



**SAN GABRIEL VALLEY  
MOSQUITO & VECTOR CONTROL DISTRICT**

1145 N. Azusa Canyon Road  
West Covina, California 91790  
(626) 814-9466 • FAX (626) 337-5686  
email: [district@sgvmosquito.org](mailto:district@sgvmosquito.org)

*Steve West*  
District Manager

*Kenn K. Fujioka, Ph.D.*  
Assistant Manager

Cities of:

Alhambra

Arcadia

Azusa

Bradbury

Claremont

Covina

Duarte

El Monte

Glendora

Industry

Irwindale

La Puente

La Verne

Monrovia

Monterey Park

Pomona

Rosemead

San Dimas

San Gabriel

Sierra Madre

Temple City

Walnut

West Covina

County of  
Los Angeles

October 12, 2011

State Water Resources Control Board  
PO Box 100  
Sacramento, California 95812-0100

Dear Sir or Madam:

Attached is a revised Pesticide Action Plan that should accompany the NOI for Water Quality Order No. 2011-0002-DWQ General Permit No. CAG 990004 for the San Gabriel Valley Mosquito and Vector Control District.

Please contact me if you have any questions. Thank you for your time and consideration.

Sincerely,

Kenn K. Fujioka, PhD  
Assistant Manager

RECEIVED

OCT 27 2011

DIVISION OF WATER QUALITY

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OCT 27 2011

ATTACHMENT G – NOTICE OF INTENT

WATER QUALITY ORDER NO. 2011-0002-DWQ DIVISION OF WATER QUALITY  
GENERAL PERMIT NO: CAG 990004

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# \_\_\_\_\_

II. DISCHARGER INFORMATION

A. Name SAN GABRIEL VALLEY MOSQUITO VECTOR CONTROL DISTRICT			
B. Mailing Address 1145 N AZUSA CANYON RD			
C. City WEST COVINA	D. County LOS ANGELES	E. State CA	F. Zip Code 91790
G. Contact Person KENN FUJIOKA	H. Email address kfujioka@sgvmosquito.org	I. Title ASSISTANT MANAGER	J. Phone 626.814.9466

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)\*:

- Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.  
 Name of the conveyance system: \_\_\_\_\_
- Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.  
 Owner's name: SEE APPENDIX A  
Name of the conveyance system: \_\_\_\_\_
- Directly to river, lake, creek, stream, bay, ocean, etc.  
 Name of water body: SAN GABRIEL RIVER AND TRIBUTARIES IN DISTRICT

\* 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 APPENDIX B

C. Period of Application: Start Date OCT 31 2011 End Date ONGOING

D. Types of Adjuvants Added by the Discharger: MINERAL OIL, WATER

**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 PAP shall be included with the NOI.

B. Is the applicator familiar with its contents?

Yes  No

The NPDES Permit for the San Gabriel Valley Mosquito and Vector Control District (SGVMVCD) requires a Pesticides Application Plan (PAP) that contains the following elements:

1. Description of ALL target areas, if different from the water body of the target area, into 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;

Please see Figure 1:  
LAFCO Map

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

Our District attempts to manage the population of mosquitoes by:

Educating residents of the District  
Removing sources of standing water

When sources of water cannot be removed and the population of mosquitoes is sufficient to be a nuisance or increase the risk of human disease, pesticides are used.

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;

- a. The following list of products may be used by the District to control larvae or adults. This list is contained in Attachments E and F of the NPDES Permit for Biological and Residual Pesticide Discharges to Waters of the U.S. for Vector Control Applications. All of these products are used according to their labels and may be applied by ground (hand, truck, ATV, backpack, etc) or by air (helicopter or fixed wing aircraft).

## List of Permitted Larvicides

Larvicide Product Name	Registration Number
Vectolex CG Biological Larvicide	73049-20
Vectolex WDG Biological Larvicide	73049-57
Vectolex WSP Biological Larvicide	73049-20
Vectobac Technical Powder	73049-13
Vectobac-12 AS	73049-38
Aquabac 200G	62637-3
Teknar HP-D	73049-404
Vectobac-G Biological Mosquito Larvicide Granules	73049-10
Vectomax CG Biological Larvicide	73049-429
Vectomax WSP Biological Larvicide	73049-429
Vectomax G Biological Larvicide/Granules	73949-429
Zoecon Altosid Pellets	2724-448
Zoecon Altosid Briquets	2724-375
Zoecon Altosid Liquid Larvicide Mosquito Growth Regulator	2724-392
Zoecon Altosid XR Entended Residual Briquets	2724-421
Zoecon Altosid Liquid Larvicide Concentrate	2724-446
Zoecon Altosid XR-G	2724-451
Zoecon Altosid SBG Single Brood Granule	2724-489
Mosquito Larvicide GB-1111	8329-72
BVA 2 Mosquito Larvicide Oil	70589-1
BVA Spray 13	55206-2
Agnique MMF Mosquito Larvicide & Pupicide	53263-28
Agnique MMF G	53263-30
Abate 2-BG	8329-71

Larvicide Product Name	Registration Number
5% Skeeter Abate	8329-70
Natular 2EC	8329-82
Natular G	8329-80
Natular XRG	8329-83
Natular XRT	8329-84
FourStar Briquets	83362-3
FourStar SBG	85685-1
Aquabac xt	62637-1
Spheratax SPH (50 G) WSP	84268-2
Spheratax SPH (50 G)	84268-2

#### List of Permitted Adulticide Products

Adulticide Product Name	Registration Number
Pyroicide Mosquito Adulticiding Concentrate for ULV Fogging 7395	1021-1570
Evergreen Crop Protection EC 60-6	1021-1770
Pyrenone Crop Spray	432-1033
Prentox Pyronyl Crop Spray	655-489
Pyroicide Mosquito Adulticiding Concentrate for ULV Fogging 7396	1021-1569
Aquahalt Water-Based Adulticide	1021-1803
Pyroicide Mosquito Adulticide 7453	1021-1803
Pyrenone 25-5 Public Health Insecticide	432-1050
Prentox Pyronyl Oil Concentrate #525	655-471
Prentox Pyronyl Oil Concentrate or 3610A	655-501
Permanone 31-66	432-1250
Kontrol 30-30 Concentrate	73748-5
Aqualuer 20-20	769-985
Aqua-Reslin	432-796
Aqua-Kontrol Concentrate	73748-1

Adulticide Product Name	Registration Number
Kontrol 4-4	73748-4
Biomist 4+12 ULV	8329-34
Permanone RTU 4%	432-1277
Prentox Perm-X UL 4-4	655-898
Allpro Evoluer 4-4 ULV	769-982
Biomist 4+4	8329-35
Kontrol 2-2	73748-3
Scourge Insecticide with Resmethrin/Piperonyl Butoxide 18%+54% MF Formula II	432-667
Scourge Insecticide with Resmethrin/Piperonyl Butoxide 4%+12% MF Formula II	432-716
Anvil 10+10 ULV	1021-1688
AquaANVIL Water-based Adulticide	1021-1807
Duet Dual-Action Adulticide	1021-1795
Anvil 2+2 ULV	1021-1687
Zenivex E20	2724-791
Trumpet EC Insecticide	5481-481
Fyfanon ULV Mosquito	67760-34

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

Please see Figure 1. 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 applications as described in Best Management Practices for Mosquito Control in California. The typical sources treated by this District include:

- Catch Basins
- Debris Basins
- Flood Control
- Gutters
- Rivers
- Spreading Grounds
- Street Drains
- Washes/Drains
- Swimming pools
- Fish ponds
- Miscellaneous

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

The District's goal is to eliminate sources of mosquitoes or other vectors. If that is not possible, ways to reduce the risk of vectorborne disease are considered. The most commonly used methods and their limitations are included in the Best Management Practices for Mosquito Control in California. The District's own Best Management Practices follow.

The San Gabriel Valley Mosquito and Vector Control District was formed pursuant to the California Health and Safety Code in 1989 after an epidemic of St. Louis encephalitis occurred in 1984 in Los Angeles County. The District includes 23 cities and unincorporated portions of the County (Figure 1). The SGVMVCD is regulated in part by the Department of Pesticide Regulation (DPR) through a cooperative agreement between the District and the California Department of Public Health (CDPH), (formerly the California Department of Health Services (DHS)).

District personnel who apply pesticides are licensed by the CDPH and pesticide use is reported to the County of Los Angeles Agricultural Commissioner (CAC) according to an annual Memorandum of Understanding among the DPR, CDPH, and CAC, and vector control agencies pursuant to Health and Safety Code Section 116180. The CAC conducts an annual inspection of the District to ensure we are complying with the provisions of the cooperative agreement.

The US Environmental Protection Agency (USEPA) and the DPR require that aquatic pesticides undergo tests for toxicity and meet specific requirements before the pesticide is registered for application to surface waters. The USEPA has found that applying properly registered aquatic pesticides does not threaten people and the environment. The effects of these pesticides on water quality will be mitigated by complying with the requirements of the



Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), using BMPs, and monitoring.

The SGVMVCD's best management practices are based on integrated vector management (IVM). The components of the programs are:

1. Public education
2. Surveillance of vector populations
3. Disease surveillance
4. Determining thresholds
5. Selecting control method(s)
6. Training and certifying applicators

1. Public Education

District staff uses various techniques to reach residents, gain cooperation, and modify behavior so the risk of mosquito-transmitted disease is reduced. Many behavioral elements, e.g., eliminate standing water, reducing runoff, and preventing trash from accumulating in natural areas reduces the need to apply public health pesticides. Multilingual communications ensure the largest possible audience.

- A. Elementary & Secondary School Outreach

Presentations, classroom loan/study materials, curricula, and field trips are available to all public and private school teachers and students.

- B. Community Outreach

Information and programs are provided to local civic groups, community service groups, homeowner associations, local businesses, and at community safety/health fairs, senior centers and others.

- C. Media Outreach

Residents are informed through local and regional media, e.g., press releases, press conferences, and local and regional media campaigns including public service announcements and paid media advertising.

2. Surveillance of Vector Populations

Surveillance limits pesticide use to areas where mosquito populations may affect public health. The 13 species of mosquitoes known in the District differ in their biology, susceptibility to larvicides, and ability to create nuisances and transmit disease. This list may change at any time, but information on the species, density, and stages present is used to select an appropriate control strategy based on integrated vector management.

Mosquitoes Present in the San Gabriel Valley Mosquito and Vector Control District	
<i>Aedes albopictus</i>	<i>Culex pipiens quinquefasciatus</i>
<i>Aedes melanimon</i>	<i>Culex stigmatosoma</i>
<i>Aedes sierrensis</i>	<i>Culex restuans</i>
<i>Aedes squamiger</i>	<i>Culex tarsalis</i>
<i>Anopheles fransiscanus</i>	<i>Culiseta incidens</i>
<i>Anopheles hermsi</i>	<i>Culiseta inornata</i>
<i>Culex erythrothorax</i>	

#### A. Larval Surveillance

Vector Control Technicians are assigned to zones within the District. They maintain a database of sites which are known to produce mosquitoes and inspect them regularly. They also search continuously for new sources of standing water and mosquitoes. Treatments are based on the abundance, species, and stage of mosquitoes present.

#### B. Adult Mosquito Surveillance

Identifying all sources of mosquito larvae is impossible. Populations of adult mosquitoes are also sampled by trapping and tested for infections with viruses that can be transmitted to humans. The spatial and seasonal abundance of adult mosquitoes is monitored and compared to historical data. Control operations are concentrated in areas where adult populations are above seasonal averages and/or where disease activity has been identified.

#### C. Service Requests

Reports of standing water, i.e., neglected pools or mosquitoes from residents allow staff to gauge the success of control efforts and locate new sources of mosquitoes. When requests for service are received, Vector Control Technicians visit the area, interview residents, and search for sources of mosquitoes.

### 3. Disease Surveillance

- A. Adult mosquitoes, birds, and sentinel chickens are tested regularly for infections with mosquito-borne viruses. Control operations are concentrated in areas where the risk for human disease is elevated.

- B. The SGVMVCD works with the County of Los Angeles Acute Communicable Disease Control Unit to keep abreast of trends in arthropod-borne diseases. We increase control and surveillance activities when the risk or incidence of disease increases in our jurisdiction.

#### 4. Determining Thresholds

Thresholds are established so that only sources which represent threats to public health or quality of life are treated. They are based on the following criteria:

- Species of mosquito present
- Stage of mosquito present
- Nuisance or disease potential
- Abundance
- Flight range
- Proximity to humans
- Size of source
- Presence/absence of natural predators
- Presence of sensitive/endangered species

Current and historic data are compared and control measures are based on whether conditions pose a risk to public health.

The SGVMVCD also uses the California Department of Public Health California's Mosquito-Borne Virus Surveillance and Response Plan as a guide to assess the potential for human illness and determine control strategy: <http://www.westnile.ca.gov/resources.php>. This document is revised annually.

#### 5. Selecting Control Methods

When thresholds are exceeded, a control strategy is selected which minimizes environmental impacts while maximizing efficacy. The method of control is based on threshold criteria and:

- Habitat type
- Water conditions and quality
- Weather conditions
- Cost
- Site accessibility
- Size and number of sites

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

Products are applied according to label specifications as determined by EPA under FIFRA.

**Aquatic pesticides used by the SGVMVCD in 2010**

<b>Pesticide</b>	
Altosid Liquid Larvicide (Methoprene) (gal)	8
Altosid(Methoprene) pellets (lb)	5
Altosid SBG (Methoprene granules) (lb)	6
Altosid XR (Methoprene) 120 day briquettes (lb)	68.6
GB-1111 (oil) (gal)	44.9
Vectobac 12 AS ( <i>B. thuringiensis</i> ) (gal)	110.7
Vectobac G ( <i>B. thuringiensis</i> granules) (lb)	32.3
Vectolex CG ( <i>B. sphaericus</i> granules) (lb)	125.5
Vectolex WDG ( <i>B. sphaericus</i> ) (lb)	1
Vectolex WSP ( <i>B. sphaericus</i> ) (lb)	30.3
Agnique (Monomolecular film) (gal)	0.005
Altosid (Methoprene) 30 day briquettes (lb)	0.59
Skeeter Abate (Temephos) (lb)	8.27
BVA2 (oil) (gal)	1.86

**7. Representative monitoring locations\* and the justification for selecting these monitoring locations**

Please see the MVCAC NPDES Coalition Monitoring Plan

**8. If applicable, list the gates of control structures and inspection schedule of those gates or control structures to ensure they are not leaking;**

Not applicable

**9. 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**

Examples include:

Coordinating with other agencies to maintain flowing water in flood control channels by removing vegetation

Coordinate with LA County Dpt of Public Works to rotate use of spreading grounds so water for recharge does not stand for longer than 96 hours

Helicopter surveillance program to identify unmaintained swimming pools and spas

Hiring seasonal staff early in the year; increased inspections and control decreases the population of mosquitoes and reduces the use of pesticides during summer.

**10. Description of BMPs to be implemented. The BMPs shall include, at the minimum:**

***a. Measures to prevent pesticide spill:***

District staff ensures equipment used to apply pesticides work properly by inspecting daily. Devices to contain spills are present in all vehicles that carry pesticides and areas where pesticides are stored. Staff is trained annually to prevent and contain spills.

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

Equipment used to apply pesticides is calibrated at least once per year as required by the MOU with the CA Dept. of Public Health.

***c. A plan to educate Coalition's or Discharger's staff and pesticide applicator on any adverse effects from the pesticide application;***

Applicators must receive training at least annually.

***d. Descriptions of specific BMPs for each spray mode, e.g. aerial spray, truck spray, hand spray, etc.; cease and desist order;***

District calibrates all equipment used to apply pesticides at least annually. Records of treatments are stored on data base and reviewed daily for accuracy. Ultra Low Volume (ULV) equipment is calibrated to apply pesticides according to label requirements. Aerial equipment used to apply pesticides will be calibrated by the contractor. Any aircraft that applies pesticides will use the best available system to place the product correctly.

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

Please see attached:

Best Management Practices for Mosquito Control in California

**f. Description of specific BMPs for each type of environmental setting (agriculture, urban, and wetlands).**

Please see attached:

Best Management Practices for Mosquito Control in California

**11. Identification of the Problem. Prior to first pesticide application covered under this General Permit that will result in a discharge of 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**

District staff identifies and controls sources of mosquitoes that threaten public health or quality of life. Even one mosquito may indicate control measures are needed; however higher thresholds may be applied based on the District's resources, disease activity, or local needs. Treatment thresholds are based on one or more of the following criteria:

- Species of mosquitoes present
- Stages of mosquitoes present
- Potential to be nuisances or transmit disease
- Level of disease
- Abundance of mosquitoes
- Flight range of mosquitoes
- Proximity to populated areas
- Size of source
- Natural enemies or predators present/absent
- Sensitive/endangered species or habitats present/absent

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

Mosquitoes Present in the San Gabriel Valley Mosquito and Vector Control District	
<i>Aedes albopictus</i>	<i>Culex pipiens quinquefasciatus</i>
<i>Aedes melanimon</i>	<i>Culex stigmatosoma</i>
<i>Aedes sierrensis</i>	<i>Culex restuans</i>
<i>Aedes squamiger</i>	<i>Culex tarsalis</i>
<i>Anopheles franciscanus</i>	<i>Culiseta incidens</i>
<i>Anopheles hermsi</i>	<i>Culiseta inornata</i>
<i>Culex erythrothorax</i>	

Methods of control include:

1. Educating residents about mosquitoes and how to control them
2. Removing sources of standing water when possible
3. Controlling vegetation and removing debris when appropriate to ensure proper water flow
4. Limit how long water is retained for ground water recharge
5. Use of larvicides based on BMPS in this plan

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

According to the Best Management Practices for Mosquito Control in California, any site that holds water for more than 96 hours can produce mosquitoes. Removing sources of standing water is the District's preferred solution, and whenever possible the District works with property owners to implement long-term solutions so continued applications of pesticides are not needed.

**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. The District continually collects data regarding the surveillance of adult and larval mosquitoes, dead bird, and chicken serology. The District also analyzes regional data for mosquito-borne diseases in humans, horses, birds, and/or other animals, and uses these data to guide mosquito control activities.

**12. Examine of Alternatives.** Dischargers should continue to examine alternatives to pesticide use 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 water 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 toxic pesticide necessary to control the target pest.

b. **Applying pesticides only when vectors are present at a level that will constitute a nuisance**

This describes the District's existing integrated vector management (IVM) program, 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 that are used by this agency.

### **13. 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.

**14. Specify a website where public notices, required in Section VIII.B may be found**

[www.sgvmosquito.org](http://www.sgvmosquito.org)

### **References:**



**Best Management Practices for Mosquito Control in California.** 2010. Available from the California Department of Public Health—Vector-Borne Disease Section, (916) 552-9730 or by download from <http://www.westnile.ca.gov/resources.php> under the heading Mosquito Control and Repellent Information.

**California Mosquito-borne Virus Surveillance and Response Plan.** 2010. [Note: this document is updated annually by CDPH]. Available from the California Department of Public Health—Vector-Borne Disease Section, (916) 552-9730 or by download from <http://www.westnile.ca.gov/resources.php> under the heading Mosquito Control and Repellent Information.

**MVCAC NPDES Coalition Monitoring Plan.**

*Pending.* Information will be available from MVCAC Consultant hired to develop Plan and conduct monitoring.

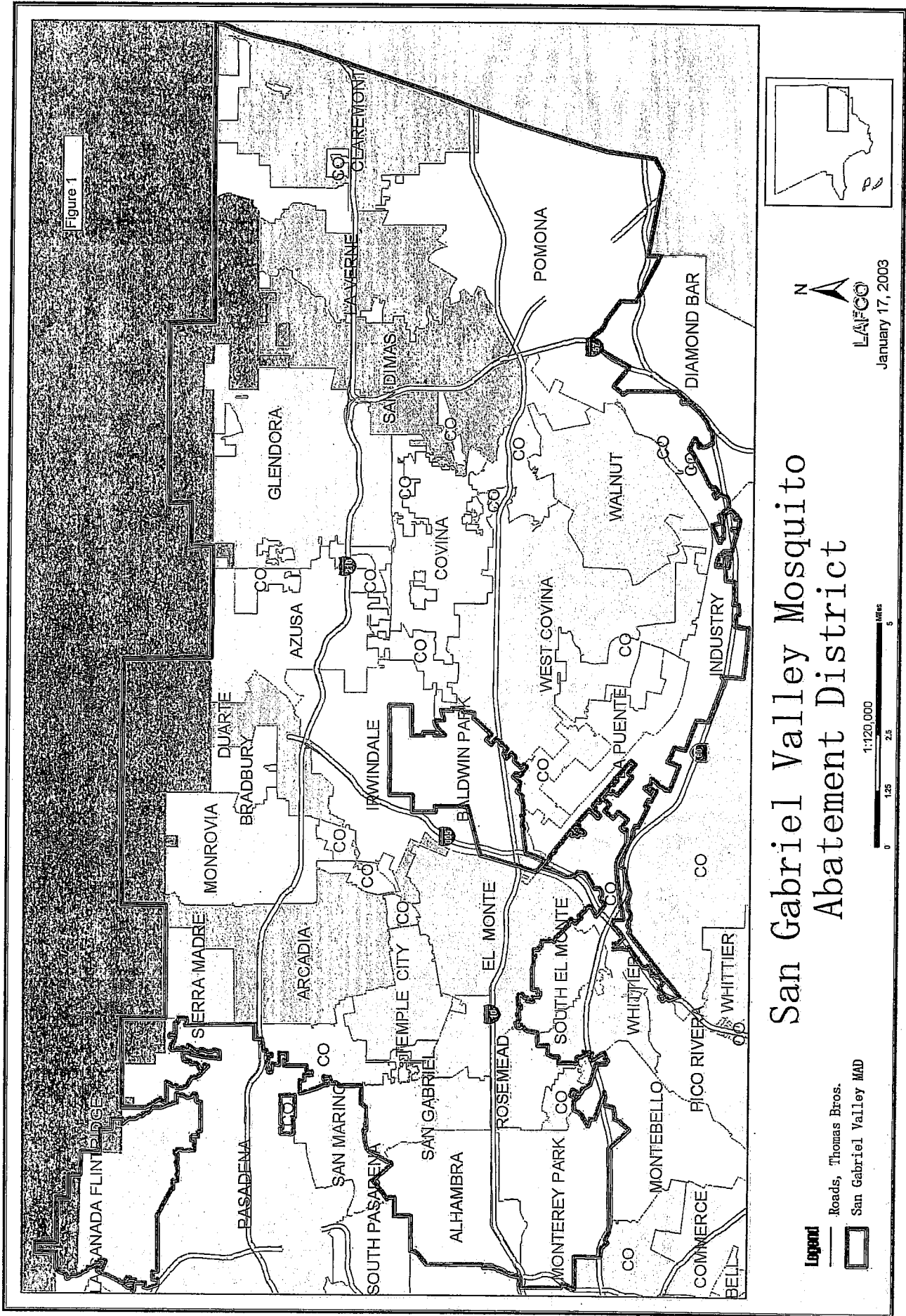





Figure 1

# San Gabriel Valley Mosquito Abatement District


  
 LAFCO
   
 January 17, 2003

**Legend**
  
 Roads, Thomas Bros.
   
 San Gabriel Valley MAD

1:120,000
   

  
 0 1.25 2.5 5 Miles