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 54AP00015

C. Change of ownership or responsibility: WDID# _____

D. Enrolled under Order 2011-0002-DWQ: WDID# _____

II. DISCHARGE INFORMATION

A. Name Tulare Mosquito Abatement District

B. Mailing Address 6575 Dale Fry Rd.

C. City Tulare

D. County Tulare

E. State California

F. Zip Code 93274

G. Contact Person Michelle Dempsey

H. Email address tularemosquito@gmail.com

I. Title General Manager

J. Phone 559-686-6628

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

A. Name _____

B. Mailing Address _____

C. City _____

D. County _____

E. State _____

F. Zip Code _____

G. Email address _____

H. Title _____

I. Phone _____

IV. RECEIVING WATER INFORMATION

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

1. Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.

   Name of the conveyance system: _____

2. Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.

   Owner's name: Various - See Attachment A

   Name of the conveyance system: _____

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

   Name of water body: Tributary Waters of Packwood Creek, Mill Creek, Cameron Creek, Elk Bayou, Homeland Canal, and Tule River

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

B. Regional Water Quality Control Board(s) where application areas are located

(REGION 1, 2, 3, 4, 5, 6, 7, 8, or 9): Region 5

(List all regions where pesticide application is proposed.)

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

V. PESTICIDE APPLICATION INFORMATION

A. Target Organisms:

X Vector Larvae X Adult Vector

B. 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

D. Types of Adjuvants Added by the Discharger:

VI. PESTICIDES APPLICATION PLAN

A. Has a Pesticides Application Plan been prepared?*

X 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?

X Yes No

Have potentially affected governmental agencies been notified?

X 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 X 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: Michelle Dempsey

B. Signature: Michelle Dempsey Date: 4/25/2023

C. Title: General Manager

X. FOR STATE WATER BOARD USE ONLY

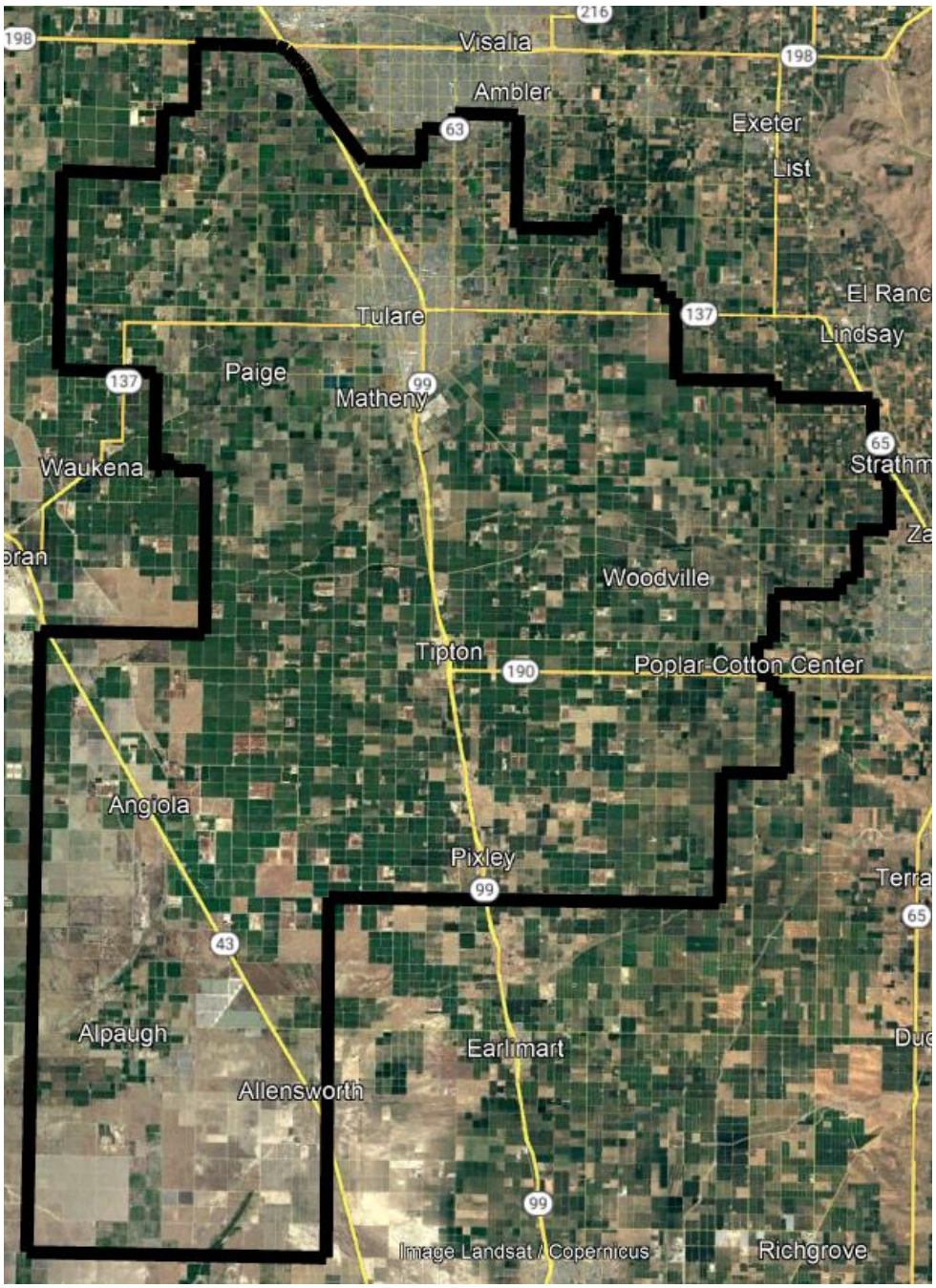
WDID:_____ Date NOI Received:_____ Date NOI Processed: _____

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#:_____

Tulare Mosquito Abatement District

Attachment A



Attachment B

Notice of Intent

V. Pesticide Application Information

List of Active Ingredients that may be used under NPDES Permit

Active Ingredients:

Bacillus thuringienses 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

Notice of Intent

VII. Notification

<u>Agency List</u>

City of Tulare

City of Visalia

County of Tulare

Tulare Irrigation District

Alpaugh Irrigation District

Lower Tule River Irrigation District

Kaweah Delta Water Conservation District

Tulare Mosquito Abatement District

6575 Dale Fry Rd., Tulare, CA 93274
Phone: 559-686-6628
Web: www.tularemosquito.com
E mail: tularemosquito@gmail.com

April 25, 2023

Notice of Intent to Apply Public Health Pesticides for Vector Control Purposes to Surface Waters and Waters of the U.S. Within Tulare County.

· The Tulare Mosquito Abatement District intends to make public health pesticide applications to, over and adjacent to constructed conveyances, surface waters and other waters of the U.S. owned and controlled by an entity other than the District for vector control purposes per the requirements of the General NPDES Permit for Biological and Residual Pesticide Discharges for Vector Control Applications.

· The NPDES Permit requirements for listing of the Public Health Pesticides anticipated to be used were modified from the previous permit, to the new permit which was issued in 2016. The newer requirements specify that any pesticide product can be used that contains approved active ingredients, provided all pesticide label restrictions and instructions are followed. In addition, pesticides which fall under the "minimum risk" category can be used. The minimum risk pesticides have been exempted from FIFRA requirements.

· The purpose of the use of larvicide and adulticide pesticides containing these active ingredients is for the control of larval and adult mosquitoes to minimize the threat of mosquito-borne diseases and biting annoyances.

· The general time period for the application of the pesticides is January through December 2023. Locations of expected use will be constructed conveyances, surface waters and other waters of the U.S. located within Tulare County.

· There are no known water use restrictions or precautions during treatment.

· Interested persons may contact the District at 559-686-6628 for additional information.

Sincerely,

Michelle Dempsey

Michelle Dempsey, General Manager
Tulare Mosquito Abatement District
6575 Dale Fry Rd.
Tulare, CA 93274

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Tulare, CA 93274

559-686-6628
www.tularemosquito.com

Pesticides Application Plan
(PAP)
April 2023

The NPDES Permit requires a Pesticides Application Plan (PAP) that contains the following elements:

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 form the water body of the target areas;

The Tulare Mosquito Abatement District (District) is located in the southern half of Tulare County. The District services 562 square miles. Please see Attachment A for the District boundaries and waters of the U.S.

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

The District seeks to eliminate or reduce mosquito breeding sources with property owners first. The use of pesticides becomes necessary when source reduction efforts have failed or have not been implemented and mosquito populations, larval or adult, reach unacceptable levels and threaten the public's health or quality of life. Other factors that influence the use of pesticides include the presence of mosquito-borne disease, population of disease vectoring mosquitoes, climatic conditions, and service requests. Also please see the Best Management Practices for Mosquito Control in California.

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

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

Active Ingredients for larval mosquito control:

- Bacillus thuringiensis subsp. israelensis (Bti)
- Bacillus sphaericus (Bs)
- Methoprene
- Monomolecular Films
- Petroleum Distillates
- Pyriproxyfen
- Spinosad
- Temephos

Active Ingredients for adult mosquito control:

Deltamethrin
Etofenprox
Lambda-Cyhalothrin
Malathion
Naled
N-octyl bicycloheptene dicarboximide (MGK-264)
Piperonyl butoxide (PBO)
Permethrin
Prallethrin
Pyrethrin
Resmethrin
Sumithrin

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

Any site that holds water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the District's preferred solution, and whenever possible the District works with property owners to effect long-term solutions to reduce or eliminate the need for continued pesticide applications as described in Item 2 above and Best Management Practices for Mosquito Control in California. Mosquito breeding sources and areas that require adult mosquito control are difficult to predict from year to year based on the weather and variations in local environmental conditions. However, the typical sources considered to be waters of the U.S. that are treated by this District include: permanent and semi-permanent seasonal wetlands, rivers, creeks, canals and ditches, associated water conveyance systems and sloughs, and tributary waters of Packwood Creek, Mill Creek, Cameron Creek, the Elk Bayou, the Homeland Canal, and the Tule River.

Please see Attachment A

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

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

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. Actual use varies annually depending on mosquito abundance. The pesticide amounts presented below were taken from the District's 2022 PUR as an estimate of pesticide use in 2023. Other public health pesticides in addition to those listed below may be used as part of the District's best management practices.

Total District Use 2022

Product Name	EPA Reg #	Amount	Unit
Agnique MMF	53263-28	1.758	gal
Altosid SR-20	2724-446	15.00	gal
Altosid Pellets WSP	2724-448	1.56	lbs
Altosid SR-5	2724-392	0.595	gal
Altosid P35	89459-95	39.00	lbs
BTI Sand	62637-15	1525	lbs
Cocobear	8329-93	177.34	gal
Fourstar Bti CRG	85685-4	40.00	lbs
MetaLarv XRP	73049-475	1.13	lbs
BVA 2 Larvicide	70589-1	1282.57	gal
Natular Sand	8329-82	1767	lbs
Natular 2EC	8329-82	.228	gal
Pyronyl 525	655-471	4.19	gal
Natular DT	8329-82	0.21	lbs
Teknar SC	73049-435	458.74	gal
Natular G	8329-80	340	lbs
Natular G30	8329-83	803.8	lbs
Natular XRT	8329-83	3.96	lbs
SumiLarv 0.5G	1021-2819	713	lbs
VectoBac 12AS	73049-38	831	gal
VectoBac GS	73049-10	567	lbs
VectoBac WDG	73049-56	1500	lbs
VectoMax FG	73049-429	187	lbs
AquaDuet	1021-2562-8329	1.02	gal
BioMist 4+12	8329-34	1.12	gal
Duet	1021-1795-8329	1.22	gal
NyGuard IGR	1021-1603	0.023	gal
Suspend SC	432-763	0.51	gal

Total Use Waters of the U.S. 2022

Product Name	EPA Reg #	Amount	Unit
BVA 2 Larvicide	70589-1	12.3	gal
Cocobear	8329-93	2	gal
VectoBac 12AS	73049-38	3.58	gal
VectoBac GS	73049-10	132	lbs

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

The District works with other agencies to reduce vegetation and maintain access to areas along bodies of water considered to be waters of the U.S. for control personnel and equipment. Also please see the Best Management Practices for Mosquito Control in California

9. Description of the BMPs to be implemented. The BMPs shall include at a minimum:
The District's BMPs are described in Item 2 above, the Best Management Practices for Mosquito Control in California, and in the California Mosquito-borne Virus Surveillance and Response Plan. 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. District 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 Department of Pesticides (DPR) and the terms of a cooperative agreement with the California Department of Public Health (CDPH).

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.;
The 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 regularly and droplet size will be monitored by the agency to ensure droplets meet label requirements. Airplanes used in urban ULV applications and the primary airplane used 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 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 for general pesticide application BMPs, and the current approved pesticide labels for application BMPs for specific products.
f. description of specific BMPs for each type of environmental setting (agricultural, urban, and wetland).

Please see Item 2 and the Best Management Practices for Mosquito Control in California.

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

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

The District's staff only applies pesticides 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 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 of habitats

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

Most Common Mosquitoes Present in Tulare MAD

Aedes aegypti	*Culiseta incidens*
Aedes nigromaculis	*Culiseta inornata*
Culex tarsalis	*Culex quinquefasciatus*

The District may target any mosquito species found within the District's boundaries that represent a nuisance or public health threat. Also please see the Best Management Practices for Mosquito Control in California and the California Mosquito-borne Virus Surveillance and Response Plan 2011.

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 the Best Management Practices for Mosquito Control in California.

d. Analyze existing surveillance data to identify new or unidentified sources of vector problems as well as areas that have recurring vector problems.
This is included in the Best Management Practices for Mosquito Control in California and the California Mosquito-borne Virus Surveillance and Response Plan that the agency uses. 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.

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.

The District 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. 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 vegetation growth in ponds, ditches, and 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.
The District follows an existing IVM program which includes practices described in Item 2 above, as well as the practices described in the California Mosquito borne Virus Surveillance and Response Plan and Best Management Practices for Mosquito Control in California.

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.

12. Correct Use of Pesticides

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

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

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

Please visit the Tulare Mosquito Abatement District website at www.tularemosquito.com

References:

Best Management Practices for Mosquito Control in California. 2022. 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 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 Tulare Mosquito Abatement District at (559) 686-6628.

California Mosquito-borne Virus Surveillance and Response Plan. 2022. [Note: this document is updated annually by calling the California Department of Public Health [CDPH]. Available by download from the California Department of Public Health—Vector-Borne Disease Section at https://westnile.ca.gov/resources_reports?resource_category_id=9 under the heading Response Plans and Guidelines. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the Tulare Mosquito Abatement District at (559) 686-6628.

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 Tulare Mosquito Abatement District at (559) 686-6628.

Tulare Mosquito Abatement District

Attachment A