

RECEIVED  
 MAR 22 2016  
 DIVISION OF WATER QUALITY

ATTACHMENT E – NOTICE OF INTENT  
 WATER QUALITY ORDER 2016-XXXX-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# \_\_\_\_\_

C. Change of ownership or responsibility: WDID# \_\_\_\_\_

D. Enrolled under Order 2011-0002-DWQ: WDID# 5 16AP00029 \_\_\_\_\_

II. DISCHARGER INFORMATION

|  |  |                              |                          |
|--|--|------------------------------|--------------------------|
| A. Name<br>Kings Mosquito Abatement District |  |                              |                          |
| B. Mailing Address<br>10871 Bonney View Lane |  |                              |                          |
| C. City<br>Hanford                           | D. County<br>Kings                             | E. State<br>CA               | F. Zip Code<br>93230     |
| G. Contact Person<br>Michael Cavanagh        | H. Email address<br>cavanagh@kingsmosquito.net | I. Title<br>District Manager | J. Phone<br>559-584-3326 |

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 Attachments A & C  
Name of the conveyance system: Various- Applications may be made to conveyance systems within Kings and Tulare Counties

3. Directly to river, lake, creek, stream, bay, ocean, etc.  
Name of water body: Applications historically have been made to Kings River, Cross Creek, Tule River, and their tributaries- see Attachment A

\* 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. Pesticides 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?\*

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

**VII. NOTIFICATION**

Have potentially affected governmental agencies been notified?

Yes       No

\* If yes, a copy of the notifications shall be attached to the NOI.

**VIII. FEE**

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

Yes       NO       NA

**IX. CERTIFICATION**

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I certify that the provisions of the Order, including developing and implementing a monitoring program, will be complied with."

A. Printed Name: Michael Cavanagh

B. Signature: 

Date: 3-17-16

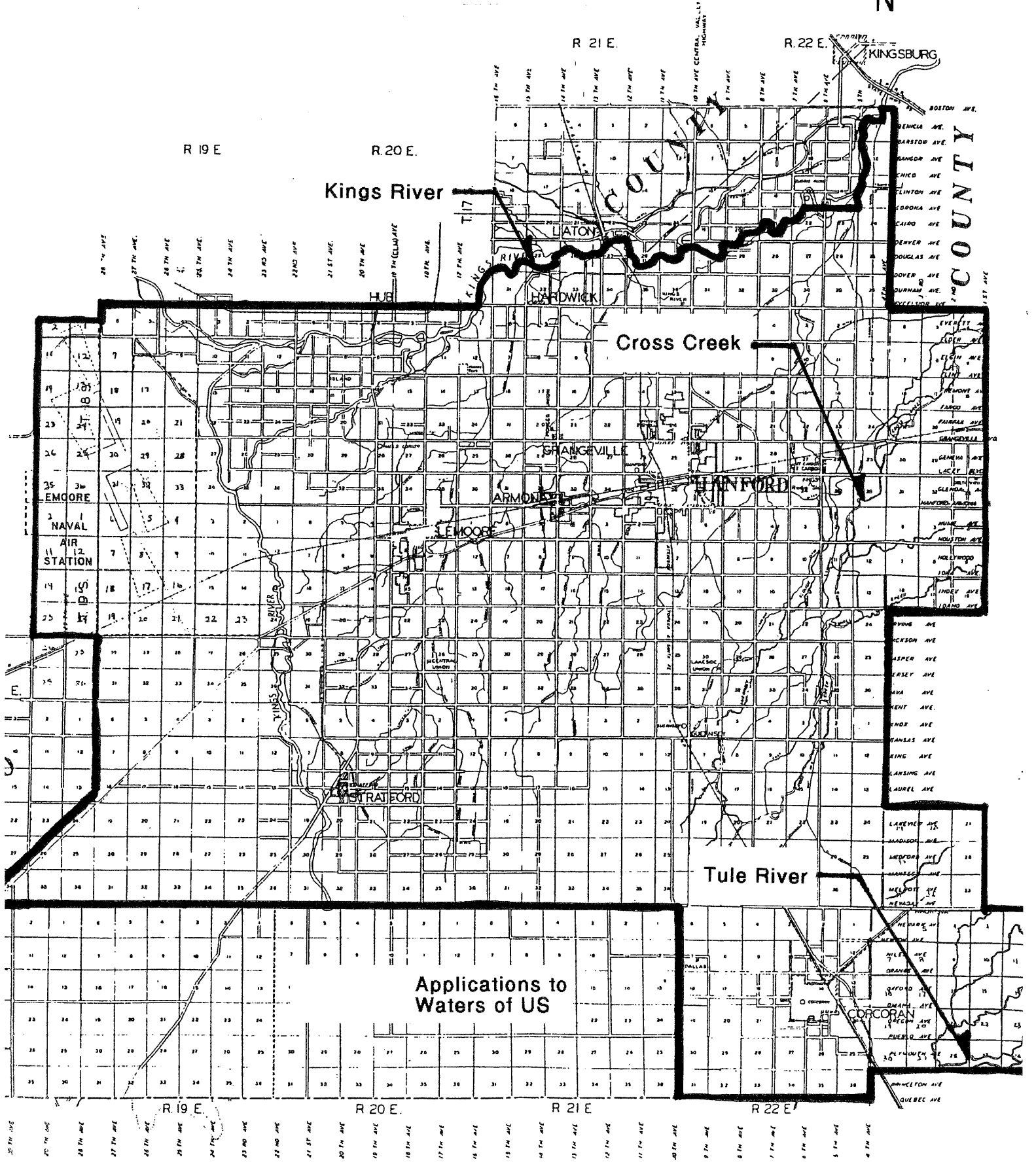
C. Title: District Manager

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

|                         |                            |                     |
|-------------------------|----------------------------|---------------------|
| WDID:                   | Date NOI Received:         | Date NOI Processed: |
| Case Handler's Initial: | Fee Amount Received:<br>\$ | Check #:            |

# Kings Mosquito Abatement District

## Attachment A



## Attachment B

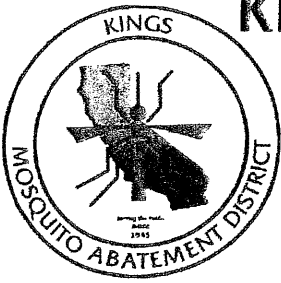
### Active Ingredients

|  |
|--|
| <i>Bacillus thuringiensis</i> subsp. <i>Israelensis</i> (Bti)  |
| <i>Bacillus sphaericus</i> (Bs) ( <i>Lysinibacillus sphaericus</i> )   |
| Methoprene   |
| Monomolecular Films  |
| Petroleum Distillates  |
| Spinosad   |
| Temephos   |
| Deltamethrin   |
| Etofenprox   |
| Lambda-Cyhalothrin   |
| Malathion  |
| Naled  |
| N-octyl bicycloheptene dicarboximide (MGK-264)   |
| Piperonyl butoxide (PBO)   |
| Permethrin   |
| Prallethrin  |
| Pyrethrin  |
| Resmethrin   |
| Sumithrin  |
| 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**

### **NOI Agency List**

Alta Irrigation District  
CA Dept of Fish & Game, Region 4  
City of Hanford  
City of Lemoore  
City of Visalia  
Consolidated Irrigation District  
Corcoran Irrigation District  
Crescent Canal Company  
Empire West Side Irrigation District  
John Heinlen Mutual Water Company  
Kings County Agricultural Commissioner  
Kings County Board of Supervisors  
Kings County Public Works Parks Division  
Kings County Water District  
Kings River Conservation District  
Kings River Water Association  
Kings River Water District  
Laguna Irrigation District  
Lakeside Irrigation Water District  
Last Chance Water Ditch Company  
Lemoore Canal & Irrigation Company  
Lower Tule River Irrigation District  
Melga Water District  
Naval Air Station Lemoore  
Natural Resources Conservation Services  
Peoples Ditch Company  
Salyer Water District  
Tulare County Agricultural Commissioner  
Tulare County Board of Supervisors  
Tulare Lake Basin Water Storage District



# Kings Mosquito Abatement District

10871 Bonney View Lane, Hanford, CA 93230

Phone: 559-584-3326 Fax: 559-584-3310

Web: [www.kingsmosquito.net](http://www.kingsmosquito.net)

E mail: [office@kingsmosquito.net](mailto:office@kingsmosquito.net)

January 15<sup>th</sup>, 2016

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

- The Kings 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 will be 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 following tables list the active ingredients approved for the FIFRA regulated pesticides.

Active Ingredients for larval mosquito control:

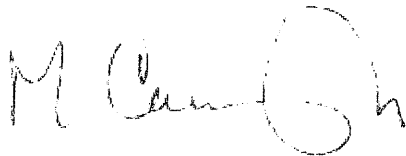
|   |
|---|
| <i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> (Bti) |
| <i>Bacillus sphaericus</i> (Bs)                               |
| Methoprene  |
| Monomolecular Films   |
| Petroleum Distillates   |
| Spinosad  |
| Temephos  |

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                                      |

- 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, 2016. Locations of expected use will be constructed conveyances, surface waters and other waters of the U.S. located within Kings and Tulare Counties.
- There are no known water use restrictions or precautions during treatment.
- Interested persons may contact the District at 559-584-3326 for additional information.

Sincerely,



Michael Cavanagh, District Manager  
Kings Mosquito Abatement District  
10871 Bonney View Lane  
Hanford, CA 93230  
[www.kingsmosquito.net](http://www.kingsmosquito.net)



## **The Kings Mosquito Abatement District (District) Pesticide Application Plan (PAP):**

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

The Kings Mosquito Abatement District (District) is primarily located in the northern third of Kings County. The District services 560 square miles, as well as 34 square miles of Tulare County. Please see Attachment 1 for the District boundaries. Typical and historically treated sites will include areas of high water marks along the Kings River, Cross Creek, and Tule River corridors, intermittent creeks, and other associated waterways and surface waters that could be affected by the District's applications.

### **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 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 below. 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 are used according to label directions and may be applied by ground (hand, truck, ATV, backpack, etc) or by air (helicopter or fixed wing aircraft).

### Active Ingredients

|  |
|--|
| <i>Bacillus thuringiensis</i> subsp. <i>Israelensis</i> (Bti)  |
| <i>Bacillus sphaericus</i> (Bs) ( <i>Lysinibacillus sphaericus</i> )   |
| Methoprene   |
| Monomolecular Films  |
| Petroleum Distillates  |
| Spinosad   |
| Temephos   |
| Deltamethrin   |
| Etofenprox   |
| Lambda-Cyhalothrin   |
| Malathion  |
| Naled  |
| N-octyl bicycloheptene dicarboximide (MGK-264)   |
| Piperonyl butoxide (PBO)   |
| Permethrin   |
| Prallethrin  |
| Pyrethrin  |
| Resmethrin   |
| Sumithrin  |
| 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 |

**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, river seepage, creeks, canals and ditches,

storm drains, associated water conveyance systems and sloughs, and tributary waters of the Kings River, Cross Creek, and the Tule River.

Please see Attachment 1

**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 such as vegetation management, discing, and legal abatement.

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

The totals below represent pesticide applications within the District boundaries to Waters of the U.S. for 2015. These amounts will change from year to year due to annual variability in required pesticide applications for mosquito control. This data is provided as an example of the products and amounts used in one year.

**Total Use Waters of the U.S. 2015**

| <b>Material</b>                   | <b>Amount</b> | <b>Units</b> |
|-----------------------------------|---------------|--------------|
| <i>Bti</i> Granule                | 1580.5        | lbs          |
| <i>Bti</i> Powder                 | 417           | lbs          |
| <i>Bti</i> Liquid                 | 5.7           | gal          |
| <i>Bti/Bs</i> Granule             | 181           | lbs          |
| Methoprene Pellets                | 40            | lbs          |
| Spinosad Granule                  | 717.1         | lbs          |
| Spinosad Extended Release Granule | 115           | lbs          |
| Petroleum Distillates             | 13            | gal          |

**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 annually as required by the Department of Pesticides (DPR) 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;**

Applicators are required to complete pesticide training on an annual basis. District employees are certified by CDPH and must perform a minimum of 20 hours Continuing Education units per training cycle to maintain their certification.

**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.

**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 Kings MAD

|                            |                              |
|----------------------------|------------------------------|
| <i>Aedes melanimon</i>     | <i>Culiseta incidens</i>     |
| <i>Aedes nigromaculis</i>  | <i>Culiseta inornata</i>     |
| <i>Aedes sierrensis</i>    | <i>Culex erythrothorax</i>   |
| <i>Aedes vexans</i>        | <i>Culex pipiens complex</i> |
| <i>Anopheles freeborni</i> | <i>Culex tarsalis</i>        |

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.

**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.

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

## **12. Correct Use of Pesticides**

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

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

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

Public notices are posted on the District's website:  
[www.kingmosquito.net](http://www.kingmosquito.net)



**References:**

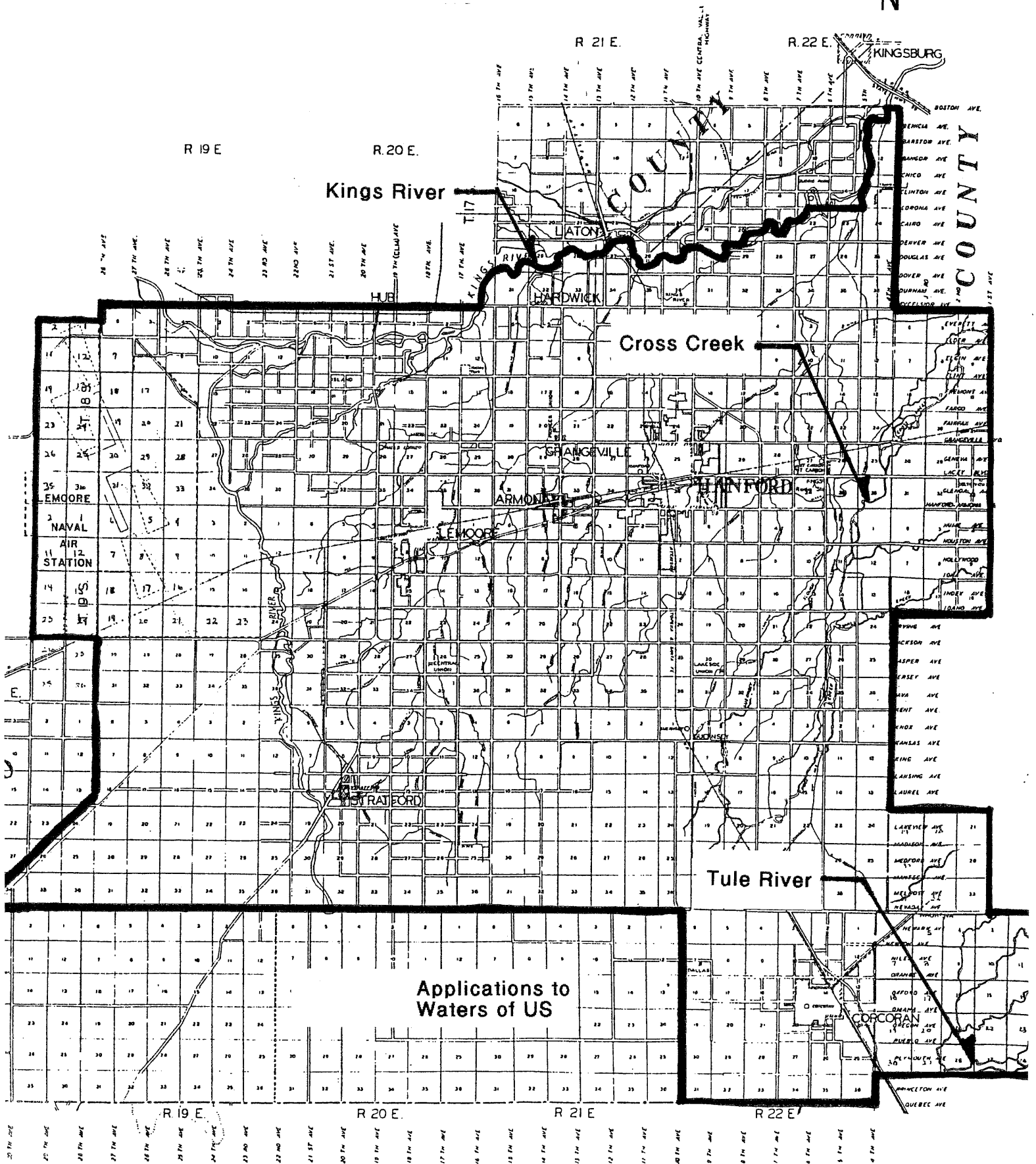
Best Management Practices for Mosquito Control in California. 2011. Available by download from the California Department of Public Health—Vector-Borne Disease Section at <http://www.westnile.ca.gov/resources.php> under the heading Mosquito Control and Repellent Information. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the Kings Mosquito Abatement District at (559) 584-3326.

California Mosquito-borne Virus Surveillance and Response Plan. 2011. [Note: this document is updated annually by CDPH]. Available by download from the California Department of Public Health—Vector-Borne Disease Section at <http://www.westnile.ca.gov/resources.php> under the heading Response Plans and Guidelines. Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the Kings Mosquito Abatement District at (559) 584-3326.

MVCAC NPDES Coalition Monitoring Plan.

# Kings Mosquito Abatement District

## Attachment 1



# RECEIPT

DATE 3/22/16

No. **617376**

RECEIVED FROM Armando Martinez

\$ 241.00

County of Kings ck# 01-130385 DOLLARS

- FOR RENT  
 FOR VCP

|          |  |
|----------|--|
| ACCOUNT  |  |
| PAYMENT  |  |
| BAL. DUE |  |

- CASH  
 CHECK  
 MONEY ORDER  
 CREDIT CARD

FROM \_\_\_\_\_ TO \_\_\_\_\_

BY oe