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# CAG 990004

II. DISCHARGER INFORMATION

A. Name: Agurto Corporation dba Pestec			
B. Mailing Address: 1555 Yosemite Ave #40			
C. City: San Francisco	D. County: San Francisco	E. State: CA	F. Zip Code: 94124
G. Contact Person: Luis Agurto	H. Email address: luis@pestecipm.com	I. Title: President	J. Phone: 4150710300

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: _____
Name of the conveyance system: _____

☑ 3. Directly to river, lake, creek, stream, bay, ocean, etc.
Name of water body: SF Bay, Lake Merced, Pacific Ocean

* 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 2
(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
Altosid XR Ingots - Methoprene
Vectomax FG - Bacillus sphaericus/Bacillus Thuringiensis
Vectomax WSP - " " " "
Agnique G-PAK 35 - Poly(oxi-1,2ethandiyl), α-(C14-20 branched + linear alkyl)-ω-hydroxy
BVA Oil 13 - Refined petroleum distillate

C. Period of Application: Start Date February 15th End Date October 31st

D. Types of Adjuvants Added by the Discharger:

VI. PESTICIDES APPLICATION PLAN

A. Has a Pesticides Application Plan been prepared?*
☑ Yes ☐ No

If not, when will it be prepared? _____

* A copy of the Pesticides Application Plan shall be included with the NOI.

B. Is the applicator familiar with its contents?

☑ Yes ☐ No

VII. NOTIFICATION

Have potentially affected governmental agencies been notified?
☑ Yes ☐ No

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

VIII. FEE

Have you included payment of the filing fee (for first-time enrollees only) with this submittal?
☑ Yes ☐ NO ☐ NA

IX. CERTIFICATION

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

A. Printed Name: Luis Aguirto

B. Signature: [signature] **Date:** 5.17.16

C. Title: President

X. FOR STATE WATER BOARD USE ONLY

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

pestec
Integrated Pest Management Providers

1555 Yosemite Ave #46
San Francisco, Ca 94124
p: 415.671.0300
f: 415.671.0305
www.pestec.com

February 26, 2016

Lewis Harrison
Waste Water Enterprise
San Francisco Public Utilities Commission
3801 3rd Street Suite 600
San Francisco, CA 94124

Dear Mr. Harrison,

This letter is to inform you of our intent to re-apply for a Statewide National Pollutant Discharge Elimination System (NPDES) Permit for Biological and Residual Pesticide Discharges to Waters of the United States from Vector Control Applications for the catch basin mosquito abatement program. The program is slated to begin on February 29th and run through October 30th.

If you have any questions please contact me at luis@pestecipm.com, Deborah Lutske with the SFPUC (DLutske@sfwater.org) , or Gil Vasquez with the California Division of Water Quality (gil.vazquez@waterboards.ca.gov).

Sincerely,

Luis Agurto Jr.
President & COO
Pestec

CC:

Nader Shatara, SF DPH
Chris Geiger, SF Department of the Environment
Mabel Chow, SFPUC|WWE
Ed Ho, SFPUC|WWE

San Francisco City and County
Citywide Mosquito Abatement
Pesticide Action Plan

Developed by Pestec Integrated Pest Management

Table of Contents

1. Target Areas

Pestec is responsible for the inspection and treatment of all San Francisco Public Utilities Commission (SFPUC) WasteWater Enterprise (WWE) catch basins during the mosquito season. Close to 25,000 catch basins are located within City and County limits. The majority of San Francisco's catch basins are part of a combined sewer system that discharges into publicly owned treatment plants. These treatments plants are currently covered under NPDES permits for the Oceanside (Southwest Ocean Outfall) and Westside Wet Weather Facilities. Larvicide applications to catch basins that drain into the City and County's combined sewer systems do not constitute point source discharges, and therefore do not require coverage under the State of California general permit for vector control applications. However during rain events storm water may discharge directly into waters of the U.S. or in limited treatments made to some Municipal Separate Storm Sewer System (MS4) when mosquito activity has been reported and confirmed.

Please see **Appendix A: Target Areas** (page 13) for a map of combined sewer system and MS4 catch basins within City and County limits.

2. Application Decision Making Process

In coordination with the San Francisco Department of Public Health (SFDPH), WWE has established a mosquito abatement program for it's catch basins that begins on February 15th and ends on October 31st. of each year. **Due to budget cuts in the FY'15-'16 the beginning of the program will begin on March 1st, 2016 and the frequency of treatments to catch basins has been reduced from once every 6 weeks to once every 90-150 days.** The purpose of this mosquito monitoring and abatement program is to decrease mosquito production in WWE catch basins, thereby reducing the population of mosquitoes and the risks they pose to public health in the City.

The primary monitoring activity carried out in this program is the routine inspection of each catch basin to identify conditions conducive to mosquito breeding, i.e. water and decaying organic matter (leaf litter), and the presence of mosquito larvae and adults. Mosquito larvicide treatments with Altosid Extended Release briquettes will be made to all catch basins visit from March 1st-June 30th, 2016. From July 1st-October 30th catch basins containing water will be treated with Altosid Briquets XR and dry catch basins will be treated with microbial larvicides for prevention purposes. When pupae are suspected or adults confirmed the basins are treated with a pupicide. When mandated by SFDPH catch basins identified has having adult mosquitoes will be treated with an ULV application of adulticide.

Pestec technicians record inspection findings and pest management actions taken, including pesticide applications, mosquito activity observed, catch basin conditions (leaf litter, clogged basins, missing covers). These findings are input to a GPS mapping service and reported to the WWE for operations and maintenance coordination.

3. Pesticide Information

Pestec may use the following list of products for larval or adult control. This list is includes all pesticides pre-approved by the San Francisco Department of the Environment on it's Reduced-Risk Pesticide list, which regulates the types of pesticides allowed for use on City property. All of these products are used according to label directions and are applied by hand or with ground operated equipment to treatment areas.

Larvicide Product Name	**Registration Number**
Essentria IC3	EPA-Exempt
Vectolex FG 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 FG 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 Extended Residual Briquets	2724-421
Zoecon Altosid Liquid Larvicide Concentrate	2724-446
Zoecon Altosid XR-G	2724-451
BVA 2 Mosquito Larvicide Oil	70589-1
Agnique MMF G	53263-30

4. Application Area(s)

For a description of the areas Pestec regularly monitors and treats please see the "Application Decision Making Process" section above. For a map of monitoring and treatment locations see **Appendix A: Target Area** (Page 13)**.**

5. Alternative Methods

With any source of mosquitoes or other vectors, Pestec'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. Pestec does this by providing ongoing surveillance data to the WWE on conditions in catch basins that are conducive to mosquito breeding. Specifically catch basins identified as having leaf litter are reported for WWE operations and maintenance prioritization. The most commonly used methods for mosquito control and their limitations are included in the *Best Management Practices for Mosquito Control in California.*[1] For a more in depth look at the BMPs Pestec has implemented in San Francisco see the "Evaluation and Implementation of Available Best Management Practices" section below (page 6).

6. Application Details

We project that we will be making more applications of pesticides given the reduction in funding for monitoring basins and the increase in risk posed by mosquito vectors. The pesticide amounts presented in **Appendix B: MAC Team PURS Reports** (page 14)

[1] http://www.cdph.ca.gov/HealthInfo/discond/Documents/CDPHBMPMosquitoControl6_08.pdf (last accessed May 2014)

were taken from Pestec's 2014-2015 pesticide use reports.

7. Representative Monitoring Locations

Pestec provides visual monitoring at sewer discharge areas after major storm events during the mosquito abatement season when the combined sewer system overflows and discharges to the San Francisco Bay. Monitoring data is collected according to State *Water Resources Control Board order 2014-0038-EXEC*.[2]

8. Evaluation and Implementation of Available Best Management Practices

Below are examples of the spectrum of methods and products for preventing adult mosquito emergence from catch basins in the City and County of San Francisco.

A. Environmental Management

Managing mosquito-breeding environments by altering factors conducive to mosquito breeding is the foundation of IPM and is mandated through the *San Francisco Integrated Pest Management Ordinance*.[3] *The Best Management Practices for Mosquito Control in California* outline three methods for managing mosquito environments: source elimination, source reduction and source maintenance.[4]

Source Elimination

Catch basins are the gateways into the sewers. They are the main entryway for rainwater and street runoff into San Francisco's combined sewer system. Not only do catch basins drain away run-off, they are designed to hold some of the water and act as a seal to prevent noxious gases from escaping the sewer system. As such, larvicide treatments are considered long-term solutions for mosquito control in lieu of costly retrofits, replacements, or redesigns. However, sole reliance on larvicides is *not* a long-term solution for preventing mosquito production. Completely eliminating the source of mosquito breeding in catch basins can be difficult, since they are designed to hold standing water, however, regular maintenance operations do help eliminate unnecessary blockage in catch basin. Catch basins clogged with debris create ideal breeding sources for mosquitoes. Eliminating these sources through regular maintenance is key to reducing mosquito populations.

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[2] http://www.waterboards.ca.gov/water_issues/programs/npdes/pesticides/docs/vectorcontrol/2012-0003-dwq/vcp_amended_mrp.pdf (last accessed May 2014)

[3] http://www.sfbos.org/ftp/uploadedfiles/bdsupvrs/ordinances11/o0007-11.pdf page 2 (last accessed May 2014)

[4] http://www.cdph.ca.gov/HealthInfo/discond/Documents/CDPHBMPMosquitoControl6_08.pdf page 12 (last accessed May 2014)

Source Reduction

Source reduction aims to alter and sometimes eliminate available habitat for larvae that substantially reduces mosquito breeding and the need for repeatedly applying pesticides. Unlike source elimination, standing water may exist, but the total amount of water, or the time the water is left standing, is greatly reduced. Source reduction may require some maintenance to prevent further mosquito breeding (see below). Examples of source reduction in catch basins include the use of the *San Francisco Stormwater Design Guideline*s[5] recommendations for reducing stormwater pollution by using source controls such as covering the catch basins to prevent adult mosquito access to the catch basin water. This best management practice (BMP) for stormwater management is also recommended by the *University of California, Division of Agriculture and Natural Resources (UC ANR) Publication 8125*.[6] UC ANR recommends, completely sealing structures that retain water permanently or longer than 72 hours to prevent entry of adult mosquitoes. Adult female mosquitoes may penetrate openings as small as 1⁄16 inch (2 mm) to gain access to water for egg laying. Screening can exclude mosquitoes, but it is subject to damage and is not the preferred method of exclusion. If using covers, they should be tight fitting with maximum allowable gaps or holes of 1⁄16 inch (2 mm) to exclude entry of adult mosquitoes. The use of gaskets can provide a much more effective barrier when used properly.[7]

Source Maintenance

When source elimination is infeasible or prohibitive, catch basin maintenance activities can make catch basins less suitable to mosquitoes and allow for other controls to work more effectively. The WWE currently has the capability to clean out, or remove the entire contents of approximately 6,000 catch basins a year with a vacuum truck. The EPA recommends that catch basins be cleaned out at least once or twice per year.[8] Although after clean out the effect on the residing population will be immediate, the re-entry of water and the re-population of catch basins by mosquitoes is likely to occur in a short period of time, depending on precipitation, local water usage/runoff and temperature. However, the removal of leaf litter from catch basins may improve inspections and the efficacy of larvicides. This strategy is therefore paramount to effective IPM for mosquitoes in San Francisco catch basins.

B. Biological Controls

The use of predators, parasites, or pathogens to reduce populations of mosquitoes is commonly employed throughout California and many of San Francisco's natural bodies

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[5] http://www.sfwater.org/Modules/ShowDocument.aspx?documentID=2779 page 82 (last accessed May 2014)

[6] http://www.ipm.ucdavis.edu/PDF/MOSQ/mosquitostormwater.pdf page 4 (last accessed May 2014).

[7] Page 5

[8] http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=factsheet_results&view=specific&bmp=77

of water already benefit from these biological controls. The use of mosquito eating fish, parasitic nematodes, crustaceans such as “tad pole shrimp,” copepods, and dragonfly nymphs must be further explored for use in catch basins. It is unlikely that the heavily polluted catch basin water could support these organisms and there is also a risk of introducing invasive species into fragile microenvironments in and around the City.

C. Chemical Controls

Pesticides that control mosquito larvae are called larvicides. Four types of larvicides (biorational, surface oil, growth regulating, and chemical products) encompassing seven active ingredients are registered for use in California. The San Francisco Department of the Environment has four standing exemptions for larvicides currently on *the San Francisco Reduced-Risk Pesticide List.*

Bio-Rational Products

Bio-rational products exploit insecticidal toxins found in certain naturally occurring bacteria. These bacteria are cultured in mass and packaged in various formulations. The bacteria must be ingested by mosquito larvae to ensure the toxin is released. Therefore biorational products are only effective against larvae since pupae do not feed. The bacteria used to control mosquito larvae have no significant effects on non-target organisms. Two products that are used against mosquito larvae singly or in combination are *Bacillus thuringiensis israelensis* (Bti) and *Bacillus sphaericus* (Bs). Manufactured Bti contains dead bacteria and remains effective in the water for 24 to 48 hours; some slow release formulations provide longer control. In contrast, Bs products contain live bacteria that in favorable conditions remain effective for more than 30 days. Both products are safe enough to be used in water that is consumed by people. Although field studies have shown that both microbial larvicides are efficacious in the control of mosquito larva “serious resistance, as high as 50,000 fold, has evolved where *B. sphaericus* is used against Culex mosquitoes.”[9] Studies have shown however that pesticide resistance can be managed through rotation or combination of active ingredients of Bti and Bs respectively.[10]

Surface Agents

Mosquito larvae and pupae breathe through siphons that extend above the water surface. Surface agents such as highly refined mineral oils or monomolecular films (alcohol derivatives) can spread across the entire surface of the water and prevent mosquitoes from breathing. Depending on the product, the film may remain on the water’s surface from a few hours to a few days. Using surface agents may be restricted in sensitive habitats or where runoff may enter sensitive habitats.

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[9] http://faculty.ucr.edu/~walton/Wirth%20et%20al%202010%20EM.pdf page 1155 (last accessed May 2014).

[10] http://webdb.dmsc.moph.go.th/ifc_nih/applications/files/13_Entomo%20E.pdf page 181 (last accessed May 2014).

The two surface agents currently approved for use by the San Francisco Department of the Environment are BVA2 oil, a highly refined mineral oil and Agnique MMF. Agnique MMF has a longer residual control, however it has been discontinued by the manufacturer, and Pestec will be using up its existing stock in 2016.

Insect Growth Regulators

Insect growth regulators (IGRs) disrupt the physiological development of larvae thus preventing adults from emerging. The two products currently used for controlling mosquito larvae are methoprene and diflubenzuron. The effective life of these products varies with the formulation. Methoprene can be applied in granular, liquid, pellet, or briquette formulation. Diflubenzuron is used selectively because it may be toxic to non-target aquatic invertebrates. There are no such restrictions to using methoprene. IGRs for mosquito control can be used in sources of water that are consumed by people.

The SF Reduced-Risk Pesticide list recognizes that bio-rational mosquito controls are preferred to IGR's, since methoprene may pose a risk to non-target organisms such as crustaceans in the Bay. **Since funding for this program has been reduced while the risk posed by mosquitoes may be increasing due to the invasive *Aedes aegypti* mosquitoes and the illness that this species vectors, Altosid Extended Release briquettes will be the primary control utilized in this program.**

9. Description of the BMP's to be implemented

A. Measures to Prevent Pesticide Spill

All mosquito abatement courier pesticide applicators receive annual spill prevention and response training. Pestec employees ensure daily that application equipment is in proper working order.

B. Measures to ensure minimum and consistent applications

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) and according to the San Francisco DPH, PUC and the SF IPM Ordinance.

C. Education Program

Before the beginning of the SF Mosquito Abatement Courier Season, all applicators/couriers complete a rigorous pesticide application safety and information training course. The course includes information about the adverse effects of pesticide discharges into the San Francisco Bay and information about the NPDES permit.

D. Specific Best Management Practices by Application Mode

Pestec calibrates all larviciding equipment each year to meet application specifications. MAC Team supervisors review application records daily to ensure appropriate amounts

of material are being used.

E. Specific Best Management Practices by Product

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. Specific Best Management Practices by Environmental Setting

Please see the "Evaluation and Implementation of Available Best Management Practices" section above (page 6) for information about the best management practices Pestec implements for mosquito abatement in San Francisco.

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, Pestec reviews and develops the following:

A. Treatment Threshold Mosquito Densities

Densities for larval and adult vector populations to serve as action threshold(s) for implementing pest management strategies;

Only those mosquito sources that Pestec determines to represent imminent threats to public health or quality of life are treated. Thresholds for public health pests are very low and given the environmental justice goals of the SFCC and the SFPUC, the travel range of adult mosquitoes of several miles and the relatively small size of the City and County, the threshold remains constant throughout the City's catch basins.

The threshold of mosquitoes in City catch basins is defined as:

- Less than one (<1) - This threshold means that measures are taken to prevent pest activity and will require service to monitor and treat to prevent the emergence of adult mosquitoes.
- One or more (1+) - When adult activity is identified through inspection, trapping or sighting reports, then an action ranging along the risk-reduction spectrum outlined below will be implemented starting with the lowest risk option.

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 (determined by SFPDH and CDPH)
- 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. Target Vector Species

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

Aedes dorsalis
Aedes squamiger
Aedes washinoi
Aedes sierrensis
Anopheles freborni
Anopheles hermsi
Culex erythrothorax
Culex pipens
Culex stigmatosoma
Culex tarsalis
Culex inornata
Culex incidens

C. Target Breeding Areas

Known breeding areas for source reduction, larval control program, and habitat management:

Pestec's target breeding areas include all of the City and County of San Francisco catch basins. Approximately 23,164 catch basins are located within City and County limits. A majority of San Francisco's catch basins are part of a combined sewer system that discharge into publicly owned treatment works. Some target areas are MS4 catch basins drain directly to the San Francisco Bay. Please see **Appendix A: Target Area** (page 13) for a detailed map of these target breeding areas.

D. Target Habitat Surveillance

The San Francisco Department of Health continually collects adult and larval mosquito surveillance data, dead bird reports, and sentinel chicken test results, and monitors regional mosquito-borne disease activity detected in humans, birds, and/or other animals, and uses these data to guide mosquito control activities. These activities are outlined in the *San Francisco Department of Public Health Mosquito-Borne Virus Surveillance and Response Activities*.[11] Pestec also reviews past season MAC Team surveillance data to review trouble spots found during the previous years mosquito abatement activities.

11. Examination of Alternatives

Pestec continues 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. Management Options

- 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.

Please see above for specific information about the best management practices Pestec implements in the City and County of San Francisco.

Implementing preferred alternatives depends a variety of factors including availability of Pestec resources, cooperation with City 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. Thresholds

Please see above for Pestec's specific vector management program that includes treatment thresholds for mosquito activity.

12. Correct Use of Pesticides

Coalition's or Discharger's use of pesticides must ensure that all reasonable

[11] http://www.sfdph.org/dph/EH/WestNile/DPH_Activities.pdf page 2

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 Pestec and the MAC Team. Pestec 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.

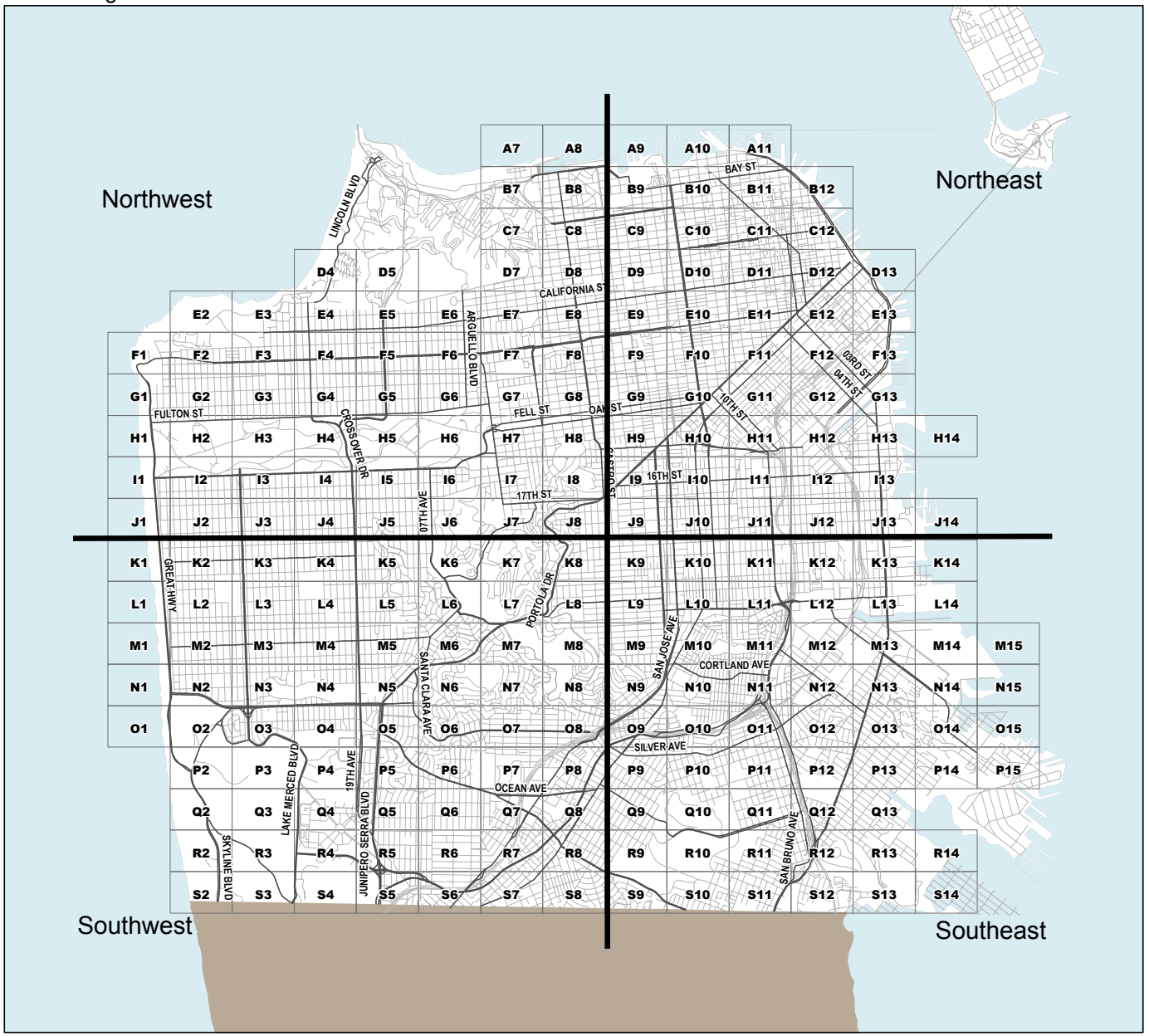
13. Public Notification

All public notices required in Section VIII.B, may be found at http://mosquitosf.com.The website acts a source for information about the San Francisco MAC Team and our activities in the City from Spring to Fall.

See Also:

California Mosquito-borne Virus Surveillance and Response Plan. 2010. [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 by calling Pestec Integrated pest management at 415-671-0300MVCAC NPDES Coalition Monitoring Plan. 2011.

Appendix A: Target Areas



Index to Citywide Sewer Map

Prepared for PESTEC
by SFDPW Hydraulic
Engineering Section
January 2013

2014 Larvacide Usage			
Sum of Undil.Qty		UOM2	
Product	Month	Total Ounces	Total Pounds
Agnique MMF G Pak 35		361.2	22.58
	April 2014	15.6	0.98
	May 2014	56.4	3.53
	June 2014	246	15.38
	July 2014	22.8	1.43
	August 2014	8.4	0.53
	September 2014	7.2	0.45
	October 2014	4.8	0.30
Vectolex WSP		256.7	16.04
	April 2014	239.9	14.99
	May 2014	16.8	1.05
Vectomax FG		20267.72	1266.73
	February 2014	1107.11	69.19
	March 2014	2416.91	151.06
	April 2014	3262.63	203.91
	May 2014	2630.87	164.43
	June 2014	1657.84	103.62
	July 2014	2260.77	141.30
	August 2014	2040.56	127.54
	September 2014	2188.63	136.79
	October 2014	2665.82	166.61
	November 2014	36.58	2.29
Vectomax WSP		93.1	5.82
	April 2014	5.95	0.37
	October 2014	87.15	5.45

2015 Larvacide Usage			
Sum of Undil.Qty		UOM2	
Product	Month	Total Ounces	Total Pounds
Agnique MMF G Pak 35		1123.2	70.20
	March 2015	8.4	0.53
	April 2015	13.2	0.83
	May 2015	4.8	0.30
	June 2015	3.6	0.23
	July 2015	8.4	0.53
	August 2015	212.4	13.28
	September 2015	332.4	20.78
	October 2015	540	33.75
Vectolex WSP		8.75	0.55
	May 2015	5.95	0.37
	August 2015	2.8	0.18
Vectomax FG		22619.7	1413.73
	February 2015	1465	91.56
	March 2015	3591.7	224.48
	April 2015	3407.21	212.95
	May 2015	3069.27	191.83
	June 2015	2083.08	130.19
	July 2015	2204.51	137.78
	August 2015	2342.84	146.43
	September 2015	1771.46	110.72
	October 2015	2684.63	167.79
Vectomax WSP		20.65	1.29
	March 2015	12.6	0.79
	June 2015	7.7	0.48
	August 2015	0.35	0.02