

ATTACHMENT 1 TO 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# 5 10AP00023
- C. Change of ownership or responsibility: WDID# \_\_\_\_\_
- D. Enrolled under Order 2011-0002-DWQ: WDID# \_\_\_\_\_

**II. DISCHARGE INFORMATION**

- A. Name Consolidated Mosquito Abatement District
- B. Mailing Address 13151 E Industrial Drive
- C. City Parlier
- D. County Fresno
- E. State CA
- F. Zip Code 93648
- G. Contact Person Jodi Holeman
- H. Email address jholeman@mosquitobuzz.net
- I. Title District Manager
- J. Phone 559-896-1085

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

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

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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: Various - see Attachment A

Name of the conveyance system: Applications may be made to various conveyance systems in Fresno County

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

Name of water body: Various - see Attachment A - applications have historically been made to high water marks of the Kings and San Joaquin Rivers.

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

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

(List all regions where pesticide application is proposed.)

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

**V. PESTICIDE APPLICATION INFORMATION**

A. Target Organisms:

☒ Vector Larvae

☒ Adult Vector

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

See Attachment B

C. Period of Application:

Start Date January 1 End Date December 31

ATTACHMENT 1 TO DRAFT 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:

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**VI. PESTICIDES APPLICATION PLAN**

A. Has a Pesticides Application Plan been prepared?\*

☒ Yes

No

If not, when will it be prepared?

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

B. Is the applicator familiar with its contents?

☒ Yes

No

Have potentially affected governmental agencies been notified?

☒ Yes

No

\*If yes, a copy of the notifications shall be attached to the NOI. See 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 Order, including developing and implementing a monitoring program, will be complied with."

A. Printed Name: Jodi J Holeman

B. Signature:  Date: 4/24/23

C. Title: District Manager

**X. FOR STATE WATER BOARD USE ONLY**

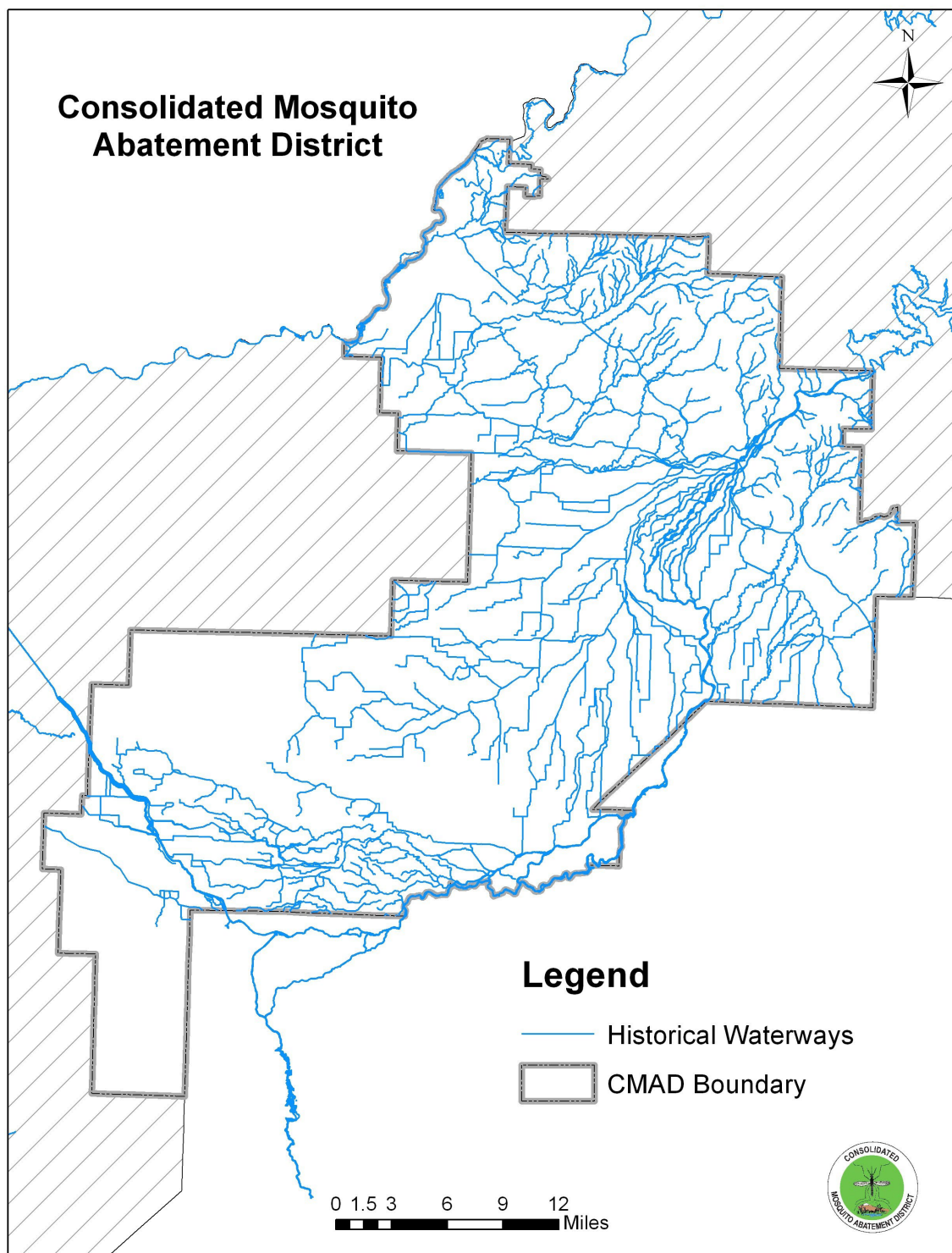
WDID: \_\_\_\_\_ Date NOI Received: \_\_\_\_\_ Date NOI Processed: \_\_\_\_\_

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

**MAP OF THE CONSOLIDATED MOSQUITO ABATEMENT DISTRICT**



Consolidated Mosquito Abatement District

**Attachment B**

**Notice of Intent**

**V. Pesticide Application Information**

**List of Active Ingredients that may be used under NPDES Permit**

**Active Ingredients:**

Bacillus thuringiensis var. israelensis  
Bacillus sphaericus (Lysinbacillus sphaericus)  
Deltamethrin  
Etofenprox  
Lambda Cyhalothrin  
Malathion  
Methoprene  
Monomolecular Films  
Naled  
N-octyl Bicycloheptene Dicarboximide (MGK-264)  
Petroleum Distillates  
Permethrin  
Piperonyl butoxide  
Prallethrin  
Pyrethrin  
Pyriproxyfen  
Resmethrin  
Spinosad  
Sumithrin  
Temephos

Any “minimum risk category” pesticides that are FIFRA exempt and registered for use in California and used in a manner specified in 40 C.F.R. section 152.25.

## Attachment C

Manager  
Alta Irrigation District  
PO BOX 715  
DINUBA CA 93618

Christine Cox-Kovacevich  
Cal Trans District 6  
1352 W OLIVE AVE  
FRESNO CA 93778-2616

City Manager  
City of Fresno  
2600 FRESNO ST  
FRESNO CA 93721

City of Parlier  
1100 E PARLIER AVE  
PARLIER CA 93648

City of Selma  
1710 TUCKER ST  
SELMA CA 93662

Manager  
Consolidated Irrigation District  
PO BOX 209  
SELMA CA 93662

Freewater County Water District  
17504 E TRIMMER SPRINGS RD  
SANGER CA 93657

Fresno County Resources Div. Parks  
2220 TULARE ST 6TH FLR  
FRESNO CA 93721

Manager  
Fresno Metropolitan Flood Control  
5469 E OLIVE AVE  
FRESNO CA 93727

International Water District  
9010 E TOLLHOUSE RD  
CLOVIS CA 93612

Manager  
Burrell Ditch Company  
3899 W DAVIS AVE  
RIVERDALE CA 93656

City of Clovis  
1033 5TH ST  
CLOVIS CA 93612

Alex Henderson  
City of Kingsburg  
1401 DRAPER ST  
KINGSBURG CA 93631

City of Reedley  
1717 9TH ST  
REEDLEY CA 93654

Caruthers Community Services Dist.  
PO BOX 218  
CARUTHERS CA 93609

Crescent Canal Company  
c/o Errotabere Ranches  
22895 S DICKENSON AVE  
RIVERDALE CA 93656

Fresno County Ag. Commissioner  
1730 S MAPLE AVE  
FRESNO CA 93702

Fresno County Special Districts  
Administrator  
2220 TULARE ST 6TH FLR  
FRESNO CA 93721

Manager  
Garfield Water District  
PO BOX 337  
CLOVIS CA 93613

Manager  
John Heinlen Mutual Water Co  
PO BOX 647  
LEMOORE CA 93245

Julie Vance  
CA Dept of Fish & Game Region 4  
1234 E SHAW AVE  
FRESNO CA 93710-7802

City of Fowler  
128 S 5TH ST  
FOWLER CA 93625

City of Orange Cove  
633 6TH ST  
ORANGE COVE CA 93646

City of Sanger  
1700 7TH ST  
SANGER CA 93657

Manager  
Central California Irrigation District  
PO BOX 1231  
LOS BANOS CA 93635

Manager  
Del Rey Community Services Dist.  
PO BOX 186  
DEL REY CA 93616

Fresno County Board of Supervisors  
Hall of Records, Room 301  
2281 TULARE ST  
FRESNO CA 93721

Manager  
Fresno Irrigation District  
2907 S MAPLE AVE  
FRESNO CA 93725

Hills Valley Irrigation District  
PO BOX 911  
VISALIA CA 93279

Kings County Ag Commissioner  
680 CAMPUS DR STE B  
HANFORD CA 93230

Kings County Board of Supervisors  
Government Center  
1400 W LACEY BLVD  
HANFORD CA 93230

Park Superintendent  
Kings County Public Works  
1400 W LACEY BLVD BLDG 6  
HANFORD CA 93230

Manager  
Kings River Conservation District  
4886 E JENSEN AVE  
FRESNO CA 93725

Watermaster  
Kings River Water Association  
4888 E JENSEN AVE  
FRESNO CA 93725

Kings River Water District  
15142 E GOODFELLOW AVE  
PO BOX 457  
SANGER CA 93657

Manager  
Lanare Community Services District  
20620 S GRANTLAND AVE  
RIVERDALE CA 93656

Manager  
Laguna Irrigation District  
5065 19 ½ AVE  
RIVERDALE CA 93656

Manager  
Last Chance Water Ditch Company  
PO BOX 131  
HANFORD CA 93232

Laton Community Services District  
PO BOX 447  
LATON CA 93242

Manager  
Lemoore Canal & Irrigation Co  
PO BOX 647  
LEMOORE CA 93245

Manager  
Liberty Canal Company  
PO BOX 223  
RIVERDALE CA 93656

Manager  
Liberty Mill Race Company  
PO BOX 126  
RIVERDALE CA 93656

Liberty Water District  
2904 W MAIN ST  
VISALIA CA 93291

Manager  
Orange Cove Irrigation District  
1130 PARK BLVD  
ORANGE COVE CA 93646

Manager  
Peoples Ditch Company  
PO BOX 1261  
HANFORD CA 93232

Manager  
Pinedale County Water District  
480 W BIRCH AVE  
PINEDALE CA 95650

Manager  
Pinedale Public Utility  
2560 W SHAW AVE STE 102  
FRESNO CA 93711

Manager  
Raisin City Water District  
PO BOX 174  
RAISIN CITY CA 93652

Manager  
Reed Ditch Company  
PO BOX 445  
RIVERDALE CA 93656

Riverdale Irrigation District  
PO BOX 683  
RIVERDALE CA 93656

Superintendent  
Riverdale Public Utility District  
PO BOX 248  
RIVERDALE CA 93656

Manager  
Stinson Canal & Irrigation Company  
1100 W SHAW AVE STE 148  
FRESNO CA 93711

Tri-Valley Water District  
15142 E GOODFELLOW AVE  
SANGER CA 93657

US Army Corp of Engineers  
Sacramento District  
1325 J ST  
SACRAMENTO CA 95814-2922

US Bureau of Reclamation  
S-C Cal Area Office  
1243 N ST  
FRESNO CA 93721-1813

Manager  
Waterworks District No. 18  
PO BOX 92  
FRIANT CA 93626





# Consolidated Mosquito Abatement District

13151 E INDUSTRIAL DR.  
MAIL: P.O. BOX 784  
PARLIER, CALIFORNIA 93648  
(559) 896-1085  
FAX (559) 896-6425  
[www.mosquitobuzz.net](http://www.mosquitobuzz.net)

April 24, 2023

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

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

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

CMAD is required and has 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 CMAD boundaries this year.

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

The following includes the label names of pesticides that CMAD may apply: Altosid Liquid Larvicide, Altosid P35, Altosid Pellets, Altosid Pellets WSP, Altosid XR-G, Altosid XR Briquet, Aqua-Kontrol 30-30, Aqua Perm-X UL 30-30, Aqualuer 20-20, BVA 2 Mosquito Larvicide Oil, Cocobear MLO, DeltaGuard, FourStar Briquets, FourStar Bti CRG, FourStar CRG, FourStar MBG, FourStar Bti Briquet, FourStar SBG, Fyfanon ULV, Kontrol 4-4, Metalarv S-PT, Natular DT, Natular G30, Natular G30 WSP, Natular 2EC, Natular XRT, Perm-X UL 30-30, Sumilarv, Sumilarv WSP, 5% Skeeter Abate, Suspend SC, VectoBac G, Vectobac GR, VectoBac GS, VectoBac WDG, VectoBac 12AS, VectoLex CG, Vectolex FG, VectoLex WDG, Vectolex WSP.

Interested persons may contact Jodi Holeman at (559) 896-1085 or [jholeman@mosquitobuzz.net](mailto:jholeman@mosquitobuzz.net) for additional information. This notification shall be posted on the CMAD website: [www.mosquitobuzz.net](http://www.mosquitobuzz.net).

Sincerely,

Jodi J. Holeman, District Manager  
Consolidated Mosquito Abatement District

## **Consolidated Mosquito Abatement District**

**13151 E Industrial Drive • P.O. Box 978  
Parlier CA 93648**

**Phone (559) 896-1085  
Fax (559) 896-6425  
[www.mosquitobuzz.net](http://www.mosquitobuzz.net)**

**Pesticides Application Plan  
(PAP)**

**April 2023**

## **Elements of Pesticides Application Plan (PAP)<sup>1</sup>**

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

The Consolidated Mosquito Abatement District (CMAD or District) is composed of 1,058 square miles, 18 of which lie in Kings County with the balance in Fresno County. CMAD occupies the central portion of Fresno County, bordered on the west by three adjacent mosquito control districts and on the east by the foothills of the Sierra Nevada. The San Joaquin River, along the portion of the northern border between Fresno and Madera Counties, and the Kings River, flowing through portions of the District's eastern and southern areas, are the principal waters of the USA in which larvicides and adulticides may be applied to control mosquitoes. Associated tributaries of the aforementioned water bodies could also be affected by such applications.

Please see Attachment 1 for a map of the District.

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

CMAD uses the principles and practices of Integrated Vector Management (IVM) as described in *Best Management Practices for Mosquito Control in California* (Appendix A, pp. 26-27). When IVM or IPM techniques, source elimination, source reduction and biological control methods have become exhausted, chemical means are used to reduce mosquito populations. Other factors that influence the decision to select pesticide applications include larval stage (instar), number of larvae, number of predators, presence of mosquito-borne disease in the region, abundance of mosquito species that vector the disease, positive dead bird information, climatic influences, presence of listed species, specialized habitats, and citizen based service requests.

- 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 NPDES Permit for Biological and Residual Pesticide Discharges to Water of the U.S. from Vector Control Applications was amended to list the approved active ingredients rather than having specific products named. All pesticide label restrictions and instructions will be followed for pesticides which contain the active ingredients listed in Attachment 2. In addition, pesticides which fall under the "minimum risk" category may be used. The minimum risk pesticides have been exempted from FIFRA requirements. All of these products may be applied by ground (hand, truck, ATV, backpack, etc.) or by air (helicopter or fixed wing aircraft).

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

Any 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, CMAD works with property owners to affect long-term solutions to reduce or eliminate the need for continued applications, as described in **Item 2** above. Target areas that require treatment of immature mosquitoes and areas that require adult mosquito control are difficult to predict from year to year based on the weather and variations in local environment conditions. However, the typical target areas treated by this agency year by year that would be considered waters of the USA include permanent and semi-permanent seasonal wetlands, creeks, streams, rivers, lakes, and tributary waters of the Kings and San Joaquin Rivers.

Please see Attachment 1 for a map of the District.

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

With any source of mosquitoes or other vectors, CMAD'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 alternative control methods and their limitations are described in the *Best Management Practices for Mosquito Control in California* (pp. 4-20, 26-27).

Specific alternative control methods used by CMAD include stocking sources with 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.

CMAD stocks mosquito fish everywhere that it is ecologically appropriate. However, the limitations of fish include sensitivity to predation, disease, water temperature, pH, dissolved oxygen levels, and desiccation of the habitat.

CMAD works with various municipalities and private landowners to reduce the need for repeated applications of pesticides in sources associated with completed projects. These measures are limited by costly improvements that may be necessary in order to minimize or eliminate mosquito breeding, regular maintenance needed to sustain mosquito-free habitats, mechanical failure resulting in unexpected mosquito problems, and neglect or indifference to the importance of mosquito source reduction.

The District has a public outreach program that includes participation in educational events at local fairs, parades, schools, clubs and town hall meetings. These engagements are designed to encourage people to take responsibility by eliminating their own sources of standing water, thus reducing chemical means of control.

CMAD also coordinates with other Fresno County agencies to disperse public information and uses newspaper articles, radio spots, and our website [www.mosquitobuzz.net](http://www.mosquitobuzz.net) to enhance communication alternatives. Public outreach may be limited by the number of residents receiving the education and the necessity to constantly remind the public of their responsibilities.

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

The need to apply product is determined by surveillance. These amounts will change from year to year due to annual variability in required pesticide applications for mosquito control. The pesticide amounts illustrated are the total of CMAD's 2015 applications, which include applications to waters of the USA. This data is provided as an example of the products and amounts used in one year. Other public health pesticides in addition to those listed may be used as part of the District's best management practices.

Please see Attachment 3 for a list of all public health pesticides applied within the District during 2015.

**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; and**

Please see the *Best Management Practices for Mosquito Control in California* (p. 20).

Please also refer back to **Items 2** and **5** above.

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

CMAD's BMPs are described in **Item 2** above. Specific elements have been highlighted below under items **a-f**.

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

All pesticide applicators receive annual spill prevention and response training. Agency employees ensure daily that application equipment is in proper working order. Spill mitigation devices are placed in all vehicles and pesticide storage areas.

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

Application equipment is calibrated at least annually as required by the California Department of Pesticide Regulation (CDPR) and the terms of a cooperative agreement with the California Department of Public Health (CDPH). 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 of the U.S. from the pesticide application;**

This will be included in our pesticide applicators' annual pesticide application and safety training, continuing education programs, and/or regional NPDES Permit training programs.

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

CMAD calibrates vehicle-mounted and handheld larviciding equipment each year to meet application specifications. Application records are reviewed 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. Equipment for aerial larviciding and adulticiding is calibrated by the Contractor.

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

Please see the *Best Management Practices for Mosquito Control in California* (pp. 27-30) for general pesticide application BMPs and the CDPR website, <http://www.cdpr.ca.gov/docs/label/labelque.htm>, for the current approved pesticide labels for application BMPs for specific products.

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

Please see **Item 2** above and the *Best Management Practices for Mosquito Control in California* (pp. 4-20).

An example of a BMP for an agricultural setting is working with farmers to reduce the number of days irrigation water stands on the property in order to disrupt the mosquito life cycle. Over the years, the encouragement and

implementation of drip irrigation systems (as opposed to flood irrigation) has dramatically reduced the need for pesticide applications in farm habitats.

BMPs for urban settings include reminding homeowners to get rid of containers that accumulate water, encouraging people to dump/drain or maintain their ornamental ponds and other water features, and urging residents to report neglected swimming pools. These are done through the District's public outreach, surveillance, or when responding to service requests.

An example of a BMP for a wetland area is stocking the source with mosquito fish. Wetlands that retain water for lengthy periods are usually able to sustain fish populations that effectively reduce or eliminate mosquito breeding and preclude the need for pesticide application.

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

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

CMAD's personnel apply pesticides to sources of mosquitoes that represent threats to the health of humans, domestic animals, or wildlife or to overall quality of life. The presence of any mosquito may necessitate treatment; however, higher thresholds may be applied depending on the agency'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 the *Best Management Practices for Mosquito Control in California* (pp. 31-34). Please see also the *California Mosquito-borne Virus Surveillance and Response Plan* (pp. 8-10).

CMAD may target any and all mosquito species found within the District that become problematic due to nuisance or vector-borne disease potential.

**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 agency's preferred solution and, whenever possible, the agency 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.

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

Please see **Item 2** above. CMAD continually collects adult and larval mosquito surveillance data and dead bird reports, monitors regional mosquito-borne disease activity detected in humans, horses, birds, and/or other animals, and uses these data to guide mosquito control activities. The District employs aerial photography and uses a GIS program to gather data on new and existing sources such as wetland habitats and neglected swimming pools. This technology assists District technicians in the field, who continually sample water and are trained to seek new treatment areas.

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

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

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

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

CMAD uses the principles and practices of Integrated Vector Management (IVM) as described on pages 26 and 27 of the *Best Management Practices*



for *Mosquito Control in California* and is 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 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.**

CMAD 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) §2002(j). 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.

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 right spraying**

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

This is an existing practice of CMAD, and is required to comply with the Department of Pesticide Regulation's (CDPR) 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 and in-house training.

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

Please visit the CMAD website at [www.mosquitobuzz.net](http://www.mosquitobuzz.net).

**References:**

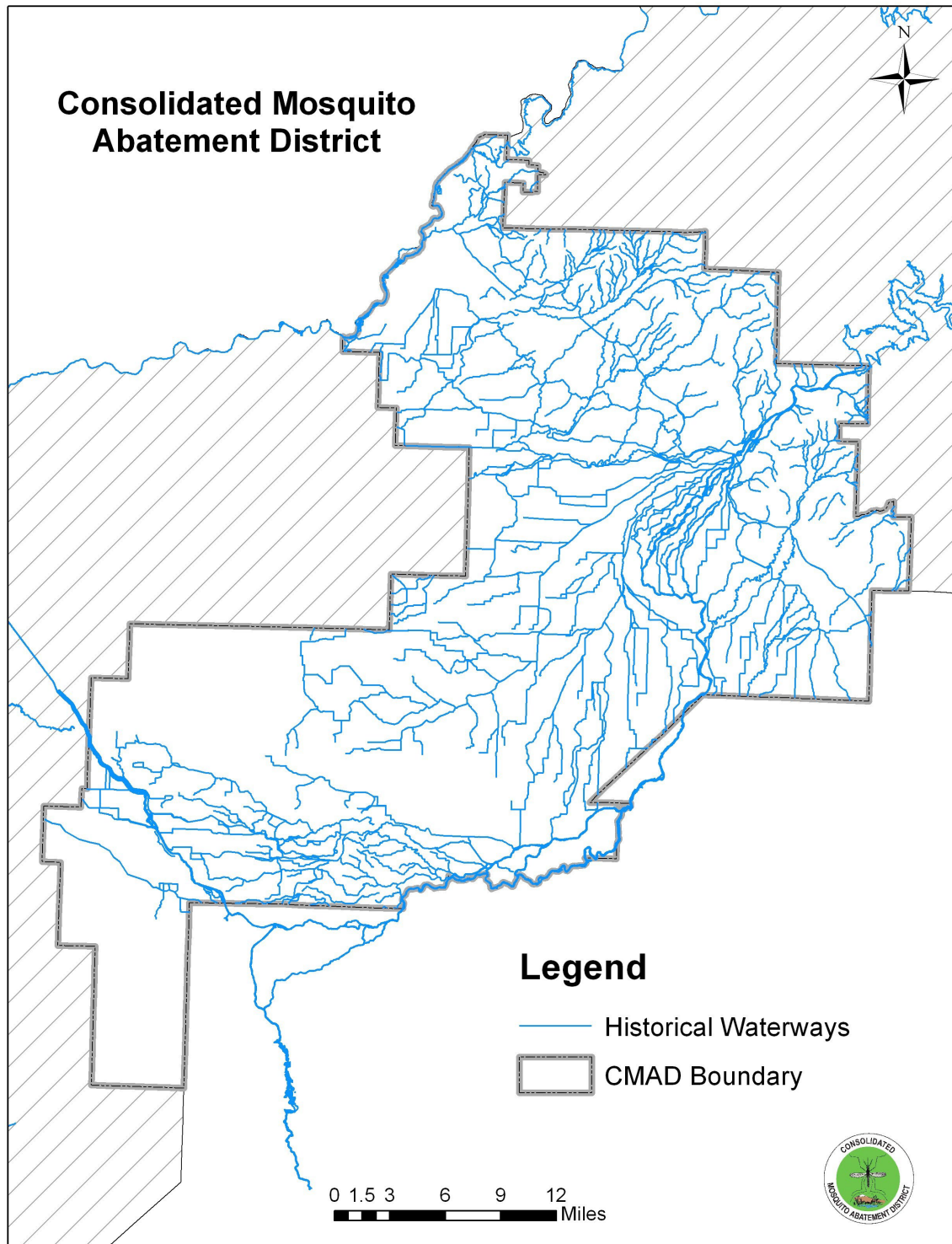
*Best Management Practices for Mosquito Control in California*. 2010. Available by download from the California Department of Public Health—Vector-Borne Disease Section at [https://westnile.ca.gov/resources\\_reports?resource\\_category\\_id=2](https://westnile.ca.gov/resources_reports?resource_category_id=2) under the heading *Mosquito Control and Repellent Information*. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the Consolidated Mosquito Abatement District at (559) 896-1085.

*California Mosquito-borne Virus Surveillance and Response Plan*. 2010. [Note: this document is updated annually by the California Department of Public Health [CDPH]. Available by download from the California Department of Public Health—Vector-Borne Disease Section [CDPH-VBDS] at [https://westnile.ca.gov/resources\\_reports?resource\\_category\\_id=9](https://westnile.ca.gov/resources_reports?resource_category_id=9) under the heading *Response Plans and Guidelines*. Copies may be also requested by calling CDPH-VBDS at (916) 552-9730 or the Consolidated Mosquito Abatement District at (559) 896-1085.

*Monitoring Plan for Mosquito Larvicides and Adulticides* (MVCAC NPDES Coalition Monitoring Plan). 2011. Copies may be requested by calling the Mosquito and Vector Control Association of California [MVCAC] at (916) 440-0826 or the Consolidated Mosquito Abatement District at (559) 896-1085.

Attachment 1

MAP OF THE CONSOLIDATED MOSQUITO ABATEMENT DISTRICT



## **Attachment 2**

### **Notice of Intent**

#### **V. Pesticide Application Information**

##### **List of Active Ingredients that may be used under NPDES Permit**

##### **Active Ingredients:**

Bacillus thuringiensis var. israelensis

Bacillus sphaericus (Lysinbacillus sphaericus)

Deltamethrin

Etofenprox

Lambda Cyhalothrin

Malathion

Methoprene

Monomolecular Films

Naled

N-octyl Bicycloheptene Dicarboximide (MGK-264)

Petroleum Distillates

Permethrin

Piperonyl butoxide

Prallethrin

Pyrethrin

Pyriproxyfen

Resmethrin

Spinosad

Sumithrin

Temephos

Any "minimum risk category" pesticides that are FIFRA exempt and registered for use in California and used in a manner specified in 40 C.F.R. section 152.25.

**Attachment 3**

<b>2015 CMAD Pesticide Use Totals</b>			
Product	Material Amount		# of Applications
Abate Pellets	50	lb	4
Agnique MMF	5.025	fl oz	7
Altosid Liquid	3.19	gal	47
Altosid WSP	17552	packet	761
Altosid XRG	35	lb	1
Anvil 10+10	93.51577031	fl oz	8
Aqualuer 20-20	116.22	fl oz	46
BVA-2	3676.814	gal	3227
Clean Crop Malathion ULV	1.16	gal	15
Cocobear MLO	46.0787	gal	1775
Fish	239	lbs	813
FourStar 45 Day Briquet	105	briquet	4
FourStar 90 Day Briquet	7841	briquet	205
FourStar Bti CRG	1162.715	lb	85
FourStar CRG	1055.176101	lb	459
FourStar MBG	0.02	lb	1
FourStar SBG	419	lb	18
Gowan Malathion	16.4	gal	91
Kontrol 4-4	5.11	gal	11
Natular 2EC	6.84	gal	132
Natular G30	1800.4195	lb	2327
Natular XRT	2324	briquet	1953
Pyrocode 7067 MAC	11.223	gal	38
Pyronyl # 525	2.909	gal	31
RoundUp Custom	6	fl oz	1
Spheratax WSP	267	packet	2
Suspend Polyzone	69.39	fl oz	37
Suspend SC	106.52	fl oz	55
VectoBac 12AS	674	gal	2331
VectoBac G	105.2	lb	8
VectoBac GR	5425.36125	lb	573
VectoBac GS	2354.7395	lb	339

VectoLex CG	1241	lb	41
VectoLex FG	934.19	lb	379
VectoLex WDG	132.74	lb	1316
VectoLex WSP	3043	packet	277
VectoMax FG	92.265	lb	473
Zenivex E20	16.405	gal	77