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APR 26 2016
DIVISION OF WATER QUALITY

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# _____

☐ C. Change of ownership or responsibility: WDID# _____

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

II. DISCHARGER INFORMATION

A. Name Greater Los Angele 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 Susanne Kluh	H. Email address skluh@glacvcd.org	I. Title Scientific Technical Director	J. Phone 626-969-8774

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: Applications made to various conveyance systems within GLACVCD

☒ 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. 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. 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: Susanne Kluh

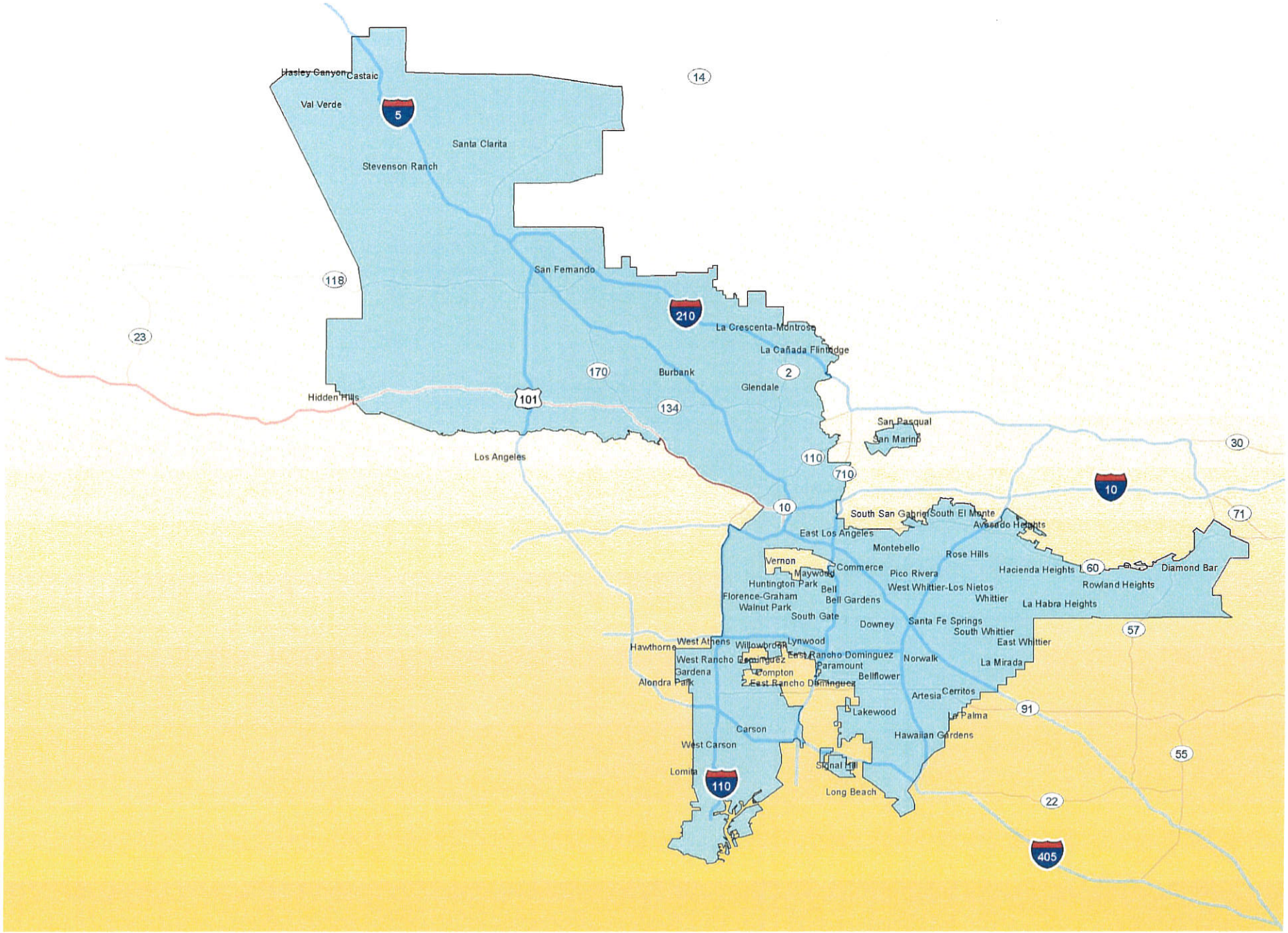
B. Signature: S. Kluh Date: 4/22/2016

C. Title: Scientific-Technical Director

X. FOR STATE WATER BOARD USE ONLY

WDID:	Date NOI Received:	Date NOI Processed:
Case Handler's Initial:	Fee Amount Received: $	Check #:

Attachment A



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
Bacillus thuringiensis subsp. *israelensis (Bti)*
Bacillus sphaericus (Bs)
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

NPDES Government Contact List

Los Angeles County Supervisors:	Cities:
The Honorable Hilda Solis The Honorable Mark Ridley-Thomas The Honorable Shiela Kuehl The Honorable Don Knabe The Honorable Michael Antonovich	City of Artesia City of Bell City of Bell Gardens City of Bellflower City of Burbank City of Carson City of Cerritos City of Commerce City of Cudahy 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 Whittier
Agencies:	
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 LA County Department of Water & Power LA County Public Health Department LA County Department of Public Works	

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@glacvcd.org Website: www.glacvcd.org

NOTICE TO POTENTIALLY INTERESTED AGENCIES

The Honorable Hilda Solis
The Honorable Mark Ridley-Thomas
The Honorable Shiela Kuehl
The Honorable Don Knabe
The Honorable Michael Antonovich
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
LA County Department of Water & Power
LA County Public Health Department
LA County Department of Public Works
City of Artesia
City of Bell
City of Bell Gardens
City of Bellflower
City of Burbank
City of Carson
City of Cerritos
City of Commerce
City of Cudahy
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 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. 2011-0002-DWQ) [General Permit No. CAG 990004] adopted on March 1, 2011, 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.

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 District's activities are conducted year-round within a 1,340 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 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:

Bacillus thuringiensis subsp. *israelensis (Bti)*
Bacillus sphaericus (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

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: January 25, 2016

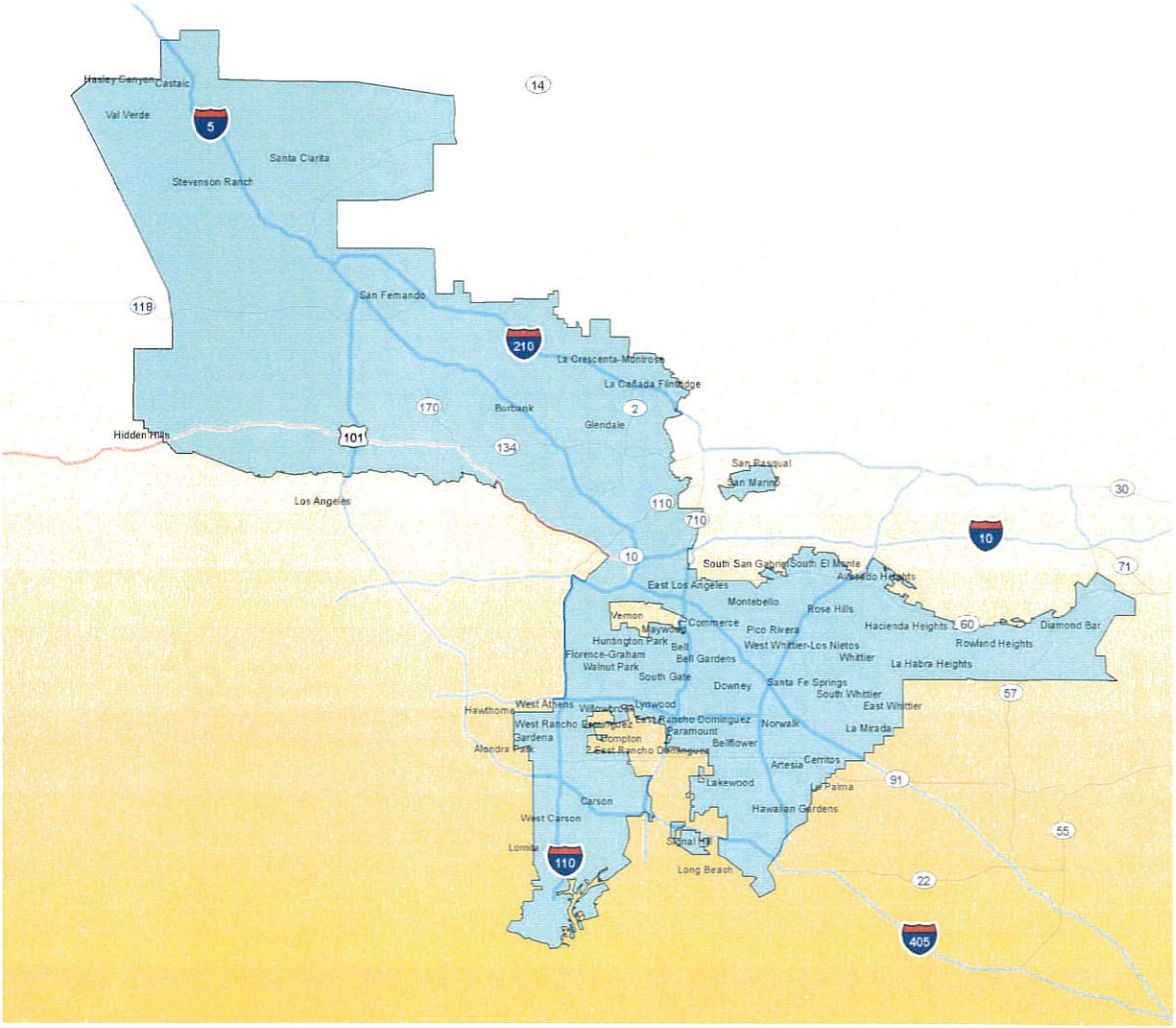
Susanne Kluh
Director of Scientific-Technical Services

Greater Los Angeles County Vector Control District Pesticides 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, Bellflower, Bell Gardens, Burbank, Carson, Cerritos, Commerce, Cudahy, Diamond Bar, Downey, Gardena, Glendale, Hawaiian Gardens, Huntington Park, Lakewood, La Habra Heights, La Canada-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 and Whittier
   - Certain unincorporated areas of Los Angeles County
   - Receiving waters: 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 pesticide

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 black fly 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:

1. **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."
2. **Environmentally- sensitive habitats** - wetlands, riparian areas, organic farms, State, Federal, local wildlife areas or other areas posted as such.
3. **Underground Storm Drain System (USDS)** – A network of conveyance systems that includes catch basins and underground pipes designed to transport rain from developed areas and discharged to a receiving body of water.

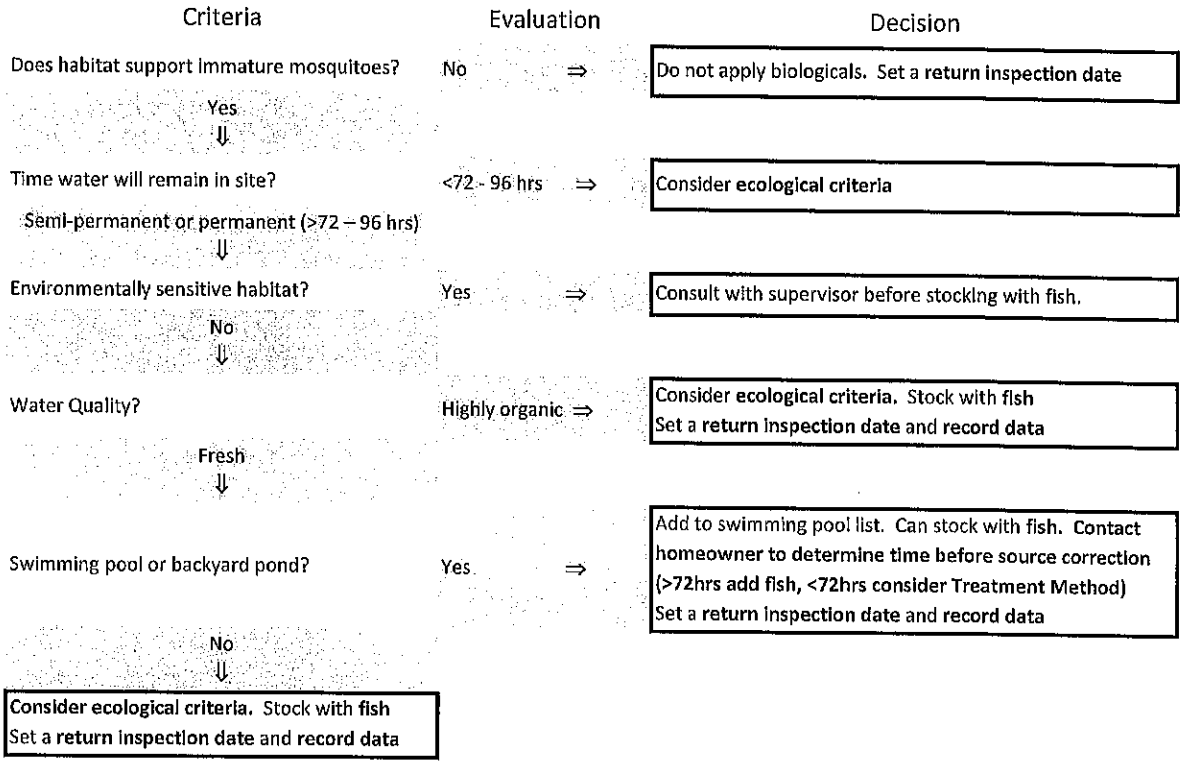
Site Assessment

Criteria	Evaluation	Decision
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 clean-up/modification**
⇓ No		
Is it bird nesting season?	Yes ⇒	Do not disturb nesting birds.
⇓ No		
Are endangered species present?	Yes ⇒	Consult supervisor about habitat. Avoid taking endangered species. If collected, return endangered species to 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**		

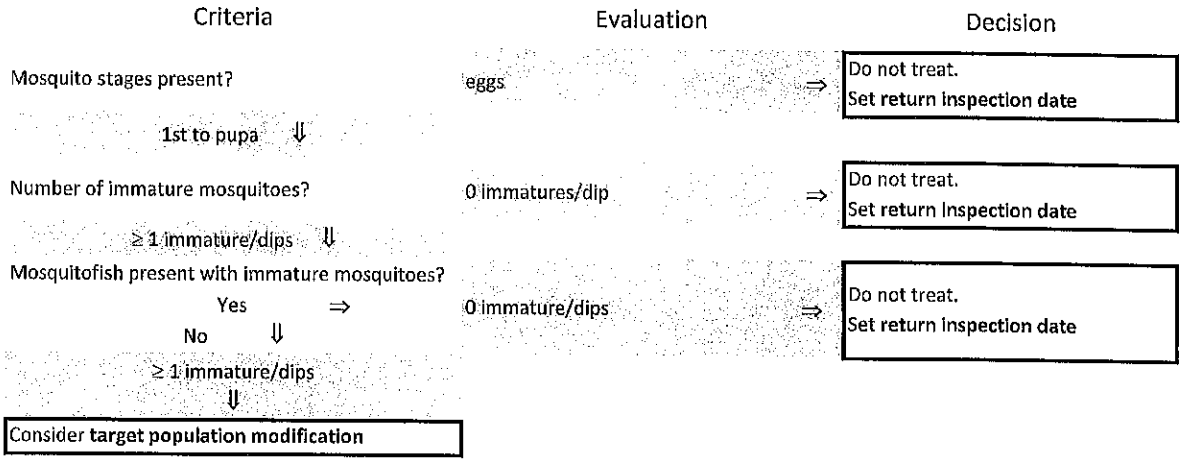
Preventive Physical Measures

Criteria	Evaluation	Decision
Can the mosquito breeding site be **eliminated?** **Can the water be removed/drained?**	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



Ecological Criteria



Target Population Modification

Criteria	Evaluation		Decision
Is site an USDS?	Yes	⇒	See technical considerations for **USDS**
No ⇓			
Mosquito source size?	more than 5 acres	⇒	Consult with supervisor before treatment
less than 5 acre ⇓			
Water quality?	moderate to highly organic *Culex sp.* sources	⇒	Apply appropriate **public health pesticide** and consider **treatment methods**
Fresh ⇓			
Majority of immature stages present?	late 4th to pupae	⇒	Apply appropriate **public health pesticide** and consider **treatment methods**
1st to early 4th ⇓			
Apply appropriate **public health pesticide** and consider **treatment methods**			

Treatment Method

Criteria	Evaluation		Decision
Is site an USDS?	Yes	⇒	See technical considerations for **USDS**
No ⇓			
Distribution of immature?	Isolated locations	⇒	Treat **selectively**
Throughout source ⇓			
Treat **entire** mosquito source	moderate to highly organic *Culex sp.* sources	⇒	Apply appropriate **public health pesticide** and consider **treatment methods**
Fresh ⇓			
Majority of immature stages present?	late 4th to pupae	⇒	Apply appropriate **public health pesticide** and consider **treatment methods**
1st to early 4th ⇓			
Apply appropriate **public health pesticide** and consider **treatment methods**			

USDS/Catch Basin Treatment Criteria

Criteria	Evaluation		Decision
Historical mosquito breeding site?	Yes	⇒	Treat with appropriate larvicides every 30 days during mosquito season
No ⇓			
Standing water present?	Yes	⇒	Treat with appropriate larvicides every 30 days during mosquito season
No ⇓			
Adult mosquitoes observed?	Yes	⇒	Treat with appropriate larvicides every 30 days during mosquito season
No ⇓			
Inspect every 10-14 days during mosquito breeding season and consider **ecologic criteria.**			

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)

1. Consult PHP's label before treatment
2. Apply PHPs within the same class or mode of activity on a rotational basis.

Factors or conditions that may modify immature mosquito management guidelines

1. Sentinel chicken sero-conversion
2. Human disease occurrence
3. Unforeseen biological/environmental conditions
4. Legal or political legislation
5. Availability of funding, resources or equipment
6. Availability of suitable larvicides
7. Resistance of immature mosquito populations to larvicides
8. Environmental conditions not listed in the program
9. Continued occurrence of immature stages in a breeding site
10. Encephalitis mosquito pool isolation
11. 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 adjuvents 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, pesticides which fall under the "minimum risk" category may be used. The minimum risk pesticides have been exempted from FIFRA requirements. Products will be applied by truck, backpack, hand can and airplane.

Active Ingredients

Bacillus thuringiensis subsp. *israelensis (Bti)*
Bacillus sphaericus (Bs) (Lysinibacillus sphaericus)
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 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 agency 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 agency include:
   1. Any and all waters that fall within district boundaries in Los Angeles County that breed mosquitoes, black flies and midges, including but not limited to the Los Angeles, San Gabriel, Rio Hondo and Santa Clara River, Coyote Creek, Hansen Dam Recreational Area, Sepulveda Dam Recreational Area, Harbor Lake Recreational Area, and Whittier Narrows Recreational Area.
   2. Flood control channels, basins, freeway drains, storm drains and any other conveyance for water runoff in an urban/suburban area.
   3. Roadside low-spots, backyard ponds and pools.
5. **Other control methods used (alternatives) and their limitations;**
   With any source of mosquitoes or other vectors, the Greater Los Angeles County Vector Control District's first goal is to look for ways to eliminate the source, or if that is not possible, for ways to reduce the potential for vectors. The most commonly used methods and their limitations are included in the Best Management Practices for Mosquito Control in California.

   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 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.

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

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

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec		
Agnique MMF	15.600	0.21	0.21	0.16	0.08	0.06	0.05	0.09	0.14	0.14	0.02	0.01	16.77	Total gallons
	8	36	36	19	17	10	11	9	15	15	5	1	182	Total Applications
Agnique MMF G Pak35		10.800	10.800	10.800	6.00				2.4	2.4			43.2	Total ounces
	1	4	4	5	2				1	1			17	Total Applications
Altosid 30 day Briq	17.1	29.58	29.58	41.01	25.36	16.5	20.37	15.07	18.13	18.13	14.83	16.61	262.27	Total pounds
	367	536	536	533	428	427	412	433	467	467	400	572	5578	Total Applications
Altosid ALL	0.009	0.043	0.043	0.645	0.236	0.97	0.061	0.025	0.07	0.01	0.019		2.131	Total gallons
	53	438	438	548	441	134	47	68	9	9	6		2191	Total Applications
Altosid Pellets	5.63	7.97	7.97	11.4	9.08	15.86	11.61	8.47	7.13	7.13	7.59	4.57	104.41	Total pounds
	285	252	252	571	272	451	365	323	565	565	464	436	4801	Total Applications
Altosid SBG							6						6	Total pounds
							1						1	Total Applications
Altosid WSP	1.1	0.69	0.69	1.78	0.4	3035	1.5	2.11	0.6	0.6	2.24	1.41	3048.12	Total pounds
	57	45	45	112	25	217	95	128	25	25	105	86	965	Total Applications
Altosid XR Briq	2.7	3.24	3.24	4.65	1.296	1.4	3.78	0.97	2.92	2.92	5.08	0.97	33.166	Total pounds
	18	13	13	23	12	5	9	2	15	15	24	4	153	Total Applications
Altosid XR-G						96							96	Total pounds
						1							1	Total Applications
COCOBEAR	4.74	10.35	10.35	11.4	7.85	10.57	10.16	5.76	5.49	5.49	3.1	1.68	86.94	Total gallons
	330	555	555	799	731	1,029	860	783	1,198	1,198	783	490	9311	Total Applications
DUET	0.5	0.001	0.001	1.25	0.17	0.16	0.39	0.45	0.83	0.83	0.21	0.25	5.042	Total gallons
	1	1	1	2	28	32	72	94	174	174	40	1	620	Total Applications
Fourstar SBG		144.18	144.18	102.31	125.18	170.36	45.18	20.19	82.96	82.96			917.5	Total pounds
		8	8	9	9	12	8		7	7			68	Total Applications
Fourstar 45day Brq	0.26				6.81	27.48	21.97	13.75	15.99	15.99	18.95	8.22	129.42	Total pounds
	10				83	449	369	224	297	297	287	159	2175	Total Applications
Kontrol Mosq.Larvicide							0.063		2	2	54.3		58.363	Total gallons
							1		14	14	26		55	Total Applications
Golden Bear 1111	0.02	0.03	0.03	0.02	0.02	0.02	0.02		0.02	0.02			0.2	Total gallons
	1	25	25	2	2	2	5		2	2			66	Total Applications
Natular 2EC	0.053	0.12	0.12		0.014	0.094	0.9710	2.952	0.436	0.436	0.31		5.506	Total gallons
	2	15	15		1	528	6,170	11,211	2,788	2,788	1,984		25502	Total Applications
Nuvan Prostrips+	2.15	7.15	7.15	1.43							0.14		18.02	Total pounds
	15	50	50	10							1		126	Total Applications
SUMMIT B.T.I. BRQ	17.860	1.370	1.37		0.92								21.52	Total ounces
	23	2	2		1								28	Total Applications
Vectobac 12AS	5.14	69.27	69.27	139.72	86.7	159.11	66.36	157.24	34.61	34.61	7.45	6.62	836.1	Total gallons
	1,634	2,733	2,733	5,211	9,288	18,547	13,185	5,562	3,160	3,160	970	1,581	67764	Total Applications
Vectobac G	47.60	294.23	294.23	527.17	460.9	631.76	710.89	541.72	173.51	173.51	73.0	68.46	3996.98	Total pounds
	23	93	93	166	429	604	757	397	78	78	94	20	2832	Total Applications
Vectobac WDG												0.3	0.3	Total pounds
												12	12	Total Applications
Vectolex CG												0.5	0.5	Total pounds
												1	1	Total Applications
Vectolex WDG	70.65	108.6	108.6	137.66	145.75	205.65	208.11	159.93	24.83	24.83	22.74	77.3	1294.65	Total pounds
	1,413	2,204	2,204	4,118	8,607	18,063	11,489	5,202	2,987	2,987	834	1,546	61654	Total Applications
Vectomax FG	402.21	364.17	364.17	560.98	570.69	660.1	661.09	597.8	657.36	657.36	299.71	187.24	5982.88	Total pounds
	1277	1567	1567	1750	1487	1,818	2,0693	1,910	1,330	1,330	836	77	35642	Total Applications
ZENIVEX E4 RTU		0.02		0.08	0.1	1.68	2.01	0.43	0.28	0.28	0.03		4.91	Total gallons
		4		13	1	10	25	10	76	76	12		227	Total Applications

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 of these methods are not feasible or effective may the agency resort to adult control measures to control vector or nuisance insect populations. For example, if a city is the owner of a recreational lake that is causing significant mosquito problems for nearby residents due to lack of vegetation management, the agency 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 agency 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 agency will continue to work with 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 applicator's annual pesticide application and safety training, State-certification 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 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 be 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 agency. While the Greater Los Angeles County Vector Control District's service area does not contain sizable agricultural areas, the agency is working with the Department of Water and Power on issues of water management in retention basins and spreading grounds, as well as the maintenance of flood control channels in regards 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 local residents' health and well-being 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 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 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 pipiens*

quinquefasciatus, Culex tarsalis or *Culex stigmatosoma*, as well as major nuisance species such as *Culex erythrothorax* or *Aedes taeniorhynchus*. Control efforts may also be directed towards black fly and non-biting midge larvae. The program's main emphasis is on larval control by means of source reduction, limitation of water retention times, as well as the use of biological and chemical control activities. Adulticiding efforts are limited to such instances where larval control has not been possible or is ineffective and disease threat or nuisance levels necessitate intervention.

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, dead bird reports, as well as sentinel chicken and wild bird sero-sample results and uses these data to guide mosquito control activities. In 2015, operations staff recorded mosquito larval and pupal presence or absence for 145,285 sources, over 150,000 adult mosquitoes were collected and identified to species and 1800 pooled mosquito samples were submitted for virus testing, along with 840 chicken blood samples. Abundance as well as virus occurrence data is utilized to direct 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 Vector Management (IVM) as described on pages 26 and 27 of the 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 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 Greater Los Angeles County Vector Control District follows an existing IVM program which includes practices described in the California Mosquito-borne Virus Surveillance and Response Plan as well as Best Management Practices for Mosquito Control in California and Item 2 above.

A "nuisance" is specifically defined in California Health and Safety Code (HSC) §2002(j). This definition allows vector control agencies to address situations where even a low number of vectors may pose a substantial threat to public health and quality of life. In practice, the definition of a "nuisance" is generally only part of a decision to apply pesticides to areas covered under this permit. As summarized in the California Mosquito-borne Virus Surveillance and Response Plan, the overall risk to the public when vectors and/or vector-borne disease are present is used to select an available and appropriate material, rate, and application method to address that risk in the context of our IVM program.

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.glacvcd.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 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 Greater Los Angeles County Vector Control District, 562-944-9656.

California Mosquito-borne Virus Surveillance and Response Plan. 2012. [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 Greater Los Angeles County Vector Control District, 562-944-9656.

MVCAC NPDES Coalition Monitoring Plan. 2011.