

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# 4B197800005
- C. Change of ownership or responsibility: WDID# _____
- D. Enrolled under Order 2011-0002-DWQ: WDID# _____

II. DISCHARGE INFORMATION

- A. Name Greater Los Angeles County Vector Control District
- B. Mailing Address 12545 Florence Ave.
- C. City Santa Fe Springs
- D. County Los Angeles
- E. State CA
- F. Zip Code 90670
- G. Contact Person Mark Hall
- H. Email address mhall@glacvcd.org
- I. Title Environmental Program Manager
- J. Phone 562-944-9656

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 within Greater Los Angeles County Vector Control District
 - 3. Directly to river, lake, creek, stream, bay, ocean, etc.
Name of water body: Various - 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 4
(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

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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

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: Mark Hall

B. Signature: Mark Hall Date: 5/22/2023

C. Title: Environmental Program Manager

X. FOR STATE WATER BOARD USE ONLY

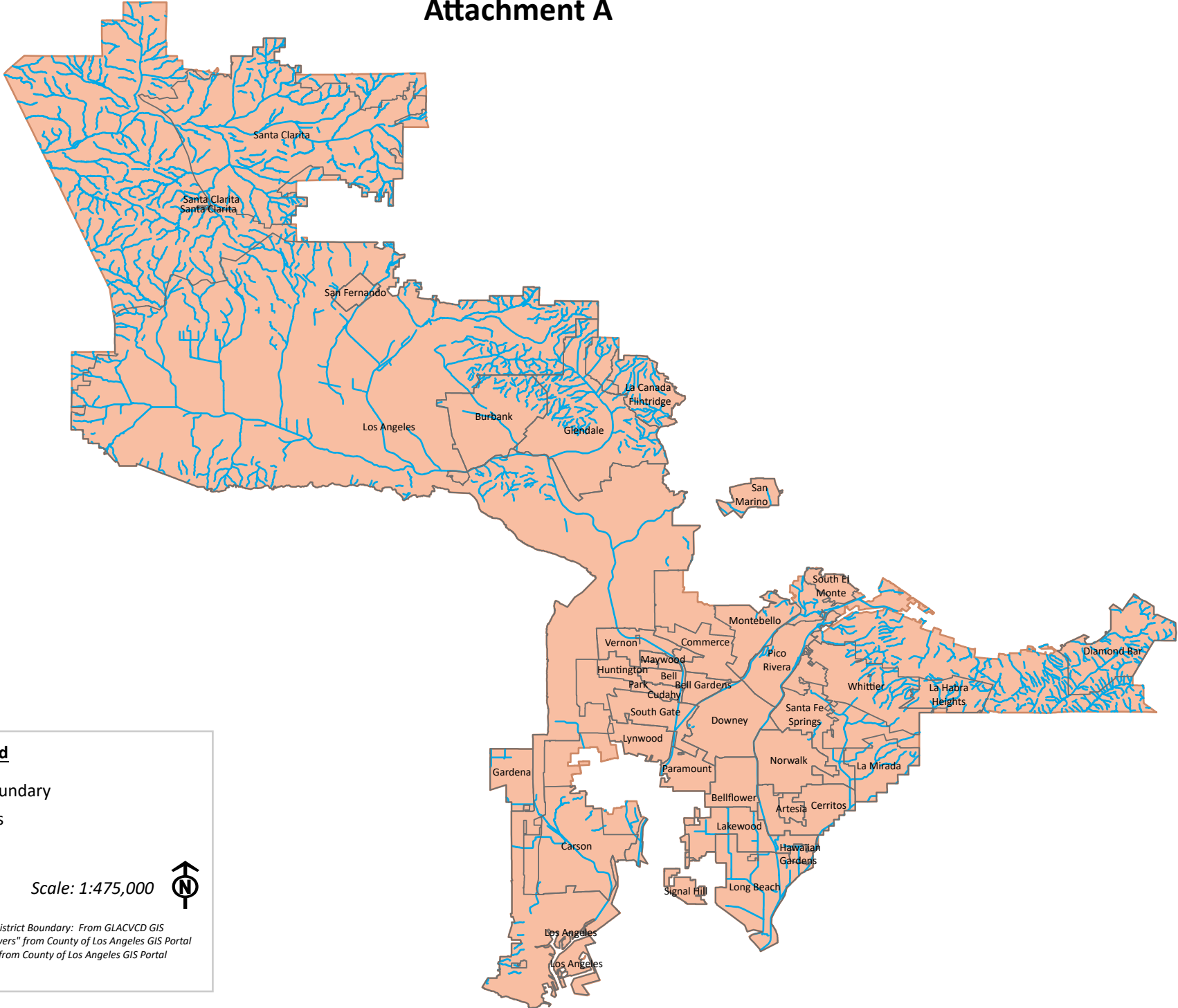
WDID: _____ Date NOI Received: _____ Date NOI Processed: _____

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

Attachment A



Legend

- District Boundary
- Waterways
- Cities

Scale: 1:475,000



Credits:
Greater Los Angeles County District Boundary: From GLACVCD GIS
Waterways: "Streams and Rivers" from County of Los Angeles GIS Portal
Cities: "City Boundary Lines" from County of Los Angeles GIS Portal

Attachment B

Greater Los Angeles County VCD NOI

V. Pesticide Application Information

List of Active Ingredients that may be used under NPDES Permit

Active Ingredient
<i>Bacillus thuringiensis</i> subsp. <i>Israelensis</i> (Bti)
<i>Bacillus sphaericus</i> (Bs)
Mthoprene
Petroleum Distillates
Pyriproxyfen
Spinosad
Temephos
Deltamethrin
Etofenprox
Lambda-Cyhalothrin
Malathion
Naled
N-octyl bicycloheptene dicarboximide (MGK-264)
Piperonyl butoxide (PBO)
Permethrin
Prallethrin
Ptrethrin
Resmethrin
Sumithrin
Any "minimum risk category" pesticide 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

NPDES Government Contact List

Los Angeles County Supervisors:	Cities:
The Honorable Hilda Solis	City of Artesia
The Honorable Holly J. Mitchell	City of Bell
The Honorable Lindsey P. Horvath	City of Bell Gargens
The Honorable Janice Hahn	City of Bellflower
The Honorable Katheryn Barger	City of Burbank
	City of Carson
	City of Cerritos
Agencies:	
California Department of Fish & Wildlife, region 5	City of Commerce
Caltrans District #7	City of Cudahy
California Coastal Commission	City of Diamond Bar
Department of Pesticide Regulations	City of Downey
Regional Water Quality Control Board Region 4	City of Gardena
San Gabriel and Lower L.A. Rivers & Mtns Conservancy	City of Glendale
LA City Department of Public Works	City of Hawaiian Gardens
LA City Department of Recreation & Parks	City of Huntington Park
LA City Department of Water & Power	City of La Canada Flintridge
LA County Agricultural Commissioner	City of La Habra Heights
LA County Department of Public Health	City of Lakewood
LA County Department of Pulic Works	City of La Mirada
LA County Registrar -Recorder/County Clerk	City of Long Beach
	City of Lynwood
	City of Maywood
	City of Montebello
	City of Norwalk
	City of Paramount
	City of Pico Rivera
	City of San Fernando
	City of San Marino
	City of Santa Clarita
	City of Santa Fe Springs
	City of Signal Hill
	City of South El Monte
	City of South Gate
	City of Vernon
	City of Whittier

GREATER LOS ANGELES COUNTY VECTOR CONTROL DISTRICT

12545 Florence Avenue, Santa Fe Springs, CA 90670

Office (562) 944-9656 Fax (562) 944-7976

Email: info@GLAmosquito.org Website: www.GLAmosquito.org

PRESIDENT

Scott T. Kwong, San Marino

VICE PRESIDENT

Marilyn Sanabria, Huntington Park

SECRETARY-TREASURER

Ali Saleh, Bell

GENERAL MANAGER

Susanne Klueh

NOTICE TO POTENTIALLY INTERESTED AGENCIES

ARTESIA

Melissa Ramoso

BELL GARDENS

Pedro Aceituno

BELLFLOWER

Sonny R. Santa Ines

BURBANK

Dr. Jeff D. Wassen

CARSON

Jim Dear

CERRITOS

Mark W. Bollman

COMMERCE

Leonard Mendoza

CUDAHY

Daisy Lomeli

DIAMOND BAR

Ruth M. Low

DOWNEY

Robert Kiefer

GARDENA

Paulette C. Francis

GLENDALE

VACANT

HAWAIIAN GARDENS

Luis Roa

LA CAÑADA FLINTRIDGE

Leonard Pieroni

LA HABRA HEIGHTS

Catherine Houwen

LAKESWOOD

Steve Craft

LA MIRADA

John Lewis

LONG BEACH

Emily Holman

LOS ANGELES CITY

Steven Appleton

LOS ANGELES COUNTY

Steven A. Goldsworthy

LYNWOOD

Rita Soto

MAYWOOD

Jessica Torres

MONTEBELLO

Avik Cordeiro

NORWALK

Margarita L. Rios

PARAMOUNT

Isabel Aguayo

PICO RIVERA

Gustavo V. Camacho

SAN FERNANDO

Sylvia Ballin

SANTA CLARITA

Heidi Heinrich

SANTA FE SPRINGS

William K. Rounds

SIGNAL HILL

Robert D. Copeland

SOUTH EL MONTE

Hector Delgado

SOUTH GATE

Denise Diaz

VERNON

Leticia Lopez

WHITTIER

Jessica Martinez

The Honorable Hilda Solis
The Honorable Holly J. Mitchell
The Honorable Lindsey Horvath
The Honorable Janice Hahn
The Honorable Kathryn Barger
California Department of Fish & Wildlife, Region 5
Caltrans District # 7
Coastal Commission
Department of Pesticide Regulations
Regional Water Control Board Region 4
San Gabriel and Lower L.A. Rivers & Mtns
Conservancy
LA County Agricultural Commissioner
LA City Department of Public Works
LA City Department of Recreation & Parks
LA County Registrar-Recorder/ County Clerk
Los Angeles Department of Water & Power
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City of Diamond Bar
City of Downey
City of Gardena
City of Glendale
City of Hawaiian Gardens
City of Huntington Park
City of La Cañada Flintridge
City of La Habra Heights
City of Lakewood
City of La Mirada
City of Long Beach
City of Lynwood
City of Maywood
City of Montebello
City of Norwalk
City of Paramount
City of Pico Rivera
City of San Fernando
City of San Marino
City of Santa Clarita
City of Santa Fe Springs
City of Signal Hill
City of South El Monte
City of South Gate
City of Vernon
City of Whittier

Subject: Greater Los Angeles County Vector Control District Notice of Intent to continue to apply Aquatic Larvicides and Adulticides for Vector Control as part of the District's Integrated Vector Management Program

Pursuant to the provisions stated in the National Pollutant Discharge Elimination System (NPDES) Permit (Order No. 2016-0039-DWQ) [General Permit No. CAG990004] adopted on March 1, 2016, by the State Water Resources Control Board, notice is hereby given that the Greater Los Angeles County Vector Control District intends to continue to perform larvicide, ultra-low volume (ULV) adulticide, as well as barrier adulticide applications as part of its Integrated Vector Management Program.

Permit regulations note 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 District's activities are conducted year-round within an approximately 1,000 square mile area contained within Los Angeles County. The areas that will be actually or potentially impacted by District activities include constructed conveyances, surface waters and other waters of the U.S. in the following: The incorporated cities of Artesia, Bell, Bellflower, Bell Gardens, Burbank, Carson, Cerritos, Commerce, Cudahy, Diamond Bar, Downey, Gardena, Glendale, Hawaiian Gardens, Huntington Park, La Cañada-Flintridge, La Habra Heights, Lakewood, La Mirada, Long Beach, Los Angeles, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, San Fernando, San Marino, Santa Clarita, Santa Fe Springs, Signal Hill, South Gate, South El Monte, Vernon, and Whittier as well as certain unincorporated areas of Los Angeles County.

Treated areas may be under the jurisdiction of Los Angeles County Public Works, Flood Control, and Watershed Management Divisions, CalTrans, the Army Corp of Engineers and the State Department of Parks and Recreation.

Applications are made in an effort to protect the public's health from vector-borne diseases, are based on key vector and arbovirus surveillance indicators, and are in strict compliance with pesticide label 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> (<i>Bti</i>)
<i>Bacillus sphaericus</i> (<i>Bs</i>)
Methoprene
Petroleum Distillates
Pyriproxyfen
Temephos
Spinosad

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

If you have any questions regarding this Notice of Intent, please contact Susanne Kluh, District headquarters at 12545 Florence Ave, Santa Fe Springs, CA 90670, (562)944-9656.

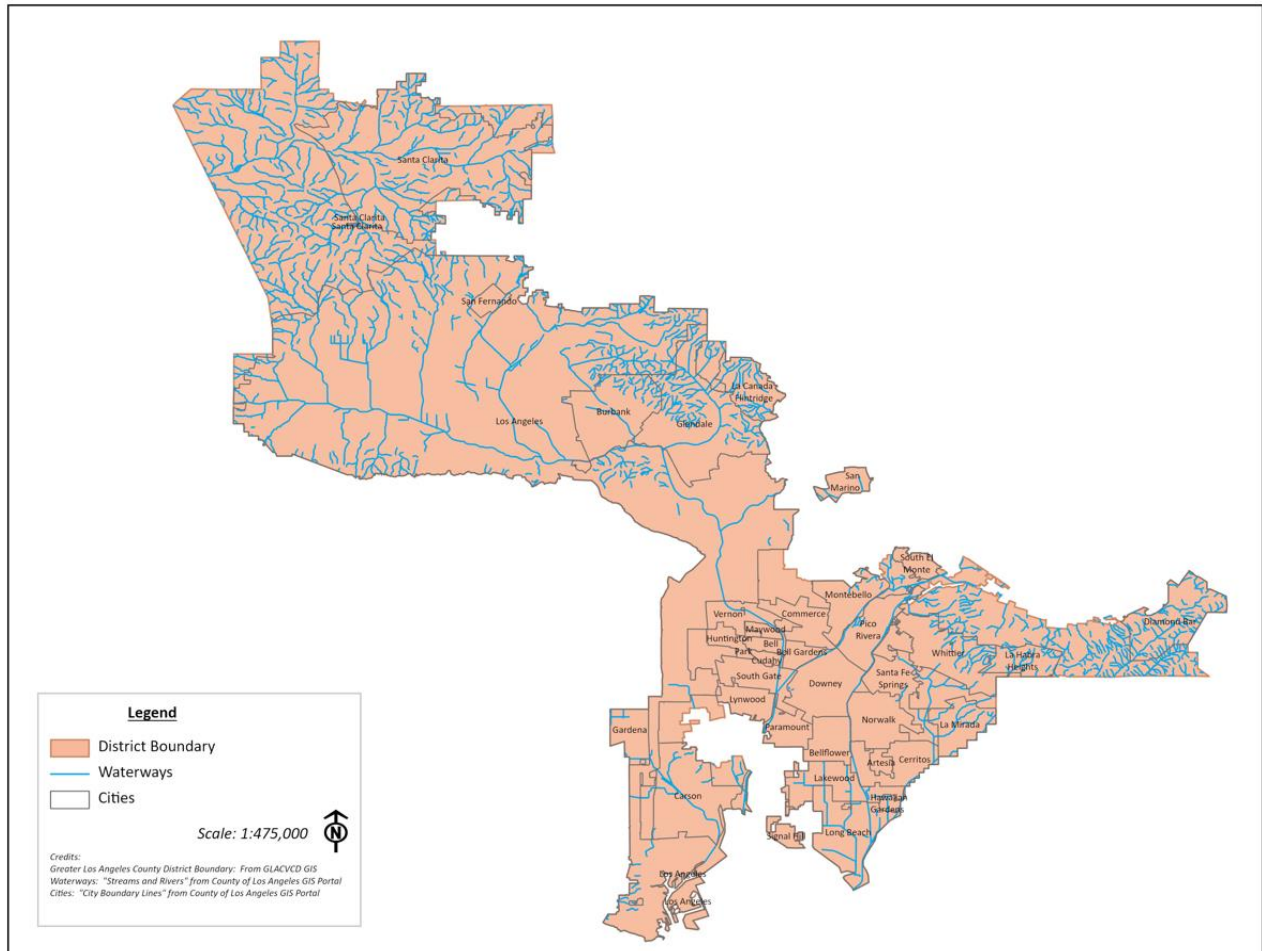
Date: March 1, 2023

Susanne Kluh
General Manager

Greater Los Angeles County Vector Control District Pesticide Application Plan (PAP)

The Discharger shall develop 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 from the water body of the target areas;
 - The incorporated cities of Artesia, Bell, Bell Gardens, Bellflower, Burbank, Carson, Cerritos, Commerce, Cudahy, Diamond Bar, Downey, Gardena, Glendale, Hawaiian Gardens, Huntington Park, Lakewood, La Habra Heights, La Cañada Flintridge, La Mirada, Long Beach, Los Angeles, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, San Fernando, San Marino, Santa Clarita, Santa Fe Springs, Signal Hill, South Gate, South El Monte, Vernon, and Whittier
 - Certain unincorporated areas of Los Angeles County
 - Receiving water: Santa Clara River and its tributaries, San Gabriel River and its tributaries, Los Angeles River and its tributaries, Rio Hondo, Arroyo Seco, Dominguez Channel, LA/LB Harbor, Los Cerritos Channel, Alamitos Bay, and the Pacific Ocean



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

Control activities will follow Integrated Vector Management principles as described in the Best Management Practices for Mosquito Control in California and will generally consist of the components listed below:

Immature Mosquito Management

- a. Evaluate site for immature mosquito threshold densities
- b. Evaluate environmental and regulatory conditions and requirements
- c. If possible, conduct drainage or modification of site
- d. If appropriate, introduce biological control measures
- e. If appropriate, apply public health pesticides

Adult Mosquito Management

- a. Adult management is initiated when threshold criteria in the IVM of adult mosquito application guidelines are met or exceeded
- b. Widespread adult control measures in non-urban areas with disease activity
- c. Adult control in urban areas in public health emergency situations following CDPH guidelines

Black-fly control

- a. Evaluate site for immature blackfly threshold densities
- b. Evaluate environmental and regulatory conditions and requirements
- c. If appropriate, apply public health pesticide
- d. Post-treatment efficacy evaluation

Midge control

- a. Evaluate site for immature midge threshold densities
- b. Evaluate environmental and regulatory conditions and requirements
- c. If possible, conduct drainage or modification of site
- d. If appropriate, apply public health pesticide

The following is our agency's decision tree:

Abbreviations and Definitions:

- a. **The Endangered Species Act** – defines “take” to mean “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”
- b. **Environmentally – sensitive habitats** – wetlands, riparian areas, organic farms, State, Federal, local wildlife areas, or other areas posted as such.
- c. **Underground Storm Drain Systems (USDS)** – A network of conveyance systems that include catch basins and underground pipes designed to transport rain from developed areas and discharged to a receiving body of water

Site Assessment

<u>Criteria</u>	<u>Evaluation</u>	<u>Decision</u>
Is site an USDS?	Yes →	See Technical Considerations for USDS
No ↓		
May mosquitoes develop in the habitat?	No →	Consult supervisor about habitat. Consider reducing site surveillance.
Yes ↓		
Is site a highly urban manmade structure?	Yes →	Consider preventive physical measures and/or contact owner/agency for cleanup/modification.
No ↓		
Is it bird nesting season?	Yes →	Consider control measure that do not disturb nesting birds
No ↓		
Are endangered species present?	Yes →	Consult supervisor about habitat. Sample site. Consider Preventive Physical Measures .
No ↓		
Environmentally sensitive habitat?	Yes →	Consult supervisor about habitat. Avoid damage to sensitive areas. Sample site. Consider Preventive Physical Measures .
No ↓		
Sample site, then consider Preventive Physical Measures .		

Preventive Physical Measures

<u>Criteria</u>	<u>Evaluation</u>	<u>Decision</u>
Can the mosquito breeding site be eliminated?	Yes →	Institute necessary preventive physical measures.
No ↓		
Can habitat be modified to reduce mosquito production?	Yes →	Inform supervisor. Institute necessary preventive physical measures.
No ↓		
Consider Preventive Biological Measures .		

Preventive Biological Measures

<u>Criteria</u>	<u>Evaluation</u>	<u>Decision</u>
Does habitat support immature mosquitoes?	No →	Do not apply biologicals. Set a return inspection date.
Yes ↓		
Time water will remain in site.	(< 72-96 hours) →	Consider Ecological Criteria .
Semi-permanent or permanent (>72-96 hours) ↓		
Environmentally sensitive habitat?	Yes →	Consult with supervisor before stocking with fish.
No ↓		

Water quality?

Highly organic
→

Consider **Ecological Criteria**. Set a return inspection date and record data.

Clear
↓

Consider **Ecological Criteria**. Stock with fish. Set a return inspection date and record data.

Ecological Criteria

Criteria

Evaluation

Decision

Mosquito stages present.

Eggs
→

Consider **Target Population Modification**. Set return inspection date.

↓

Number of immature mosquitoes.

0 immatures/dip
→

Do not treat. Set return inspection date.

≥ 1 immatures/dip

↓

Mosquito fish present with immature mosquitoes?

Yes
≤ 1 immature/dips
→

Do not treat. Set return inspection date.

No

> 1 immatures/dip

↓

Consider **Target Population Modification**.

Target population modification

<u>Criteria</u>	<u>Evaluation</u>	<u>Decision</u>
Is site an USDS? No ↓	Yes →	See technical considerations for USDS.
Mosquito source size? (< 5 acres) ↓	(> 5 acres) →	Consult with supervisor before treatment.
Water quality? Clear ↓	Moderate to highly organic <i>Culex spp.</i> sources →	Consider Treatment Methods and apply appropriate public health pesticide.
Majority of immature stages present? 1 st to early 4 th instar ↓	Late 4 th instar to pupae →	Consider Treatment Methods and apply appropriate public health pesticide.
Consider Treatment Methods and apply appropriate public health pesticide.		

Treatment Method

Criteria

Is site an USDS?

No

↓

Consider treatment methods and apply appropriate public health pesticide.

Evaluation

Yes

→

Decision

See **USDS/Catch Basin Treatment Criteria**.

USDS/Catch Basin Treatment Criteria

Criteria

Historical mosquito breeding site?

No

↓

Standing water present?

No

↓

Adult Mosquitoes observed?

No

↓

Inspect every 10 – 14 days during mosquito breeding season and consider ecologic criteria.

Evaluation

Yes

→

Yes

→

Yes

→

Decision

Treat with appropriate larvicides every 30 days during mosquito season.

Treat with appropriate larvicides every 30 days during mosquito season.

Treat with appropriate larvicides every 30 days during mosquito season.

Larval Sampling:

Due to the skittish nature of some larval species, such as *Cx. erythrothorax*, visual counts of larva on the water surface, instead of collections, and adult trap counts are considered acceptable to consider target population modification.

Public health pesticide (PHP) use & resistance management (applications can be over more than one year)

- a. Consult PHP’s label before treatment
- b. Apply PHPs within the same class or mode of activity on a rotational basis

Factors or conditions that may modify immature mosquito management guidelines

- a. Human disease occurrence
- b. Unforeseen biological /environmental conditions
- c. Legal or political legislation
- d. Availability of suitable larvicides
- e. Availability of funding, resources, or equipment
- f. Resistance of immature mosquito populations to larvicides
- g. Environmental conditions not listed in the program
- h. Continued occurrences of immature stages in a breeding site
- i. Encephalitis mosquito pool isolation
- j. Natural disasters

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 Waters 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, pesticide which fall under the “minimum risk” category may be used. The minimum risk pesticides have been exempted from FIFRA requirements. Products may be applied by truck, backpack, hand can, helicopter or airplane.

Active Ingredients

<i>Bacillus thuringiensis</i> subsp. <i>Israelensis</i> (Bti)
<i>Bacillus sphaericus</i> (Bs) (<i>Lysinibacillus sphaericus</i>)
Methoprene
Petroleum Distillates
Spinosad
Temephos
Deltamethrin
Etofenprox
Lambda-Cyhalothrin
Malathion
Naled

N-octyl bicycloheptene dicarboximide (MGK-264)
Piperonyl butoxide (PBO)
Permethrin
Prallethrin
Pyrethrin
Pyriproxyfen
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 Greater Los Angeles County Vector Control District’s preferred solution, and whenever possible the District works with property owners to affect 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 variations in local environmental conditions. However, the typical sources treated by this District include:

- a. Any and all waters that fall within district boundaries in Los Angeles County that breed mosquitoes, black flies, midges, including but not limited to the Los Angeles, San Gabriel, Rio Hondo, and Santa Clara rivers, Coyote Creek, Hansen Dam Recreational Area, and Whittier Narrows recreational Area.
- b. Flood control channels, basins, freeway drains, storm drains, and any other conveyances for water runoff in an urban/suburban area.
- c. Roadside low-spots, backyard ponds and pools.

Please see district boundary map in number 1 above.

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.

Asterisks indicate terms that are defined in Attachment A of the NPDES Permit for Vector Control

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 the mosquito abundance. The pesticide amounts presented below were taken from the Greater Los Angeles County Vector Control District's 2015 PUR as an estimate of pesticide use anticipated in 2016. Other public health pesticides in addition to those listed below may be used as part of the District's best management practices.

Greater Los Angeles County Vector Control District Pesticide Use Report for Year 2015

Agniquie MMF	16.77	Total gallons
Agnique MMF G Pak35	43.2	Total ounces
Altosid 30 day Briq	262.27	Total pounds
Altosid ALL	2.13	Total gallons
Altosid Pellets	104.41	Total pounds
Altosid SBG	6.00	Total pounds
Altosid WSP	15.78	Total pounds
Altosid XR Briq	33.17	Total pounds
Altosid XR-G	96.00	Total pounds
Cocobear	86.94	Total gallons
Duet	5.04	Total gallons
Fourstar SBG	917.5	Total pounds
Fourstar 45day Briq	129.42	Total pounds
Kontrol Mosquito Larvicide	58.36	Total gallons
Golden Bear 1111	0.20	Total gallons
Natular 2EC	5.51	Total gallons
Nuvan Prostrips+	18.02	Total pounds
Summit B.T.I. Briq	21.52	Total ounces
Vectobac 12AS	836.1	Total gallons
Vectobac G	3996.98	Total pounds
Vectobac WDG	0.30	Total pounds
Vectolex CG	0.50	Total pounds
Vectolex WDG	1294.65	Total pounds
Vectomax FG	5982.88	Total pounds
Zenivex E4 RTU	4.91	Total gallons

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

As described in Item 2 above, water management strategies, vegetation management or the use of fish are the preferred approaches to solving any vector breeding issues. When these methods are not appropriate, feasible or effective, and evidence of breeding continues to exist, larviciding will be considered. Only if all these methods are not feasible or effective may the agency resort to adult control measure to control vector or nuisance insect populations. For example, if the city is the owner of a recreational lake that is causing significant mosquito problems for nearby residents due to lack of vegetation management, the district will direct the city to increase vegetation control efforts to allow the existing fish population access to the mosquito larvae. If the city's budgetary restraints do not allow additional resources to be dedicated toward the problem, the district will assess whether a larviciding approach could be successful. Should vegetation density prevent larvicides from penetrating to the water surface, the only remaining control option is to minimize emerging adult populations through adulticiding efforts. All the while, the district will continue to work with the city officials toward a more permanent, economical, and environmentally sound solution to the problem.

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

The Greater Los Angeles County Vector Control District'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. 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 Pesticide Regulations (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.

Asterisks indicate terms that are defined in Attachment A of the NPDES Permit for Vector Control

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

The Greater Los Angeles County 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. At this point, the Greater Los Angeles County Vector Control District is not utilizing aerial adulticiding applications. If an aerial adulticiding service would be contracted in the future, equipment will be calibrated regularly, and droplet size monitored by the District to ensure droplets meet label requirements. Airplanes used in urban ULV applications are 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. descriptions of specific BMPs for each type of environmental setting (agricultural, urban, and wetland).

Please see Item 2 above for a description of general BMPs used by the district. While the Greater Los Angeles County Vector Control District's service area does not contain sizable agricultural areas, the district is working with the County Department of Public Works on issue of water management in retention basins and spreading grounds, as well as the maintenance of flood control channels in regard to prevention of sediment and algal mass built-up in highly urbanized areas. The goal is to minimize the need for larvicide or adulticide applications. Close relationships are being maintained with the owners of coastal wetland areas as well as constructed treatment wetlands to ensure preservation of wildlife habitat and achievement of water quality objectives without endangering the health and well-being of local residents through excess vector abundance. Vegetation management and the ability to control water levels whenever possible are key to avoiding pesticide applications.

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;

The Greater Los Angeles County Vector Control District staff only apply 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 District's resources, disease activity, 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. Main targets of the Greater Los Angeles County Vector Control District's control program are disease vectoring mosquito species such as *Culex quinquefasciatus*, *Culex tarsalis*, *Culex stigmatosoma*, *Aedes aegypti*, *Aedes albopictus*, as well as major nuisance species such as *Culex erythrothorax* or *Aedes taeniorhynchus*.

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

Any site that holds water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the District's preferred solution, and whenever possible the District works with property owners to implement long-term solutions to reduce or eliminate the need for continued applications as described in 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.

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 Greater Los Angeles County Vector Control District uses as well as in the specifics provided under Item 2. The District continually collects adult and larval mosquito surveillance data and dead bird reports, and uses these data to guide mosquito control activities. In 2015, operations staff recorded mosquito larval and pupal presence or abundance for 145,285 sources, over 150,000 adult mosquitos were collected and identified to species and 1,800 pooled mosquito samples were submitted for virus testing, along with 840 chicken blood samples. Abundance as well as virus occurrence data are utilized to guide additional treatment efforts.

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 Greater Los Angeles County Vector Control District uses the principles and practices of integrated pest management (IPM) as described on pages 26 and 27 of Best Management Practices for Mosquito Control in California 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.

Implementation of preferred alternatives depends on a variety of factors including availability of agency resources, cooperation with stakeholders, coordination with other regulatory agencies, and the 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 Greater Los Angeles County Vector Control District follows an existing integrated pest management (IPM) program which includes 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 level of vectors may pose a substantial threat to public health. 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 right spraying techniques and equipment, taking account of weather conditions and the need to protect the environment.

This is an existing practice of the Greater Los Angeles County Vector Control 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.

www.GLAmosquito.org

References:

Best Management Practices for Mosquito Control in California. 2012. 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 Greater Los Angeles County Vector Control District, 562-944-9656.

California Mosquito-borne Virus Surveillance and Response Plan. 2020. [Note: this document is updated annually by CDPH]. Available by download from the California Department of Public Health—Vector-Borne Disease Section at <https://westnile.ca.gov/pdfs/CAMosquitoSurveillanceResponsePlan.pdf> Copies may be also requested by calling the California Department of Public Health—Vector-Borne Disease Section at (916) 552-9730 or the Greater Los Angeles County Vector Control District, 562-944-9656.

MVCAC NPDES Coalition Monitoring Plan. 2011.