Administrator City of Exeter 137 North F Street</p>	<p>Tract 92 Community Services Dist P.O. Box 276 Farmersville, CA 93223</p>	<p>Ivanhoe Irrigation District 22777 Road 164 Visalia, CA 93291</p>
<p>Mike Olmos, City Manager City of Visalia 425 E. Oak St., Suite 301 Visalia, CA 93291</p>	<p>Kings River Conservation Dist 4886 E. Jensen Ave. Fresno, CA 93725</p>	<p>Lindmore Irrigation District P.O. Box 908 Lindsay, CA 93247</p>
<p>John Jansons, City Manager City of Farmersville 909 W. Visalia Rd. Farmersville, CA 93223</p>	<p>County Sanitation District Selma-Kingsburg-Fowler P.O. Box 158 Kingsburg, CA 93631</p>	<p>Lindsay-Strathmore Irrigation Dist P.O. Box 846 Lindsay, CA 93247</p>
<p>Ramon Lara, City Administrator City of Woodlake 350 N. Valencia Blvd. Woodlake, CA 93286</p>	<p>St. John's Water District 11878 Ave. 328 Visalia, CA 93291</p>	<p>Orange Cove Irrigation Dist P.O. Box 308 Orange Cove, CA 93646</p>
<p>East Orosi Community Services Dist P.O. Box 213 Orosi, CA 93647</p>	<p>Lewis Creek Water District P.O. Box 911 Visalia, CA 93279</p>	<p>Stone Corral Irrigation District 37656 Road 172 Visalia, CA 93291</p>
<p>Goshen Community Services Dist P.O. Box 2 Goshen, CA 93227</p>	<p>Tulare County Flood Control Dist 5961 S. Mooney Blvd. Visalia, CA 93277</p>	<p>Levee District No. 1 c/o Tulare County Admin. Office 2800 W. Burrel Ave.</p>
<p>London Community Services Dist 37835 Kate Rd. Dinuba, CA 93618</p>	<p>Alta Irrigation District P.O. Box 715 Dinuba, CA 93618</p>	<p>Levee District No. 2 c/o Tulare County Admin. Office 2800 W. Burrel Ave.</p>
<p>Patterson Tract Comm. Services Dist P.O. Box 532 Visalia, CA 93291</p>	<p>Consolidated Irrigation District P.O. Box 209 Selma, CA 93662</p>	<p>Cutler Public Utility District 40526 Orosi Dr. Cutler, CA 93615</p>
<p>Sultana Community Services Dist P.O. Box 158 Sultana, CA 93666</p>	<p>Exeter Irrigation District P.O. Box 516 Exeter, CA 93221</p>	<p>Ivanhoe Public Utility District P.O. Box A Ivanhoe, CA 93235</p>
<p>Orosi Public Utility District 12488 Ave. 416 Orosi, CA 93647</p>	<p>Tulare Co. Resource Conservation Dist 3530 W. Orchard Ct. Visalia, CA 93277</p>	<p>Lemon Cove Sanitary District P.O. Box 44074 Lemon Cove, CA 93244</p>
<p>Kaweah Delta Water Conservation Dist 2975 N. Farmersville Blvd.</p>		

Attachment IV.A.3 Rivers, lakes, streams

Antelope Creek	stream-intermittent, river, or wash	Williams Ditch	stream-intermittent, river, or wash
Badger Creek	stream-intermittent, river, or wash	Wilson Ditch	stream-intermittent, river, or wash
Cottonwood Creek	stream-intermittent, river, or wash	Yokohl Creek	stream-intermittent, river, or wash
Cross Creek	stream-intermittent, river, or wash	Bump and Edmiston Aq	stream-perennial or river
Deep Creek	stream-intermittent, river, or wash	Cameron Creek	stream-perennial or river
Driver Ditch	stream-intermittent, river, or wash	Cole Slough	stream-perennial or river
East Fork Dry Creek	stream-intermittent, river, or wash	Cottonwood Creek	stream-perennial or river
Farmers Ditch	stream-intermittent, river, or wash	Deep Creek	stream-perennial or river
Fleming Ditch	stream-intermittent, river, or wash	Dry Creek	stream-perennial or river
Goetzman Creek	stream-intermittent, river, or wash	Elbow Creek	stream-perennial or river
Grapevine Creek	stream-intermittent, river, or wash	Greasy Creek	stream-perennial or river
Indian Creek	stream-intermittent, river, or wash	Kaweah River	stream-perennial or river
Johnson Slough	stream-intermittent, river, or wash	Kaweah River	stream-perennial or river
Kaweah River	stream-intermittent, river, or wash	Kings River	stream-perennial or river
Kennedy Waste Way	stream-intermittent, river, or wash	Kingsburg Branch	stream-perennial or river
Lemon Cove Ditch	stream-intermittent, river, or wash	Long Canal	stream-perennial or river
Lewis Creek	stream-intermittent, river, or wash	Mankins Creek	stream-perennial or river
Long Creek	stream-intermittent, river, or wash	Mill Creek	stream-perennial or river
Minnehaha Creek	stream-intermittent, river, or wash	Packwood Creek	stream-perennial or river
Murry Creek	stream-intermittent, river, or wash	Saint Johns River	stream-perennial or river
Outside Creek	stream-intermittent, river, or wash	Sand Creek	stream-perennial or river
Persian Creek	stream-intermittent, river, or wash	Smyrna	stream-perennial or river
Rattlesnake Creek	stream-intermittent, river, or wash	South Fork Persian Ditch	stream-perennial or river
Ridenhour Creek	stream-intermittent, river, or wash	Traver Canal	stream-perennial or river
Stocker Creek	stream-intermittent, river, or wash	Travers Creek	stream-perennial or river
Story Creek	stream-intermittent, river, or wash	Van Gordon Creek	stream-perennial or river
Uphill Ditch	stream-intermittent, river, or wash	Wooten Creek	stream-perennial or river
Watson Ditch	stream-intermittent, river, or wash		
Wilcox Creek	stream-intermittent, river, or wash		

DELTA MOSQUITO & VECTOR CONTROL DISTRICT

Dr. Mustapha Debboun
General Manager

1737 West Houston Avenue * Visalia, California 93291
Phone (559) 732-8606 * (877) 732-8606 * Fax (559)-732-7441

Crystal Grippin
Scientific Program Manager

Paul Harlien
Operations Program Manager

www.deltamvcd.org

Erick Arriaga
Community Education & Outreach Coordinator

Mary Ellen Gomez
Administrative Assistant



Bryan Ferguson
Foreman

Rick Alvarez
Vector Control Supervisor

Bryan Ruiz
Supervisor Assistant

June 9, 2023

NOTICE OF INTENT TO APPLY PUBLIC HEALTH PESTICIDES FOR VECTOR CONTROL PURPOSES TO SURFACE WATERS AND WATERS OF THE UNITED STATES (US) WITHIN TULARE COUNTY, CA.

The Delta Mosquito and Vector Control District (DMVCD) is a public health agency that protects Tulare County residents and visitors from mosquitoes and vector-borne diseases. The District is an independent special district that operates under the California Health and Safety Code §~2000-2093. The staff of DMVCD conduct ongoing surveillance of mosquitoes, and other vectors in DMVCD to determine the threat of disease transmission and direct the control activities. The DMVCD staff practice a program of integrated vector management (IVM), which includes surveillance for mosquitoes and other vectors; source reduction; biological control; larviciding and adulticiding as indicated by surveillance; resistance monitoring; disease surveillance in vectors and reservoirs of vector-borne diseases; and community education and outreach.

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

The DMVCD staff are required and have obtained a Statewide General National Pollutant Discharge Elimination System (NPDES) permit to apply public health pesticides in, over, and near waters of the USA. The NPDES permit requires that we notify potentially affected government agencies about the 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 DMVCD boundaries in 2023.

These pesticides are used to protect public health by controlling the development and populations of mosquitoes. Applications will be made within DMVCD boundaries from April 1 through December 31, 2023. There are no known water use restrictions or precautions during treatment.

Names of pesticides: Agnique Liquid Oz, Agnique MMF G, Altosid Briq150day, Altosid Briq130day, Altosid Liquid, Altosid Pellets WSP, Alto-sid XRG, Aqua Reslin, Aqualuer 20-20, BVA2 Larvicide, Natular 2EC, Natular G30, Pyrenone 25-5, Pyronyl 525, VectoBac 12AS, VectoBac Granules, Vectolex Granules, Vectolex WSP, In2Mix, Sumilarv 0.5G.

Interested persons may contact Paul Harlien at (559) 909-8688 or Dr. Mustapha Debboun at (559) 732-8606 for additional information. This notification shall be posted on the DMVCD website: www.deltamvcd.org.

Please contact us for any additional information.

Sincerely,

Dr. Mustapha Debboun, M.S., Ph.D., BCE, ESA Fellow
General Manager/Medical & Veterinary Entomologist
Delta Mosquito & Vector Control District
Email: mdebboun@deltamvcd.org; Phone: 559-732-8606

Attachment VII continued

<p>Luis Patlan, City Manager City of Dinuba 405 E. El Monte Way Dinuba, CA 93618</p>	<p>Three Rivers Com. Services Dist P.O. Box 423 Three Rivers, CA 93271</p>	<p>Hills Valley Irrigation District P.O. Box 911 Visalia, CA 93279</p>
<p>Randy Groom, City Administrator City of Exeter 137 North F Street Exeter, CA 93221</p>	<p>Tract 92 Community Services Dist P.O. Box 276 Farmersville, CA 93223</p>	<p>Ivanhoe Irrigation District 22777 Road 164 Visalia, CA 93291</p>
<p>Mike Olmos, City Manager City of Visalia 425 E. Oak St., Suite 301 Visalia, CA 93291</p>	<p>Kings River Conservation Dist 4886 E. Jensen Ave. Fresno, CA 93725</p>	<p>Lindmore Irrigation District P.O. Box 908 Lindsay, CA 93247</p>
<p>John Jansons, City Manager City of Farmersville 909 W. Visalia Rd. Farmersville, CA 93223</p>	<p>County Sanitation District Selma-Kingsburg-Fowler P.O. Box 158 Kingsburg, CA 93631</p>	<p>Lindsay-Strathmore Irrigation Dist P.O. Box 846 Lindsay, CA 93247</p>
<p>Ramon Lara, City Administrator City of Woodlake 350 N. Valencia Blvd. Woodlake, CA 93286</p>	<p>St. John's Water District 11878 Ave. 328 Visalia, CA 93291</p>	<p>Orange Cove Irrigation Dist P.O. Box 308 Orange Cove, CA 93646</p>
<p>East Orosi Community Services Dist P.O. Box 213 Orosi, CA 93647</p>	<p>Lewis Creek Water District P.O. Box 911 Visalia, CA 93279</p>	<p>Stone Corral Irrigation District 37656 Road 172 Visalia, CA 93291</p>
<p>Goshen Community Services Dist P.O. Box 2 Goshen, CA 93227</p>	<p>Tulare County Flood Control Dist 5961 S. Mooney Blvd. Visalia, CA 93277</p>	<p>Levee District No. 1 c/o Tulare County Adm'n. Office 2800 W. Burrel Ave. Visalia, CA 93291</p>
<p>London Community Services Dist 37835 Kate Rd. Dinuba, CA 93618</p>	<p>Alta Irrigation District P.O. Box 715 Dinuba, CA 93618</p>	<p>Levee District No. 2 c/o Tulare County Adm'n. Office 2800 W. Burrel Ave. Visalia, CA 93291</p>
<p>Patterson Tract Comm. Services Dist P.O. Box 532 Visalia, CA 93291</p>	<p>Consolidated Irrigation District P.O. Box 209 Selma, CA 93662</p>	<p>Cutler Public Utility District 40526 Orosi Dr. Cutler, CA 93615</p>
<p>Sultana Community Services Dist P.O. Box 158 Sultana, CA 93666</p>	<p>Exeter Irrigation District P.O. Box 516 Exeter, CA 93221</p>	<p>Ivanhoe Public Utility District P.O. Box A Ivanhoe, CA 93235</p>
<p>Orosi Public Utility District 12488 Ave. 416 Orosi, CA 93647</p>	<p>Tulare Co. Resource Conservation Dist 3530 W. Orchard Ct. Visalia, CA 93277</p>	<p>Lemon Cove Sanitary District P.O. Box 44074 Lemon Cove, CA 93244</p>
<p>Kaweah Delta Water Conservation Dist 2975 N. Farmersville Blvd. Farmersville, CA 93223</p>		

Cameron Creek	Perennial stream or river
Cole Slough	Perennial stream or river
Cherokee Creek	Perennial stream or river
Dry Creek	Perennial stream or river
Greasy Creek	Perennial stream or river
Kaweah River	Perennial stream or river
Kaweah River North Fork	Perennial stream or river
Kaweah River South Fork	Perennial stream or river
Kennedy Wasteway	Perennial stream or river
Kings River	Perennial stream or river
Kingsburg Branch	Perennial stream or river
Long Canal	Perennial stream or river
Mankins Creek	Perennial stream or river
Mill Creek	Perennial stream or river
Packwood Creek	Perennial stream or river
Saint Johns River	Perennial stream or river
Sand Creek	Perennial stream or river
Smyrna	Perennial stream or river
Travers Creek	Perennial stream or river
Wooten Creek	Perennial stream or river

In prior years, the District has applied adulticides and/or larvicides directly to or in the vicinity of the following canals, ditches, or other constructed conveyance facilities:

Banks Ditch	Intermittent canal, ditch, or aqueduct
Button Ditch	Intermittent canal, ditch, or aqueduct
Catron Ditch	Intermittent canal, ditch, or aqueduct
Clements	Intermittent canal, ditch, or aqueduct
Cross Creek Waste Way	Intermittent canal, ditch, or aqueduct
Foothill Ditch	Intermittent canal, ditch, or aqueduct
Gray Ditch	Intermittent canal, ditch, or aqueduct
Horseman Ditch	Intermittent canal, ditch, or aqueduct
Ketchum Ditch	Intermittent canal, ditch, or aqueduct
King Ditch	Intermittent canal, ditch, or aqueduct
Lindsay Strathmore canal	Intermittent canal, ditch, or aqueduct
Locust Grove Ditch	Intermittent canal, ditch, or aqueduct
Mill Creek Ditch	Intermittent canal, ditch, or aqueduct
Modoc Ditch	Intermittent canal, ditch, or aqueduct
Packwood Canal	Intermittent canal, ditch, or aqueduct
Persian Ditch North Fork	Intermittent canal, ditch, or aqueduct
Persian Ditch South Fork	Intermittent canal, ditch, or aqueduct
Rice Ditch	Intermittent canal, ditch, or aqueduct
Tout Ditch	Intermittent canal, ditch, or aqueduct
Tulare Colony Ditch	Intermittent canal, ditch, or aqueduct
Van Noy Ditch	Intermittent canal, ditch, or aqueduct
Watson Ditch	Intermittent canal, ditch, or aqueduct

Wilson Ditch

Intermittent canal, ditch, or aqueduct

Alta East Branch Canal

Perennial canal, ditch, or aqueduct

Andrews Ditch

Perennial canal, ditch, or aqueduct

Bowhay Ditch

Perennial canal, ditch, or aqueduct

Buttonwillow Ditch

Perennial canal, ditch, or aqueduct

Bishop Canal

Perennial canal, ditch, or aqueduct

California Vineyard Ditch

Perennial canal, ditch, or aqueduct

Cary Hunter Ditch

Perennial canal, ditch, or aqueduct

Ceaser Ditch

Perennial canal, ditch, or aqueduct

Clark Ditch

Perennial canal, ditch, or aqueduct

Clough Ditch

Perennial canal, ditch, or aqueduct

Driver Ditch

Perennial canal, ditch, or aqueduct

Floyd Ditch

Perennial canal, ditch, or aqueduct

Friant Kern Canal

Perennial canal, ditch, or aqueduct

Island Canal

Perennial canal, ditch, or aqueduct

Kennedy School House Ditch

Perennial canal, ditch, or aqueduct

Kirk Ditch

Perennial canal, ditch, or aqueduct

Lakeland Canal

Perennial canal, ditch, or aqueduct

Loper Ditch

Perennial canal, ditch, or aqueduct

Lovel Ditch

Perennial canal, ditch, or aqueduct

Mc Clanahan Ditch

Perennial canal, ditch, or aqueduct

Mc Gee Ditch

Perennial canal, ditch, or aqueduct

Monson Ditch

Perennial canal, ditch, or aqueduct

Montague Ditch

Perennial canal, ditch, or aqueduct

Peoples Ditch

Perennial canal, ditch, or aqueduct

Riverside Ditch

Perennial canal, ditch, or aqueduct

Sand Ridge Aqueduct Ditch

Perennial canal, ditch, or aqueduct

Smith Mountain Ditch

Perennial canal, ditch, or aqueduct

Tulare Canal

Perennial canal, ditch, or aqueduct

Tulare Ditch

Perennial canal, ditch, or aqueduct

Tulare Irrigation Canal

Perennial canal, ditch, or aqueduct

Traver Canal

Perennial canal, ditch, or aqueduct

Wachumna

Perennial canal, ditch, or aqueduct

Wilson Dinuba Ditch

Perennial canal, ditch, or aqueduct

Wilson Ditch

Perennial canal, ditch, or aqueduct

Wilson Hunter Ditch

Perennial canal, ditch, or aqueduct

In prior years, the District has applied aduenticides and/or larvicides directly to or in the vicinity of canals, ditches, or other constructed conveyance facilities owned and controlled by:

Dinuba

City

Exeter

City

Farmersville	City
Visalia	City
Woodlake	City
East Oroshi	Community Services District
Goshen	Community Services District
London	Community Services District
Patterson Tract	Community Services District
Sultana	Community Services District
Three Rivers	Community Services District
Tract 92	Community Services District
Kings River	Conservation District
Selma-Kingsburg-Fowler	County Sanitation District
St. John's	Water District
Lewis Creek	Water District
Tulare County	Flood Control District
Alta	Irrigation District
Consolidated	Irrigation District
Exeter	Irrigation District
Hills Valley	Irrigation District
Ivanhoe	Irrigation District
Lindmore	Irrigation District
Lindsay-Strathmore	Irrigation District
Orange Cove	Irrigation District
Stone Corral	Irrigation District
Levee District No. 1	Levee District
Levee District No. 2	Levee District
Cutler	Public Utility District
Ivanhoe	Public Utility District
Oroshi	Public Utility District
Tulare County	Resource Conservation District
Lemon Cove	Sanitary District
Kaweah Delta	Water Conservation District

Pesticide Application Plan (PAP) for the NPDES Vector Control Permit Application of the Delta Mosquito and Vector Control District (DMVCD).

1. **Target areas:** surface waters and waters of the U.S. within the Delta Mosquito and Vector Control District (DMVCD) boundary in Tulare County, CA. See: Map of DMVCD boundaries Appendix PAP I.I.

In prior years, the District has applied adulticides and/or larvicides directly to or in the vicinity of the following water bodies.

Kaweah	Lake
Bravo	Lake
Antelope Creek	Intermittent stream, river, or wash
Badger Creek	Intermittent stream, river, or wash
Bear Creek	Intermittent stream, river, or wash
Cedar Creek	Intermittent stream, river, or wash
Cross Creek	Intermittent stream, river, or wash
Cottonwood Creek	Intermittent stream, river, or wash
Cottonwood Creek	Intermittent stream, river, or wash
Deep Creek	Intermittent stream, river, or wash
Dry Creek East Fork	Intermittent stream, river, or wash
Elbow Creek	Intermittent stream, river, or wash
Farmers Ditch	Intermittent stream, river, or wash
Fleming Ditch	Intermittent stream, river, or wash
Goetzman Creek	Intermittent stream, river, or wash
Grapevine Creek	Intermittent stream, river, or wash
Indian Creek	Intermittent stream, river, or wash
Johnson Slough	Intermittent stream, river, or wash
Lemon Cove Ditch	Intermittent stream, river, or wash
Lewis Creek	Intermittent stream, river, or wash
Long Creek	Intermittent stream, river, or wash
Minnehaha Creek	Intermittent stream, river, or wash
Murry Creek	Intermittent stream, river, or wash
Negro Slough	Intermittent stream, river, or wash
Outside Creek	Intermittent stream, river, or wash
Persian Creek	Intermittent stream, river, or wash
Rattlesnake Creek	Intermittent stream, river, or wash
Ridenhour Creek	Intermittent stream, river, or wash
Sontag Ditch	Intermittent stream, river, or wash
Stocker Creek	Intermittent stream, river, or wash
Story Creek	Intermittent stream, river, or wash
Van Gordon Creek	Intermittent stream, river, or wash
Williams Ditch	Intermittent stream, river, or wash
Wilcox Creek	Intermittent stream, river, or wash
Yokohl Creek	Intermittent stream, river, or wash

Bump and Edmiston	Perennial stream or river
Cameron Creek	Perennial stream or river
Cole Slough	Perennial stream or river
Cherokee Creek	Perennial stream or river
Dry Creek	Perennial stream or river
Greasy Creek	Perennial stream or river
Kaweah River	Perennial stream or river
Kaweah River North Fork	Perennial stream or river
Kaweah River South Fork	Perennial stream or river
Kennedy Wasteway	Perennial stream or river
Kings River	Perennial stream or river
Kingsburg Branch	Perennial stream or river
Long Canal	Perennial stream or river
Mankins Creek	Perennial stream or river
Mill Creek	Perennial stream or river
Packwood Creek	Perennial stream or river
Saint Johns River	Perennial stream or river
Sand Creek	Perennial stream or river
Smyrna	Perennial stream or river
Travers Creek	Perennial stream or river
Wooten Creek	Perennial stream or river

In prior years, the District has applied adulticides and/or larvicides directly to or in the vicinity of the following canals, ditches, or other constructed conveyance facilities:

Banks Ditch	Intermittent canal, ditch, or aqueduct
Button Ditch	Intermittent canal, ditch, or aqueduct
Catron Ditch	Intermittent canal, ditch, or aqueduct
Clements	Intermittent canal, ditch, or aqueduct
Cross Creek Waste Way	Intermittent canal, ditch, or aqueduct
Foothill Ditch	Intermittent canal, ditch, or aqueduct
Gray Ditch	Intermittent canal, ditch, or aqueduct
Horseman Ditch	Intermittent canal, ditch, or aqueduct
Ketchum Ditch	Intermittent canal, ditch, or aqueduct
King Ditch	Intermittent canal, ditch, or aqueduct
Lindsay Strathmore canal	Intermittent canal, ditch, or aqueduct
Locust Grove Ditch	Intermittent canal, ditch, or aqueduct
Mill Creek Ditch	Intermittent canal, ditch, or aqueduct
Modoc Ditch	Intermittent canal, ditch, or aqueduct
Packwood Canal	Intermittent canal, ditch, or aqueduct
Persian Ditch North Fork	Intermittent canal, ditch, or aqueduct
Persian Ditch South Fork	Intermittent canal, ditch, or aqueduct
Rice Ditch	Intermittent canal, ditch, or aqueduct
Tout Ditch	Intermittent canal, ditch, or aqueduct
Tulare Colony Ditch	Intermittent canal, ditch, or aqueduct
Van Noy Ditch	Intermittent canal, ditch, or aqueduct

Watson Ditch	Intermittent canal, ditch, or aqueduct
Wilson Ditch	Intermittent canal, ditch, or aqueduct
Alta East Branch Canal	Perennial canal, ditch, or aqueduct
Andrews Ditch	Perennial canal, ditch, or aqueduct
Bowhay Ditch	Perennial canal, ditch, or aqueduct
Buttonwillow Ditch	Perennial canal, ditch, or aqueduct
Bishop Canal	Perennial canal, ditch, or aqueduct
California Vineyard Ditch	Perennial canal, ditch, or aqueduct
Cary Hunter Ditch	Perennial canal, ditch, or aqueduct
Ceaser Ditch	Perennial canal, ditch, or aqueduct
Clark Ditch	Perennial canal, ditch, or aqueduct
Clough Ditch	Perennial canal, ditch, or aqueduct
Driver Ditch	Perennial canal, ditch, or aqueduct
Floyd Ditch	Perennial canal, ditch, or aqueduct
Friant Kern Canal	Perennial canal, ditch, or aqueduct
Island Canal	Perennial canal, ditch, or aqueduct
Kennedy School House Ditch	Perennial canal, ditch, or aqueduct
Kirk Ditch	Perennial canal, ditch, or aqueduct
Lalceland Caua	Perennial canal, ditch, or aqueduct
Loper Ditch	Perennial canal, ditch, or aqueduct
Lovel Ditch	Perennial canal, ditch, or aqueduct
Mc Clanahan Ditch	Perennial canal, ditch, or aqueduct
Mc Gee Ditch	Perennial canal, ditch, or aqueduct
Monson Ditch	Perennial canal, ditch, or aqueduct
Montague Ditch	Perennial canal, ditch, or aqueduct
Peoples Ditch	Perennial canal, ditch, or aqueduct
Riverside Ditch	Perennial canal, ditch, or aqueduct
Sand Ridge Aqueduct Ditch	Perennial canal, ditch, or aqueduct
Smith Mountain Ditch	Perennial canal, ditch, or aqueduct
Tulare Canal	Perennial canal, ditch, or aqueduct
Tulare Ditch	Perennial canal, ditch, or aqueduct
Tulare Irrigation Canal	Perennial canal, ditch, or aqueduct
Traver Canal	Perennial canal, ditch, or aqueduct
Wachumna	Perennial canal, ditch, or aqueduct
Wilson Dinuba Ditch	Perennial canal, ditch, or aqueduct
Wilson Ditch	Perennial canal, ditch, or aqueduct
Wilson Hunter Ditch	Perennial canal, ditch, or aqueduct
Alta East Branch Canal	Perennial canal, ditch, or aqueduct

In prior years, the District has applied adulticides and/or larvicides directly to or in the vicinity of canals, ditches, or other constructed conveyance facilities owned and controlled by:

Dinuba	City
Exeter	City
Farmersville	City
Visalia	City

Woodlake	City
East Orosi	Community Services District
Goshen	Community Services District
London	Community Services District
Patterson Tract	Community Services District
Sultana	Community Services District
Three Rivers	Community Services District
Tract 92	Community Services District
Kings River	Conservation District
Selma-Kingsburg-Fowler	County Sanitation District
St. John's	Water District
Lewis Creek	Water District
Tulare County	Flood Control District
Alta	Irrigation District
Consolidated	Irrigation District
Exeter	Irrigation District
Hills Valley	Irrigation District
Ivanhoe	Irrigation District
Lindmore	Irrigation District
Lindsay-Strathmore	Irrigation District
Orange Cove	Irrigation District
Stone Corral	Irrigation District
Levee District No. 1	Levee District
Levee District No. 2	Levee District
Cutler	Public Utility District
Ivanhoe	Public Utility District
Orosi	Public Utility District
Tulare County	Resource Conservation District
Lemon Cove	Sanitary District
Kaweah Delta	Water Conservation District

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

- **Best Management Practices for Mosquito Control in California.** 2011. California Department of Health Services, Vector-Borne Disease Section. Pages 1, 4-19.
- **California Mosquito-Borne Virus Surveillance & Response Plan.** 2011. California Department of Health Services, Vector-Borne Disease Section. Pages 3-9.
- **Operational Plan for Emergency Response to Mosquito-Borne Disease Outbreaks.** 2010. California Department of Public Health, Vector-Borne Disease Section. Pages 6-10, 19-20.
- **Overview of Mosquito Control Practices in California.** 2008. California Department of Public Health, Vector-Borne Disease Section. Pages 3, 6-15, 18-19, 21-22.
- **Epidemic/Epizootic West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control.** 2003. U.S. Department of Health and Human Services, Centers for Disease Control and Prevention. Pages 5-13, 15-17, 27-35.

The use of pesticides to control adult and immature stages of mosquitoes is determined when other control methods cannot or will not be feasible. Following are but some examples of the limitations that other control methods present that may then trigger the need for a pesticide application:

Biological control (use of mosquitofish) has definite limitations. For example:

- They can seldom inhabit two important larval sites: small containers and highly polluted water. In temporary water sites, repeated introduction of fish will be required. Mosquito-eating fish can harm beneficial organisms (e.g., other fish or insect predators) by eating their eggs and young or by superior competition for food. Their release carries the potential to reduce or eliminate non-target species.
- Larvivorous fish may be preyed upon by larger fish. Their vulnerability to fungi and other pathogens may keep their populations in check.
- Where larvivorous fish are harvested or removed, their populations could be reduced to a level inadequate for mosquito control.
- Mosquito-eating fish may prefer food other than mosquito larvae. In some situations, mosquito larvae production outruns the increase in fish population that would be necessary for control.
- The District can only rear certain amounts of mosquitofish per year in. All mosquitofish produced are used in the District's biological control element of the IPM program.

Natural control (a pest management strategy whereby the environment is disturbed as little as possible) has definite limitations. For example:

- Natural control is sometimes difficult to implement or assess due to the amount of manmade or manipulated vector sources found in the District. Natural control is advocated for sites that are remote and undisturbed, to the least amount practical, for the individual vector species being contemplated for control.

Physical control (or mosquito habitat modification) has definite limitations. For example:

- Only man-made or managed mosquito sources are capable of being physically altered to reduce mosquito abundance. In some cases, physically altered lands will reduce, but not eliminate mosquito breeding, requiring the implementation of other forms of control, including biological and chemical control.

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

The following list of products may be used by the District for larval or adult control. All of these products may be applied by ground (hand, truck, backpack, hand can, all terrain vehicle, amphibious vehicle, etc.) or by air (helicopter, or fixed wing aircraft) according to label directions.

List of Permitted Products

Pesticide	Active Ingredient	EPA Reg #
Agnique Liquid Gal	Poly(oxy-1,2-ethanediyl),a-(C16-20branched and linearalkyl)-w-hydroxy	53263-28-AA
Agnique Liquid Oz	Poly(oxy-1,2-ethanediyl),a-(C16-20branched and linearalkyl)-w-hydroxy	53263-28-AA
Agnique MMF G	Poly(oxy-1,2-ethanediyl),a-(C16-20branched and linearalkyl)-w-hydroxy	5326-330-AA
Altosid Briq 150 day	(S) - Methoprene	2724-421-ZA
Altosid Briq 30 day	(S) - Methoprene	2724-375-ZA
Altosid Liquid	(S) - Methoprene	2724-392-ZA
Altosid Pellets WSP	(S) - Methoprene	2724-448-ZC
Altosid - Sand Mix	(S) - Methoprene	2724-392-ZA
Altosid XRG	(S) - Methoprene	2724-451-ZA
Natular 2EC	Spinosad (A&D)	8329-82-AA
Natular G30	Spinosad (A&D)	8329-83-AA
Coco Bear	Mineral Oil	8329-93
Kontrol Larvacide	Mineral Oil	73748-10
BVA2 larvacide	Mineral Oil	70589-1-AA
Pyrenone 25-5	Permethrin; Piperonyl Butoxide	432-1050-ZA
Aqua Reslin	Permethrin; Piperonyl Butoxide	432-796-ZA
Aqualuer 20-20	Permethrin; Piperonyl Butoxide	769-985-AA
Pyronyl 525	Permethrin; Piperonyl Butoxide Technical	655-471-AA
In2Mix	Pyriproxyfen, Beauveria bassiana strain GHA	91720-1
Sumilarv 0.5G	2-[1-Methyl-2-(4-phenoxyphenoxy) ethoxyl] pyridine	1021-2819
VectoBac 12AS	Bacillus thuringiensis israelensis	73049-38-AA
VectoBac Granules	Bacillus thuringiensis israelensis	73049-10-AA
FourStar SBG	Bacillus sphaericus, Bacillus thuringiensis israelensis	85685-1-AA
FourStar 180	Bacillus sphaericus	83362-3
VectoLex Granules	Bacillus sphaericus	73049-20-AA
VectoLex WSP	Bacillus sphaericus	73049-20-ZA

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 Delta Mosquito and Vector Control 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 item 2 above. 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. However, typical sources treated by this District include: permanent & semi-permanent seasonal wetlands, streams, rivers, lakes, canals & ditches, irrigated pasture & crops, flood control containment basins and associated water conveyance systems, livestock and sewer impoundments, man-made aquatic containments, and tributary waters of the Kings, St. Johns, and Kaweah Rivers.

Source Type	Source Description
110	Alfalfa
120	Irrigated Pasture
130	Orchard
140	Corn
150	Cotton
160	Grain
170	Vine Crop
180	Sudan Grass
190	Other Ag Crop
210	Irrigation Pipe
220	Irrigation Pond
230	Irrigation Canal
310	Misc. Open Land
320	Misc. Native Pasture
330	Misc. Trough
410	Swimming Pool - Private
411	Pool Above Ground
412	Spa
415	Fountain
418	Aerial Spot
420	Pond - Private
430	Wash drain/ sink private
440	Container - Private
450	Cesspool - Private
460	Other Source - Private
510	Gutter/Storm drain/Sump
530	Golf Course/Park
540	Roadside/Railroad

550	School
560	Other public domain
610	Other Commercial
620	Dairy Lagoon
621	Sludge Field
625	Livestock pens
630	Flood Control Basin
640	Mining
650	Lumber Yard
660	Sewer Treatment
670	Tires
710	Natural Marsh
720	Natural River / Slough
730	Natural Creek

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

With any source of mosquitoes or other vectors, the Delta Mosquito and Vector Control District's first goal is to look for ways to eliminate the source, or, if that is not possible, for ways to reduce the potential for vectors. The most commonly used methods and their limitations are included in the Best Management Practices for Mosquito Control in California, 2011. Pages 1, 4-19.

Specific methods used by the District include stocking mosquito fish (*Gambusia affinis*), educating residents that mosquitoes develop in standing water and encouraging them to remove sources of standing water on their property, and working with property owners to find long-term water management strategies that meet their needs while minimizing the need for public health pesticide applications.

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

The need to apply product is determined by surveillance. The Delta Mosquito and Vector Control District cannot speculate on the amount of product required to be used on a prospective basis. Actual use varies annually depending on mosquito abundance. The pesticide amounts presented below were taken from Delta Mosquito and Vector Control District’s 2022 Pesticide Use Report as an estimate of pesticide use in 2023 and outlying years. Total Use and Waters of the US are identified in below and in Attachment C.

Product	Num Applications	Total Amount	Application UOM	Acres Treated	EPA Reg No
Agnique MMF	305	518	fl oz	1.04	53263-28-AA
Altosand	5	13	lb	1.00	2724-392-ZA
Altosid LL	109	909.5	fl oz	343817.37	2724-392-ZA
Altosid WSP	4668	63808	packet	29.57	2724-448-ZC
Altosid XR	46	68	each	335.10	
Altosid XRG	43	351.1	lb	32.74	2724-451-ZA
Altosid XRG Ultra	40	1597	lb	161.55	89459-104-AA
BVA-2	1495	687651.91	fl oz	127125.54	70589-1-AA
COCO Bear	1	4	gal	2.00	
Duplex G	16	306	lb	34.52	W9459-93
Fourstar 180	15	121	each	0.20	83362-3-AA
Fyfanon EW	16	7186.24	fl oz	6821.66	279-3622
Natular 2EC	406	1521.5	fl oz	760.66	8329-82-AA
Natular DT	70	126	each	0.13	8329-602
Natular G30	47	291.67	lb	23.95	8329-83-ZA
Natular XRT	103	342	briquet	0.19	8329-84
Pyronyl 525	10	35.99	gal	4838.45	655-471
Sumilarv WSP 25g	14	14	pouch	0.01	1021-2818
Sumilarv WSP 50g	15	29	pouch	0.01	1021-2818
Vectobac 12AS	614	25958.55	fl oz	1626.15	73049-38-AA
Vectobac G	5	60	lb	6.00	73049-10-AA
Vectobac GR	19	287	lb	29.40	73049-486
Vectobac WDG	48	1200	lb	2400.00	73049-56
Vectolex FG	8	175	lb	18.00	73049-20-AA
Vectolex WSP	336	541	packet	51.04	73049-20-ZA

Total Treatments: 8454

Total Acres Treated: 488116.287794

7. Representative monitoring locations and the justification for selecting these monitoring 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 Delta Mosquito and Vector Control District performs source reduction through physical control efforts through Memorandum(s) of Understanding with the California Department of Fish and Game. Examples that have resulted in the reduction of pesticide applications are the following:

- Memorandum of Understanding between the California Department of Fish and Game, the California Regional Water Quality Control Board and Mosquito Abatement and Vector Control Districts of the South San Joaquin Valley regarding vegetation management in wastewater treatment facilities, 1993 (See Appendix PAP 8.1).
- Stream Alteration Agreement No. 2005-0151-R4 Kings, St. Johns, and Kaweah Rivers - Tulare County. March 28, 2006 (See Appendix PAP 8.2).

9. Description of the BMPs to be implemented. The BMPs shall include at a minimum:

The Delta Mosquito and Vector Control District's BMP's are described in Item 2 above. Specific elements have been highlighted below under items a -f:

a. measures to prevent a pesticide spill;

All pesticide applicators receive annual spill prevention and response annually. District employees monitor application equipment daily 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.

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

Application equipment is calibrated each year as part of the terms of a cooperative agreement with the California Department of Public Health (CDPH). Please see Appendix PAP 9.b.

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:

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 application mode, e.g. aerial spray, truck, hand, etc.;

The Delta Mosquito and Vector Control District calibrates truck mounted and handheld larviciding equipment each year to meet application specifications. Supervisors review application records daily to ensure appropriate amounts of material are being used. Ultra Low Volume (ULV) application 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 use for rural ULV application 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.

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

Please see the Best Management Practices for Mosquito Control in California, 2011- Pages 1, 4-19, for general pesticide application BMP's, and current approved pesticide labels for application BMP's for specific products.

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

Employees evaluate the ability of a given mosquito breeding source to be reduced or eliminated per biological and/or physical control strategies outlined in CDPH's Best Management Practices for Mosquito Control in California, 2011- Pages 1, 4-19, after determining: 1) the species of mosquito, 2) the immediate population of mosquitoes, and 3) the current public health threat posed by the mosquito specie(s), the current mosquito population, and related arbovirus activity. Additional information regarding arbovirus activity is also used in determining what type of control technique should be implemented and when.

10. Identification of the problem.

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

The Delta Mosquito and Vector Control District staff only applies pesticide to sources of mosquitoes that represent imminent threats to public health or quality of life. The presence of any mosquito may necessitate treatment; however, higher thresholds may be applied depending on the District's resources, disease activity, surveillance data, or local needs. Treatment thresholds are based on a combination of one or more of the following criteria:

- Mosquito species present
- Mosquito stage of development
- Pest, nuisance, or disease potential
- Disease activity
- Mosquito abundance
- Flight range
- Proximity to populated areas
- Size of source
- Presence/absence of natural enemies or 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;

Please see Item 2 above and Appendix PAP 10.b: Delta Mosquito and Vector Control District Larval Treatment Criteria.

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 Delta Mosquito and Vector Control 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 pesticide applications as described in Item 2 above. The following are known breeding areas where source reduction reduces the need for larval control through habitat management options.

Name	TRS	Source #
Kingsburg Gun Club	16-22-25	4001
Kingsburg Sewer Farm	16-22-36	2001-2003
Lindy's Landing	16-23-08	2001, 4001-4002
Brandt's	16-23-09	1001-1002
416 Bridge	16-23-17	2001-2002
Jacksons	16-23-17	3001
Beaver Pond	16-23-19	2001
Kings River Golf and Country Club	16-23-29	1001
Tulare County Park	16-23-30	3001
Brickyard	16-23-30	3002
Mary & Gary Johnson's	16-23-30	4001
Royal Oak Park and Island	16-23-30	4003
St. John's River	18-27-04	3001

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

The District continually collects adult and larval mosquito surveillance data, dead bird reports, and monitors regional mosquito-borne disease activity detected in humans, horses, birds, and/or other animals, and uses these data to guide mosquito control activities/decisions (see Appendix PAP 10.d Summary of WNV/SLE Incidence 1989/2011).

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 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 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 Delta Mosquito and Vector Control District uses the principles and practices of Integrated Vector Management program (IVM) as described on pages 26-27 of the Best Management Practices for Mosquito Control in California, 2011, and discussed in item 2 above. As stated in item # 10 above, locations where vectors may exist are assessed, and the potential for using alternatives to pesticides is determined on a case-by-case basis. Commonly considered alternatives include: 1) Eliminate artificial sources of standing water; 2) Ensure temporary sources of surface water drain within four days (96 hours) to prevent adult mosquitoes from developing; 3) Control plant growth in ponds, ditches and shallow wetlands; 4) Design facilities and water conveyance and/or holding structures to minimize the potential for producing mosquitoes; and 5) Use appropriate biological control methods that are available.

Additional alternatives to using pesticides for managing mosquitoes are listed on pages 4-19 of the Best Management Practices for Mosquito Control in California. Implementing preferred alternatives depends on a variety of factors including availability of District 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.

The Delta Mosquito and Vector Control District follows an existing IVM program, which includes practices described in Item 2 above. A "nuisance" is specifically defined in California Health and Safety Code (HSC) §20020). This definition allows vector control agencies to address situations where even a low number of vectors may pose a substantial threat to public health and quality of life. In practice, the definition of a "nuisance" is generally only part of a decision to apply pesticides to areas covered under this permit. As summarized in the California Mosquito-borne Virus Surveillance and Response Plan, the overall risk to the public when vectors and/or vector-borne disease are present is used to select an available and appropriate material, rate, and application method to address that risk in the context of our IVM program.

ATTACHMENT B

STATE WATER RESOURCES CONTROL BOARD

MONITORING AND REPORTING PROGRAM FOR

WATER QUALITY ORDER NO. 2004-0008-DWQ STATEWIDE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR THE DISCHARGE OF AQUATIC PESTICIDES TO SURFACE WATERS OF THE UNITED STATES FOR VECTOR CONTROL (GENERAL PERMIT) GENERAL PERMIT NO. CAG990004

A. MONITORING PLANS: Individual and Regional

Each discharger seeking coverage under this General Permit shall submit a Monitoring Plan (Plan) for approval by the appropriate Regional Water Quality Control Board (Regional Board) and shall implement the Plan as approved. Plans shall achieve the following goals:

1. Document compliance with the requirements of this General Permit;
2. Support the development, implementation, and effectiveness evaluation of Best Management Practices (BMPs);
3. Demonstrate that, following completion of resource or pest management projects, the water quality of the receiving waters is equivalent to the pre-application state ;
4. Identify and characterize aquatic pesticide application projects (Projects) conducted by the discharger; and
5. Ensure that the Plan provides for monitoring of Projects that are representative of all pesticides and application methods used by the discharger.

BMPs include activities that eliminate or reduce the discharge of pollutants that minimize the areal extent and duration of impacts caused by the discharge of pollutants. BMPs also identify and implement non-toxic or less toxic alternatives.

Dischargers must comply with the requirements of this Plan either individually or by participating in a Regional Pesticide Monitoring Program (RPMP). Any discharger planning to comply through an RPMP must so indicate in Section VI of the Notice of Intent [(NOI, Attachment A)].

Each discharger is responsible for submitting a Plan to the appropriate Regional Board(s) for approval. Regional Boards may waive the submittal requirement for dischargers that have an acceptable Plan on file for Water Quality Order No. 2001-12-DWQ. Upon waiving the submittal requirement, the Regional Board accepts the previous Plan as the required submittal for this Monitoring and Reporting Program. All Plans, whether individual or RPMP, must include monitoring of at least one representative project for each pesticide

Attachment C

Product	Num Applications	Total Amount	Application UOM	Acres Treated	EPA Reg No
Agnique MMF	305	518	fl oz	1.04	53263-28-AA
Altosand	5	13	lb	1.00	2724-392-ZA
Altosid LL	109	909.5	fl oz	343817.37	2724-392-ZA
Altosid WSP	4668	63808	packet	29.57	2724-448-ZC
Altosid XR	46	68	each	335.10	
Altosid XRG	43	351.1	lb	32.74	2724-451-ZA
Altosid XRG Ultra	40	1597	lb	161.55	89459-104-AA
BVA-2	1495	687651.91	fl oz	127125.54	70589-1-AA
COCO Bear	1	4	gal	2.00	
Duplex G	16	306	lb	34.52	W9459-93
Fourstar 180	15	121	each	0.20	83362-3-AA
Fyfanon EW	16	7186.24	fl oz	6821.66	279-3622
Natular 2EC	406	1521.5	fl oz	760.66	8329-82-AA
Natular DT	70	126	each	0.13	8329-602
Natular G30	47	291.67	lb	23.95	8329-83-ZA
Natular XRT	103	342	briquet	0.19	8329-84
Pyronyl 525	10	35.99	gal	4838.45	655-471
Sumilarv WSP 25g	14	14	pouch	0.01	1021-2818
Sumilarv WSP 50g	15	29	pouch	0.01	1021-2818
Vectobac 12AS	614	25958.55	fl oz	1626.15	73049-38-AA
Vectobac G	5	60	lb	6.00	73049-10-AA
Vectobac GR	19	287	lb	29.40	73049-486
Vectobac WDG	48	1200	lb	2400.00	73049-56
Vectolex FG	8	175	lb	18.00	73049-20-AA
Vectolex WSP	336	541	packet	51.04	73049-20-ZA

Total Treatments: 8454

Total Acres Treated: 488116.287794