

COMPTON CREEK MOSQUITO ABATEMENT DISTRICT
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PESTICIDE APPLICATION PLAN
(PAP)

FEBRUARY 2012

ELEMENTS OF THE PESTICIDE APPLICATION PLAN (PAP)¹

- 1. Description of ALL target areas, if different from the water body of the target area, in 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 Compton Creek Mosquito Abatement District (CCMAD or the District) consists of 12½ square miles in the southern portion of Los Angeles County, consists of the City of Compton, the northwest portion of North Long Beach and unincorporated areas of Los Angeles County adjacent to the District and is completely surrounded by Greater Los Angeles County Vector Control District. The Compton Creek is the principle water of which larvicides and adulticides may be applied to control mosquitoes. The Los Angeles River is near to the District and could be affected by such applications.

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

CCMAD uses the principles and practices of Integrated Vector Management (IVM) as described in *Best Management Practices for Mosquito Control in California* (Appendix A, pp. 26-27). When IVM or IPM techniques, source elimination, source reduction and biological control methods have become exhausted, chemicals means are used to reduce mosquito populations. Other factors that influence the decision to select pesticide applications include larval stage (instar), number of larvae, number of predators, presence of mosquito-borne disease in the region, abundance of mosquito species that vector the disease, positive dead bird information from West Nile virus (WNV), climatic influences, presence of listed species, specialized habitats and citizen based service requests.

- 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.**

Please see Attachments E and F within the NPDES Permit for Biological and Residual Pesticide Discharges to Waters of the US for Vector Control Applications. Products may be applied by hand, truck, backpack, hand can, helicopter, or airplane according to label directions.

- 4. Description of ALL the application areas² 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 (4days) can produce mosquitoes. Source reduction is the District's preferred solution and, whenever possible, CCMAD works with property owners to affect long term solutions to reduce or eliminate the need for continued applications, as described by **Item 2** above. Typical sources treated by the District include:

- Any and all navigable waters in southeast Los Angeles County that breed mosquitoes.
- Flood control channels, basins, freeway drains, storm drains and any other conveyance for water runoff in an urban/suburban area.
- Roadside low-spots, street gutters and backyard ponds and swimming pools.

¹ *Statewide National Pollutant Discharge Elimination System (NPDES) Permit (Permit) for Biological and Residual Pesticide Discharges to Waters of the United States from Vector Control Applications*. Water Quality Order No. 2011-0002-DWQ. General Permit No. CAG990004. VIII: C (16-18). State Water Resources Control Boars. 1001 "I" Street, Sacramento, CA 95814

² Defined in *Permit*. Attachment A – Definitions (A-2)

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

With any source of mosquitoes or other vectors, CCMAD's first goal is to look for ways to eliminate the source or, if that is or feasible, for ways to reduce the potential for vectors. the most commonly used alternative control methods and their limitations are described in the *Best Management Practices for Mosquito control in California* (pp. 4-20, 26-27).

Specific alternative control methods used by CCMAD include stocking potential mosquito breeding sources with mosquitofish (*Gambusia affinis*), educating citizens 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.

The District has a public outreach program that includes participation in educational events at local fairs, schools, clubs and town hall meetings. The meetings are designed to encourage people to take responsibility by eliminating their own sources of standing water, thus reducing chemical means of 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 mosquito activity. The pesticide amounts illustrated below are the total of CCMAD's 2011 applications, which include applications to the waters of the US. These amounts are representative of an estimate of pesticide use in 2012. Other public health pesticides in addition to those listed may be used as part of the District's best management practices.

7. Representative monitoring locations³ and the justification for selecting these monitoring locations.

Please see the MVCAC NPDES Coalition Monitoring Plan.

8. Evaluation of available BMP's to determine if there are feasible alternatives to the selected pesticide application project that could reduce potential water quality impacts: and

Please see the *Best Management Practices for Mosquito Control in California* (p. 20).

Please also refer back to Items 2 and 5 above.

9. Description of the BMP's to be implemented. The BMP's shall include at a minimum:

CCMAD's BMP's are described in Item 2 above. Specific elements have been highlighted under items a-f.

³ Defined in *Permit*. Attachment C – Monitoring and Reporting Program (C-3)

a. Measures to prevent pesticide spill:

All pesticide applicators receive annual spill prevention and response training. Agency 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 California Department of Pesticide Regulation (CDPR) 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 US from the pesticide application;

This will be included in our pesticide applicators annual pesticide application and safety training, continuing education programs, and/or regional NPDES Permit training programs.

d. Descriptions of specific BMP's for each application mode, e.g. aerial, truck, hand, etc.;

The District calibrates truck-mounted and hand-held larviciding equipment each year to meet application specifications. The District Manager reviews the applications records daily to ensure that appropriate amounts of material are being used. Ultra-low volume (ULV) application equipment is calibrated for output and droplet size to meet label requirements. Aerial larviciding equipment is calibrated by the Contractor. Aerial adulticides equipment is calibrated regularly and droplet size will be monitored by the District to ensure droplets meet label requirements. Airplanes used in urban ULV applications and the primary airplane used for rural ULV application is equipped with advanced guidance and drift management equipment to ensure the best available technology is being used to place product in the intended area. If a secondary airplane is used in rural ULV applications, it will be equipped with an advanced guidance system.

e. Descriptions of specific BMP's for each pesticide product used; and

Please see the *Best management Practices for Mosquito Control in California* (pp.27-30) for general pesticide BMP's and the CDPR website, <http://www.cdpr.ca.gov/docs/label/abelque.htm>, for the current approved pesticide labels for application BMP's for specific products.

f. Descriptions of specific BMP's for each type of environmental setting (agricultural, urban and wetland).

Please see **Item 2** above and the *Best Management Practices for Mosquito Control in California* (pp. 4-20).

BMP's for urban settings include reminding homeowners to get rid of containers that accumulate water, encouraging people to dump or drain or maintain their ornamental ponds and other water features, and urging residents to report neglected swimming pools. These are performed through the District's public outreach, surveillance, or when responding to service requests.

An example of a BMP wetland area is stocking the source with mosquito-fish. Wetlands that retain water for lengthy periods are usually able to sustain fish populations that effectively reduce or eliminate mosquito breeding and preclude the need for pesticide application.

An example of a BMP for an agricultural setting is working with farmers to reduce the number of days irrigation water stands on the property in order to disrupt the mosquito life cycle. Over the years, the encouragement and implementation of drip irrigation systems (as opposed to flood irrigation) has dramatically reduced the need for pesticide applications in farm habitats.

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;

CCMAD's personnel apply pesticides to sources of mosquitoes that represent threats to the health of humans, domestic animals, or wildlife or to overall quality of life. The presence of any mosquito may necessitate treatment; however, higher thresholds may be applied depending on the agency's resources, disease activity, surveillance data or local needs. Treatment thresholds are based on a combination of one or more of the following criteria:

- Mosquito species present
- Mosquito stage of development
- Pest, nuisance, or disease potential
- Disease activity
- Mosquito abundance
- Flight range
- Proximity to populated areas
- Size of source
- Presence/absence of natural enemies
- Presence of sensitive/endangered species or habitats.

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

Please see **Item 2** above and the *Best Management Practices for Mosquito Control in California* (pp. 31-34). Please see also the *California Mosquito-Borne Virus Surveillance and Response Plan* (pp. 8-10).

CCMAD may target any and all mosquito species found within the District that become problematic due to nuisance or vector-borne disease potential.

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

Any site that holds water for more than 96 hours (4 days) can produce mosquitoes. Source reduction is the agency's preferred solution, and whenever possible, the agency works with property owners to implement long-term solutions to reduce or eliminate the need for continued pesticide applications as described in **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. Please see **Item 2** above. CCMAD continually collects adult and larval mosquito surveillance data and dead bird reports, monitors regional mosquito-borne disease activity detected in humans, horses, birds, and/or other animals, and uses these data to guide mosquito control activities. The District employs aerial technology and works with various government planning commissions to gather data on new and existing sources such as neglected swimming pools. This technology assists the District technicians in the field, who continually sample water and are trained to seek new treatment areas.

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.

CCMAD 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 is 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 4-10 of the *Best Management Practices for Mosquito Control in California*.

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

CCMAD follows an existing IVM program which includes practices described in **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 vectors may pose a substantial threat to public 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 CCMAD, and is required to comply with the Department of Pesticide Regulation’s (CDPR) 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 and in-house training.

- 13. If applicable, specify a website where public notices, required in Section VIII.B, may be found. Please visit the CCMAD website at www.comptoncreekmad.org.**

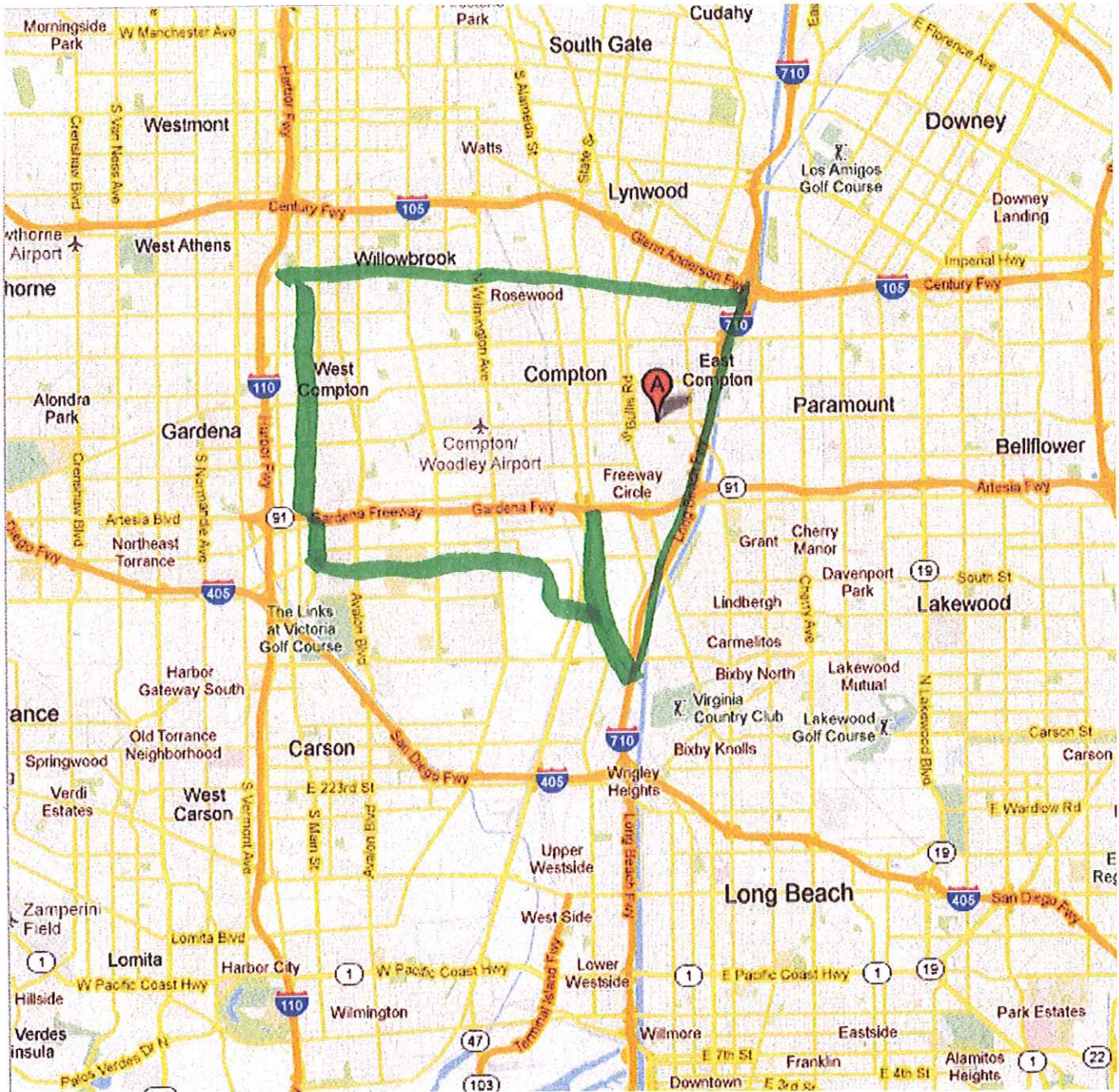
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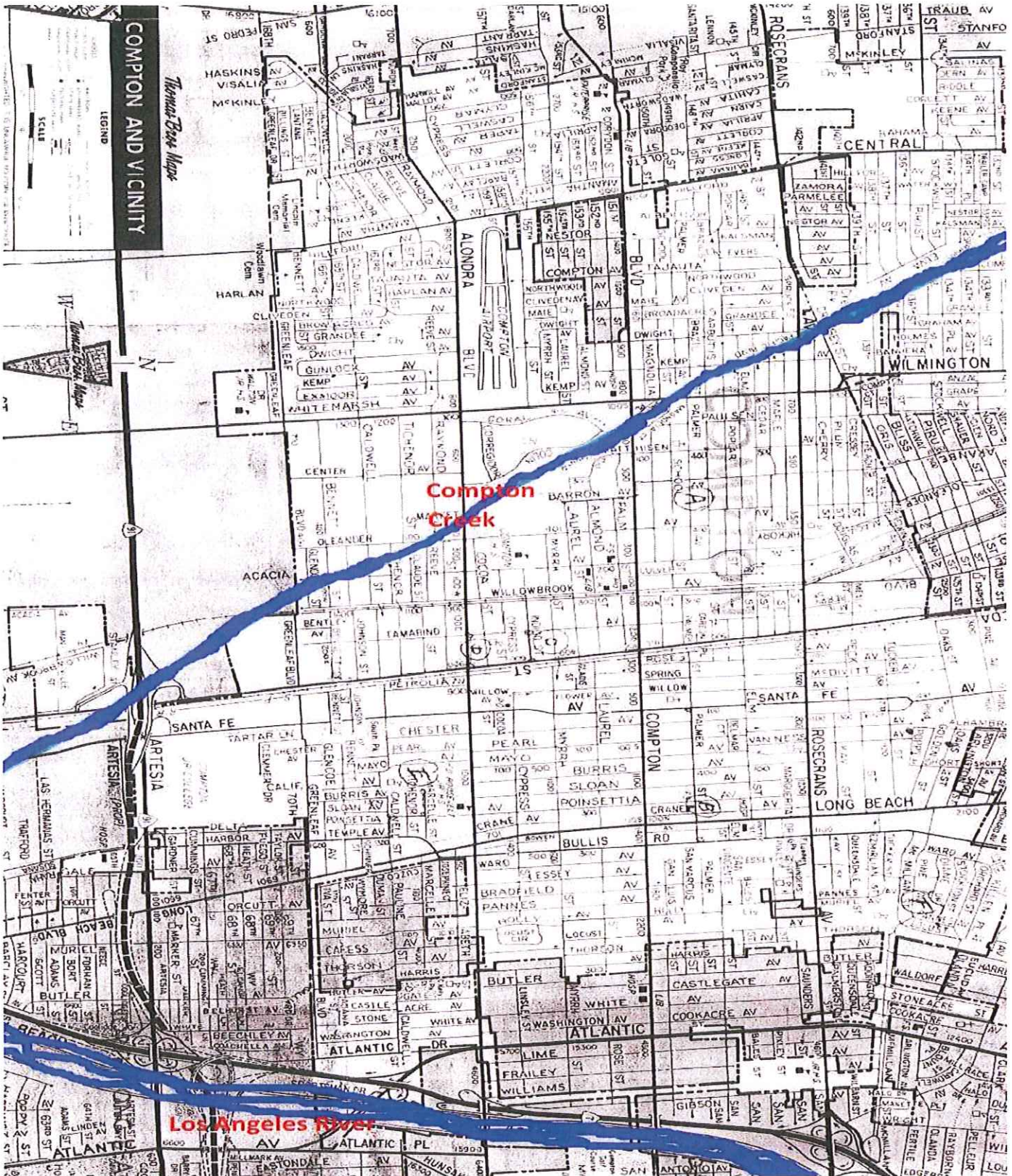
Best Management Practices for Mosquito Control in California. 2010. Available by download from the California Department of Public Health – Vector-Borne Disease Section at <http://www.westnile.ca.gov/resources.php> under the heading *Mosquito Control and Repellent Information*. Copies may also be requested by calling the California Department of Public Health – Vector-Borne Disease Section at (916) 552-9730 or the Compton Creek Mosquito Abatement District at (310) 933-5321.

California Mosquito-borne Virus Surveillance and Response Plan. 2010. {Note: this document is updated annually by the California Department of Public Health (CDPH)}. Available by download from the California Department of Public Health – Vector-Borne Disease Section (CDPH-VBDS) at <http://www.westnile.ca.gov/resources.php> under the heading *Response Plans and Guidelines*. Copies may also be requested by calling CDPH at (916) 552-9730 or the Compton Creek Mosquito abatement District at (310) 933-5321.

Monitoring Plan for Mosquito Larvicides and adulticides (MVCAC NPDES Coalition Monitoring Plan). 2011. Copies may be requested by calling the Mosquito and Vector Control Association of California (MVCAC) at (916) 440-0826 or the Compton Creek Mosquito Abatement District at (310) 933-5321.

Map of the Compton Creek Mosquito Abatement District





Showing Waters of the US

Pesticide Use Report 2011

Attachment 2

Month/Yr	Product	Usage	App's
Jan-11	GB-1111	0	0
	Alto. Briq	0	0
	V'lex WDG	0	0
Feb-11	GB-1111	0	0
	Alto. Briq	0	0
	V'lex WDG	0	0
Mar-11	GB-1111	0	0
	Alto. Briq	0	0
	V'lex WDG	0	0
Apr-11	GB-1111	.75 gal	12
	Alto Briq	1.12 lbs	12
	V'lex WDG	0	0
May-11	GB-1111	2 gal	32
	Alto Briq	2.43 lbs	29
	V'lex WDG	0	0
Jun-11	GB-1111	2 gal	26
	Alto Briq	1.06 lbs	25
	V'lex WDG	8 oz	204
Jul-11	GB-1111	2 gal	11
	Alto Briq	.95 lbs	11
	V'lex WDG	8 oz	197
Aug-11	GB-1111	2 gal	16
	Alto Briq	1.08 lbs	16
	V'lex WDG	8 oz	225
Sep-11	GB-1111	.50 gal	4
	Alto Briq	.22 lbs	4
	V'lex WDG	5 oz	149
Oct-11	GB-1111	0	0
	Alto Briq	0	0
	V'lex WDG	0	0
Nov-11	GB-1111	0	0
	Alto Briq	0	0
	V'lex WDG	0	0
Dec-11	GB-1111	0	0
	Alto Briq	0	0
	V'lex WDG	0	0
TOTALS	GB-1111	9.25 gals	101
	Alto Briq	6.86 lbs	97
	V'lex WD	21 ozs	775

Pesticides used by the Compton Creek Mosquito Abatement

Golden Bear 1111 – Petroleum	EPA # - 8329-72
Altosid Briquets – S-Methoprene	EPA # - 2724-374
Vectolex WDG – Bacillus Sphaericus	EPA # - 73049-57