

AGENDA

1031st MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

MARCH 9TH, 2016

TIME: 5:00 P.M.
PLACE: Office of the District, 23187 Connecticut Street, Hayward
TRUSTEES: Richard Guarienti, President, City of Dublin
Kathy Narum, Vice-President, City of Pleasanton
Robert Dickinson, Secretary, City of Piedmont
Scott Paulsen, County-at-Large
Wendi Poulson, City of Alameda
Scott Donahue, City of Emeryville
George Young, City of Fremont
Elisa Marquez, City of Hayward
James N. Doggett, City of Livermore
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Ursula Reed, City of San Leandro
Ronald Quinn, City of Union City
City of Berkeley, vacant

1. Call to order.
2. Roll call.
3. President Guarienti invites any member of the public to speak at this time on any issue relevant to the District. (Each individual is limited to five minutes).
4. Approval of the minutes of the 1030th meeting held February 10th, 2016 (Board action required).
5. Presentation of the Financial Audit for Fiscal Year 2014-15 by Ian Petrovsky of R.J. Ricciardi, Inc. (Board Action Required).
6. CalPERS Report: (Information only)
 - a. Pension: Actuarial assumptions
 - b. Health: Cadillac Tax
7. Nomination of District Manager, Ryan Clausnitzer as a CSDA Board of Director (Board action required).
8. Reclassification of Administrative/ Finance Manager position to Administrative Assistant in Fiscal Year 16-17, with positions to overlap 3-5 months (Board action required)
9. Financial Reports:

- a. Review of warrants dated February 15, 2016 numbering 037616 through 039916 amounting to \$103,980.80 and warrants dated February 29, 2016 numbering 039916A through 042816 amounting to \$114,361.38 (Information only).
 - b. Review of Budget as of February 29, 2016. (Information only).
 - c. Review of Budget Summary received as of February 29, 2016. (Information only).
10. Presentation of the Monthly Staff Report for February 2016 (Information only).
11. Presentation of the Manager's Report for February 2016 (Information only).
- a. MVCAC Annual Conference
 - b. VCJPA annual workshop
 - c. Conflict of Interest Disclosures - FPPC 2015/2016 Statement of Economic Interests, Form 700: due April 1
 - d. 2016 Committee assignments
 - i. District policy review project update
 - ii. Budget review with Finance Committee to begin in early April
 - iii. Interim change of a committee name from "West Nile Virus Committee" to "Public Health Emergency Committee". Permanent change to be proposed during policy review project
 - iv. Manager evaluation committee and membership to replace Ad Hoc Committee on Long Term Planning
 - e. ACMAD quarterly newsletter update
 - f. Trustee Harassment Training
 - g. Legislative update
 - i. AB 1362: districts to allow a city selection committee to chose Trustees
 - ii. SB 1246: 7-day waiting period required of aerial pesticide applications
12. Board President asks for reports on conferences and seminars attended by Trustees.
13. Board President asks for announcements from members of the Board.
14. Board President asks trustees for items to be added to the agenda for the next Board meeting.
15. Adjournment.

RESIDENTS ATTENDING THE MEETING MAY SPEAK ON ANY AGENDA ITEM AT THEIR REQUEST.

Please Note: A copy of this agenda is also available at the District website, www.mosquitoes.org or via email by request. Alternative formats of this agenda can be made available for persons with disabilities. Please contact the district office at (510) 783-7744, via FAX (510) 783-3903 or email at acmad@mosquitoes.org to request an alternative format.

Agenda item: 1031.4

MINUTES

**1030th MEETING OF THE BOARD OF TRUSTEES
OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT**

FEBRUARY 10TH, 2016

TIME: 5:00 P.M.
PLACE: Office of the District, 23187 Connecticut Street, Hayward
TRUSTEES: Richard Guarienti, President, City of Dublin
Kathy Narum, Vice-President, City of Pleasanton
Robert Dickinson, Secretary, City of Piedmont
Scott Paulsen, County-at-Large
Wendi Poulson, City of Alameda
Scott Donahue, City of Emeryville
George Young, City of Fremont
Elisa Marquez, City of Hayward
James N. Doggett, City of Livermore
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Ursula Reed, City of San Leandro
Ronald Quinn, City of Union City
City of Berkeley, vacant

President Guarienti called the regularly scheduled Board meeting to order at 5:05 P.M.

Trustees, Guarienti, Narum, Dickinson, Paulsen, Poulson, Donahue, Young, Marquez, Doggett, Hentschke, Reed, and Quinn were present; Trustee Washburn was absent.

President Guarienti invited members of the public to speak on any issue relevant to the District, there were none present.

The board approved the minutes of the 1029th meeting held January 13th, 2016.
(Narum/Doggett– unanimous; Trustees Hentschke, Reed, Quinn– abstained)

The Board entered closed session to conference with labor negotiators, pursuant to Government Code 54957.6.

The Board returned from closed session whereupon Salary Committee chair Guarienti announced that the Board had voted (11-1) to accept the recommendation of the Committee and enter into a three year Memorandum of Understanding (MOU) with the Employee Association. The MOU will state that the District will increase life insurance policy coverage from \$10,000 to \$20,000 at a cost of about \$1,200 total per year. The District will also provide disability insurance to the employees at a rate of .9% of the total district's payroll. Employees will also receive a 4% per year increase in wages in fiscal year 2016-17 followed by a 3.5% increase in both the 2017-18 and 2018-19 fiscal years of the 3 years of the contract. The Board authorized the salary committee to sign a MOU reflecting these changes.

President Guarienti presented the President's Award Plaque to past Board President George Young.

The Board reviewed warrants dated January 15, 2016 numbering 032716 through 035216 amounting to \$97,915.96 and warrants dated January 31, 2016 numbering 035316 through 037516 amounting to \$108,341.75 Trustee Reed asked about some particular purchased items. The District Manager responded that those items are under the lab budget, whereupon Trustee Dickinson added that those items were budgeted for.

The Board reviewed the budget and summary received as of January 31, 2016.

The District Manager presented the Monthly Staff Report for January 2016. Trustee Dickinson suggested analyzing Google analytics for Zika and/or mosquito complaints and respond accordingly. Trustee Reed asked if the District was paying for Google ads, the District Manager promised to research that and report back. Trustee Reed requested more information on our social media report: what is the District's Facebook name and are the Twitter posts provided in the report posted by District? These will be answered in the following board meeting, per the District Manager.

The District Manager presented the Manager's Report for January 2016. Board President Guarienti asked to be added to the annual CSDA dinner in Pleasanton (yes) and asked for a specific timeline on the District policy manual project (planned for March).

Board President Guarienti asked for reports on conferences and seminars attended by Trustees, which were none.

Board President Guarienti asked for announcement from the Board. Trustee Donahue shared that he will not be attending the next board meeting as he will be traveling in South America.

Board President Guarienti asked trustees for items to be added to the agenda for the March Board meeting. Trustee Narum asked for a report on our pension liability in light of the approved MOU, and for further information on the "Cadillac Tax" in reference to an employers' excise tax on generous health plans for employees. The District Manager responded that these items will be placed on the March 2016 board meeting.

The meeting adjourned at 6:15 P.M.

Respectfully submitted,

Approved as written and/or corrected
at the 1030th meeting of the Board of
Trustees held March 9th, 2016

Robert Dickinson, Secretary
BOARD OF TRUSTEES

Richard Guarienti, President BOARD OF TRUSTEES

Agenda Item 6a.1031

Actuarial predictions based on ACMAD's MOU:

9 classic employees:	Entry age:	Service credit:	4 % COLA	3.5% COLA	3.5% COLA	Additional increases	
						Longevity	Step increase
	25	25	4	3.5	3.5	5%	x
	39	16	4	3.5	3.5	x	x
	34	17	4	3.5	3.5	3%	x
	23	14	4	3.5	3.5	2%	x
	33	14	4	3.5	3.5	2%	x
	33	12	4	3.5	3.5	2%	x
	28	4	4	3.5	3.5	1%	5%
	37	9	4	3.5	3.5	x	2.5%
	27	5	4	3.5	3.5	x	x
Averages:	31	13	4%	3.5%	3.5%	.3% weighted average	
4% COLA + .3% = 4.3% maximum increase in total payroll							

The table below is how our pension liability is calculated, via CalPERS

Public Agency Miscellaneous			
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.1220	0.1160	0.1020
1	0.0990	0.0940	0.0830
2	0.0860	0.0810	0.0710
3	0.0770	0.0720	0.0630
4	0.0700	0.0650	0.0570
5	0.0640	0.0600	0.0520
10	0.0460	0.0430	0.0390
15	0.0420	0.0400	0.0360
20	0.0390	0.0380	0.0340
25	0.0370	0.0360	0.0330
30	0.0350	0.0340	0.0320

Their assumption of a payroll increase of .043 or 4.3% roughly matches what our actual increased salaries will be.

Our pension liability for Classic Members is \$2.64 million. Since our 4.3% matches their assumption, there is no gain or loss. If there was, the gain/loss changes would be spread between 30,000 employees in our risk pool.

Agenda Item 6b.1031

Cadillac Tax:

Employer-sponsored health insurance is considered part of the employees' compensation package, but is not taxed as wages. This is thought to be essentially a government subsidy that encourages employers to offer, and employees to enroll in, more expensive plans that cover more of the cost of medical care, and then the employees use that subsidized medical care excessively because they are insulated from its full cost. These tax deductions may contribute to the high cost of medical care.

The Patient Protection and Affordable Care Act (PPACA, as amended by the Health Care and Education Reconciliation Act of 2010), imposes an annual 40% excise tax on plans with annual premiums exceeding \$10,200 for individuals or \$27,500 for a family starting in 2020, to be paid by insurers. This only includes health coverage not dental, vision, life insurance, short-term disability.

Example: If an employer offered individual coverage that cost \$12,000 per employee, the excess amount for a month would be calculated by $(\$12,000 / 12 \text{ months}) - (\$10,200 / 12) = \$150$. Therefore, the employer would be taxed 40 percent of \$150, or \$60 per employee per month. Over a year, the Cadillac tax liability per employee would be \$720.

At this time, ACMAD would not qualify for the excise tax (\$8,958 for individual coverage is less than the \$10,200 limit).

The health cost adjustment percentage is designed to increase the thresholds in the event that the actual growth in the cost of U.S. health care exceeds the projected growth for that period. This growth is based on the Consumer Price Index, which does not necessarily represent medical costs

Repeal efforts:

H.R.2050 - Middle Class Health Benefits Tax Repeal Act of 2015

H.R.879 - Ax the Tax on Middle Class Americans' Health Plans Act

The 2017 national budget proposes to use an average of gold plans in bay area health exchanges as the base premium. The CalPERS board of directors is currently engaged with lawmakers on these fluctuating regulations.



**California Special
Districts Association**
Districts Stronger Together

RECEIVED

FEB 26 2016

**ALAMEDA COUNTY
MOSQ. ABAT. DIST**

DATE: February 19, 2016

TO: CSDA Voting Member Presidents and General Managers

FROM: CSDA Elections and Bylaws Committee

**SUBJECT: CSDA BOARD OF DIRECTORS CALL FOR NOMINATIONS
SEAT B**

The Elections and Bylaws Committee is looking for Independent Special District Board Members or their General Managers who are interested in leading the direction of the California Special Districts Association for the 2017 - 2019 term.

The leadership of CSDA is elected from its six geographical networks. Each of the six networks has three seats on the Board with staggered 3-year terms. Candidates must be affiliated with an independent special district that is a CSDA Regular member located within the geographic network that they seek to represent. (See attached Network Map)

The CSDA Board of Directors is the governing body responsible for all policy decisions related to CSDA's member services, legislative advocacy, education and resources. The Board of Directors is crucial to the operation of the Association and to the representation of the common interests of all California's special districts before the Legislature and the State Administration. Serving on the Board requires one's interest in the issues confronting special districts statewide.

Commitment and Expectations:

- Attend all Board meetings, held every other month at the CSDA office in Sacramento.
- Participate on at least one committee, meets 3-5 times a year at the CSDA office in Sacramento.

(CSDA reimburses Directors for their related expenses for Board and committee meetings as outlined in Board policy).

- Attend CSDA's two annual events: Special Districts Legislative Days (held in the spring) and the CSDA Annual Conference (held in the fall).
- **Complete all four modules of CSDA's Special District Leadership Academy within 2 years.**

(CSDA does not reimburse for expenses for the two conferences or the Academy classes even if a Board or committee meeting is held in conjunction with the events).

Nomination Procedures: Any Regular Member is eligible to nominate one person, a board member or managerial employee (as defined by that district's Board of Directors), for election to the CSDA Board of Directors. **A copy of the member district's resolution or minute action and Candidate Information Sheet must accompany the nomination. The deadline for receiving nominations is May 30, 2016.** Nominations and supporting documentation may be mailed or faxed.

Nominees will receive a Candidate's Packet in the mail. The packet will include campaign guidelines.

CSDA will mail ballots on June 3rd. The ballots must be received by CSDA no later than 5:00 p.m. August 5, 2016. The successful candidates will be notified no later than August 8th. All selected Board Members will be introduced at the Annual Conference in San Diego, CA in October.

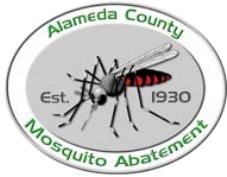
Expiring Terms

(See enclosed map for regional breakdown)

Northern Network	Seat B Greg Orsini, McKinleyville Community Services District*
Sierra Network	Seat B Ginger Root, Country Club Sanitary District*
Bay Area Network	Seat B Sherry Sterrett, Pleasant Hill Recreation & Park District
Central Network	Seat B Tim Ruiz, East Niles Community Services District*
Coastal Network	Seat B N/A
Southern Network	Seat B Bill Nelson, Orange County Cemetery District*
	Seat B Kathy Tiegs, Cucamonga Valley Water District

(* = Incumbent is running for re-election)

If you have any questions, please contact Charlotte Lowe at 877-924-CSDA or charlottel@c�다.net.



Alameda County Mosquito Abatement District
23187 Connecticut Street
Hayward, CA 94545-1605

DATE: March 4, 2016

TO: Alameda County Mosquito Abatement District Board of Trustees

FROM: Ryan Clausnitzer, Manager
Letty Juárez, Human Resources Consultant

SUBJECT: Administrative Summary – Classification and Compensation recommendation –
Office Assistant/Office Administrator

Recommendation:

District staff recommends that the District Board:

- 1) Establish a new classification, job descriptions and salary schedule for the position of Office Assistant /Office Administrator;
- 2) Reallocate the position of Administrator/Financial Manager to the new position of Office Assistant /Office Administrator;
- 3) Abolish the current Administrator/Financial Manager classification.

Background

The District's current Administrator/Financial Manager will be retiring the end of the 2015/2016 fiscal year. The current incumbent evolved in his position and had greater duties and responsibilities at ACMAD from his original classification to the currently configured Administrator/Financial Manager.

Upon receipt of plans for this pending retirement, our District Human Resources Consultant conducted a classification and salary survey to compare the pay and benefits of this position with comparable neighboring agencies. The survey agencies and comparable classifications considered in this matter were as follows:

- Santa Clara County - Account Clerk I/II (confidential), Administrative Assistant (confidential)
- San Mateo County Mosquito Abatement District - Office Administrator
- City of San Mateo - Office Assistant I/II, Accounting Assistant and Human Resources Technician.

In reviewing the duties of this position compared with comparable agencies and the needs of ACMAD, staff recommends adoption of a flexible staff job description allowing grow within the position while gaining ACMAD work experience, institutional knowledge, skills and abilities.

Administrative Summary

Classification and Compensation recommendation
Office Assistant/Office Administrator (Page 2)

The proposed entry-level classification of Office Assistant has the ability evolve into the journey level classification of Office Administrator.

Based on the findings from the survey of regional agencies, the following salary scheduled is recommended:

- Office Assistant \$3,937 - \$4,558 per month
- Office Administrator \$4,786 - \$5,817 per month

Fiscal impact

The Agency intends to bring on the new employee in advance of the retirement of the current Administrator/Financial Manager for cross training purposes. As a result of the training period, the ACMAD budget will be over-expended by \$8,000 - \$10,000 in this fiscal year (2015/2016) but will experience an ongoing budget savings of \$4,330 per month or \$51,960 for the 2016/2017 fiscal year.

Attachments:

1. Draft Job Specifications – Office Assistant/Office Administrator
2. Salary Schedule for Office Assistant/Office Administrator

2016 Alameda County Mosquito Abatement District		
<i>Office Assistant</i>		
Annual		Monthly
\$ 45,000.00	Step 1	\$ 3,750.00
\$ 47,250.00	Step 2	\$ 3,937.50
\$ 49,612.50	Step 3	\$ 4,134.38
\$ 52,093.13	Step 4	\$ 4,341.09
\$ 54,697.78	Step 5	\$ 4,558.15
<i>Office Administrator</i>		
Annual		Monthly
\$ 57,432.67	Step 1	\$ 4,786.06
\$ 60,304.30	Step 2	\$ 5,025.36
\$ 63,319.52	Step 3	\$ 5,276.63
\$ 66,485.49	Step 4	\$ 5,540.46
\$ 69,809.77	Step 5	\$ 5,817.48

Alameda County Mosquito Abatement District

Office Assistant / Office Administrator

Definition

Under general direction and supervision of the District Manager performs a variety of professional, financial, administrative and human resource related staff work. This position serves as the administrative assistant to the District Manager and handles matters that are confidential in nature. This position is responsible for completion of all clerical, budgeting, accounting, bookkeeping, record keeping, and file management. Work includes utilization of accounting software for general ledger, accounts payable, accounts receivable, payroll, general human resources and inventory of fixed assets. This position is responsible for the preparation of financial statements and performs related work as required.

DISTINGUISHING CHARACTERISTICS

Office Assistant - This is the entry-level class **within the ACMAD Office Assistant series**. The class is distinguished from the Office Administrator by the performance of the more routine tasks and duties assigned to positions within the series including duties performed according to established procedures and changes in procedures or exceptions to rules explained in detail as they arise. Since this class can be used as a training class, employees may have only limited or no directly related work experience.

Office Administrator - This is the journey-level class within the **ACMAD Office Assistant series**. Employees within this class are distinguished from the Office Assistant by the performance of the full range of duties as assigned including duties requiring the knowledge of general ACMAD procedures on purchasing, personnel and payroll as well as a knowledge of ACMAD policies and procedures. Employees at this level receive only occasional instruction or assistance as new or unusual situations arise, and are fully aware of the operating procedures and policies of the work. Positions in this class are flexibly staffed and are normally filled by advancement from the entry level, or when filled from the outside, require prior accounting/clerical experience. Appointment to the journey level requires that the employee be performing the full range of duties for the class and meets the qualification standards for the class.

SUPERVISION RECEIVED AND EXERCISED

Office Assistant

Receives immediate supervision from ACMAD Manager. May exercise functional and technical supervision over accounting/clerical part time staff.

EXAMPLES OF DUTIES - Depending upon assignment, duties may include, but are not limited to, the following:

TYPICAL AND IMPORTANT DUTIES

Financial

- Creates and maintains all financial records and reports, including but not limited to Accounts Payable, Accounts Receivable, Payroll and General Ledger.
- Insures compliance with all new State and Federal laws that may affect payroll.
- Interacts with the District's support staff regarding purchasing and all other financial decisions.
- Prepare monthly financial statements of operation.
- Compiles and analyzes data for annual budget preparation, prepares written justification and explanation for expenses and prepares draft of annual budget for management staff analysis. Prepares proposed and final budgets under the direction of the District Manager.
- Maintains inventory records on all fixed assets.
- Works with the District's annual auditor by providing District records.
- Plans and organizes record keeping, reporting, and business office procedures.
- Responsible for all tax return preparation and tax payments related to Payroll.
- Manage all employee/trustee travel arrangements in compliance with IRS regulations regarding travel expense reimbursements.
- Administers benefit assessment and property tax ledgers.

Human Resources

- Serves as District's Workers' Compensation designee, handling all workers' compensation procedures and claims.
- Administers employee and retiree benefit and CalPERS pension plans.
- Stays current with new State and Federal laws and regulations affecting employee benefits.
- Advises management of new State and Federal laws and regulations that may warrant changes in District policies.
- Manages all employee records, such as but not limited to medical/dental plans, payroll deductions, W-2s, pension plans, performance reports, driving records, workers' compensation injuries, and miscellaneous benefit plans.
- Oversees the District's DMV Pull Notice program for all driving records of employees.
- Manages special projects assigned by the District Manager.

Office Management

- Type and proofread a variety of documents including general correspondence, agendas, reports, memos, and statistical charts from rough draft, audio recording, forms, copy, notes, transcribing machine recordings or verbal instruction.
- Primary contact for incoming calls
- Act as Front Office Representative for visitors, vendors, deliveries and inquiries.
- Enters mosquito-related service requests
- Receive, sort and distribute incoming and outgoing correspondence.
- Maintain inventory records; process purchase requisitions; maintain purchase records; resolve errors in orders received and invoices.
- May maintain petty cash fund; accept payment of fees; maintain and process cash records.

Employment Standards

Office Assistant

Knowledge of:

- English usage, spelling, grammar, and punctuation. Business letter writing and basic report preparation.

Ability to:

- Type at speed necessary for adequate job performance. Perform routine accounting/clerical work.
- Learn to operate modern office machines and learn office methods, rules and policies including receptionist techniques.
- Understand and carry out oral and written directions. Communicate clearly and concisely, both orally and in writing.
- Establish and maintain cooperative working relationships with those contacted in the course of work.

Office Administrator

Knowledge of:

- Modern principles and practices of public administration.
- Basic principles, theories, techniques and methods of financial analysis and budget preparation and monitoring.
- Work effectively with the current computer accounting program used by the District.
- Plan and conduct administrative activities.
- Establish and maintain working relationships with other employees and the public.
- Communicate, translate and express ideas effectively.
- Gather, organize and analyze information.

- Read, comprehend, interpret, and apply laws, policies, rules, contracts, guidelines and professional practices.
- Plan, organize and monitor accounting, personnel, data processing, reporting and record keeping functions.
- Mapping software, mosquito-database management, warrant payment procedures

Ability to:

- Speak, write and understand English clearly in order to communicate with the public
- Prepare, organize and maintain accurate records
- Handle a wide array of human resources issues and projects.
- Work with a variety of software including advanced expertise in the more common software package such as Microsoft Office,

Experience and Training:

Any combination of experience and training that would provide the required knowledge, skills, and abilities would be qualifying. A typical way to obtain the knowledge, skills, and abilities would be:

Office Assistant

Experience

Some general accounting/clerical experience is desirable.

Training

Equivalent to completion of the twelfth grade. Additional specialized accounting/clerical training is desirable.

Office Administrator

Experience

Two (2) years of experience in public accounting, human resources or related field.

Training

Equivalent to graduation from high school accompanied with college level courses in accounting, finance, human resources or biology. A Bachelors Degree in related field is highly preferred.

License and Certificate:

- Possession a valid California State Driver's License
- Must be insurable under the guidelines set forth by the District's insurance carrier.

ADA Essential Functions:

Essential duties require the following physical skills and work environment:

Body Movement – Must have full mobility and use of both arms. Must have the ability for full extension above the head to lift boxes off shelves or remove office equipment during normal daily activity. Must have the ability and range of flexibility to reach over their heads, reach below their knees, and to bend over or squat down. Must be able to move quickly within the office or in the fishpond areas and may deal with irate or antagonistic individuals.

- A. **Constant:** activity or condition exists 2/3 or more of the time. The position requires constant operation of a computer, telephone, and other office equipment for extensive periods of time. Mobility of arms to reach and dexterity of hands to grasp and manipulate small objects. Be able to provide clear verbal communications.
- B. **Frequently:** activity or condition exists from 1/3 to 2/3 of the time. Lifts and carries equipment, boxes of paper, and supplies weighting 5 lbs. to 20 lbs.
- C. **Occasionally:** activity or condition exists up to 1/3 of the time. Assists in office programs by lifting supplies and equipment from 10 lbs. to 25 lbs. without assistance.

Responsible for maintaining their physical condition in a state that will not prevent performance of the duties of their position or increases the danger or likelihood of injury on the job.

Work Environment:

May be exposed to and handle toxic and hazardous substances; be available on call for evening and weekend emergencies, as assigned.

**ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
LIST OF WARRANTS DATED FEBRUARY 15, 2016.**

WAR			ACCT	AMT OF	AMT OF
NO	PAYEE		NO	CHARGE	WARRANT
037616	Biological Specialist	Total salary less deduction for payroll	1011	2,375.58	
037616	Mosq Control Tech	February 1 to February 15, 2016.	1011	2,093.61	
037616	Vector Biologist	"	1011	2,699.30	
037616	Vector Biologist	"	1011	2,777.30	
037616	Mosq Control Tech	"	1011	2,010.65	
037616	Environment Specialist	"	1011	2,543.55	
037616	District Manager	"	1011	3,591.22	
037616	Asst Mosq Control Tech	"	1011	1,953.53	
037616	IT Specialist	"	1011	2,851.71	
037616	Entomologist	"	1011	3,043.98	
037616	Field Supervisor	"	1011	2,975.42	
037616	Finance Manager	"	1011	2,444.92	
037616	Seasonal	"	1011	1,030.25	
037616	Vector Biologist	"	1011	3,271.66	
037616	Mosq Control Tech	"	1011	2,392.45	
037616	Mosq Control Tech	"	1011	1,988.58	
037616	Mechanic Specialist	"	1011	2,882.62	
037616	IRS	Federal tax withheld (payroll) Medicare Tax Withheld (payroll) District Contribution to Medicare (payroll)	1011 1011 1311	7,478.88 836.81 836.81	
037616	State of California	State Tax withheld (payroll)	1011	2,344.64	54,423.47
037716	Public Employees' Retirement System	Employee Contributions Employee Paid Member Contributions, 7% & 6.5% Employer Contribution 9.353% & 6.73%	1011 1011 1211	16.00 4,149.19 5,166.66	
037816	Aetna Life & Annuity	Employee Contributions	1011	150.00	
037916	CALPERS 457 Plan	Employee Contributions - PERS 457	1011	2,580.00	
038016	Delta Dental Plan	Monthly Premium	1411	4,343.25	
038116	Vision Service Plan	Health premium	1411	1,047.80	
038216	Adapco	Vectobac	3391.1		2,709.31
038316	Bayside	Janitorial services, February 2016	3051		300.00
038416	Cintas	Laundry service Personal supply	3071 3031	241.84 98.68	340.52
038516	Corporate Park Landscaping	Landscape maintenance	3211		195.00
038616	Carquest Auto Parts	Car Parts	3231		6.38
038716	Grainger	First Aid Plug in Seal & Gasket	3391.6 3211 3231	83.40 266.19 130.39	479.98
038816	Hayward Water System	Utilities	3271		401.10
038916	Kimball Midwest	Miscellaneous	3231		259.85
039016	KBA Docusys	Canon copier rental	3111		462.59
039116	Mar-Len	Aluminum trays, Miscellaneous	3211		220.00
039216	Michelle Matthes	Reimbursement mileage	3351.1		141.95
039316	Naylor Steel	Cutting fee	3231		30.07
039416	PFM Asset	Investment advisory services	3411		1,693.23
039516	Quill	Stationery	3111		110.83
039616	R J Ricciardi	Audit fee, progress billing	3411		1,207.50
039716	SCI Consulting	Project administration	3411		16,250.00
039816	Waste Management	Garbage, January service	3271		191.69

WAR		ACCT	AMT OF	AMT OF
NO	PAYEE	NO	CHARGE	WARRANT
039916	Rocky Mountain	3031	14.29	
	Office Depot - Journal	3031	30.84	
	Office Depot - Planner	3031	185.90	
	The Cobblers - Boots	3111	26.39	
	Office Depot - Planner	3111	341.00	
	Canon - Copier rental	3111	83.55	
	Chamber of Commerce - Booklet	3111	10.99	
	Office Depot - Envelopes	3121	106.68	
	Office Depot - Cable	3121	35.70	
	Amazon - cable	3121	59.00	
	Software Plaza - Software	3121	255.00	
	Solarwinds - Software	3121	417.99	
	Office Depot - Computer (to be returned)	3131.1	224.40	
	Howard Wire Cloth - Ago traps	3131.1	47.94	
	Home Depot - Chain	3131.1	40.34	
	Home Depot - Painters touch	3131.1	11.62	
	Golden State Overnight - Delivery	3131.2	8.99	
	Tech Safety - Test Biosafety cabinet	3131.4	270.00	
	Home Depot - Sharpies	3131.5	41.71	
	Home Depot - Key Schlage	3131.5	10.78	
	Amazon - Chair	3131.5	32.99	
	Amazon - Chair	3131.5	141.88	
	Staples - Food pans	3131.5	59.14	
	Amazon - Dissecting Dissection Teasing Needles	3131.5	28.39	
	Amazon - Pencil Sharpener	3131.5	75.58	
	Amazon - Magnifier lens	3131.5	79.77	
	Ford - Mirror	3231	177.64	
	Dultmeier - Shurflo pump	3231	271.24	
	Ford - Indicator Asy	3231	20.04	
	Ford - Thermostat	3231	26.77	
	Telepacific Com - Com	3291.1	1,000.00	
	Entomologic - ESA membership	3331	144.00	
	Oakland Parking Meter - Parking	3351.1	0.15	
	Oakland Parking - Parking	3351.1	9.00	
	CSDA - Martinez / WP	3351.3	225.00	
	MVCAC - Reg Sac/ RF	3351.3	350.00	
	Hyatt - Hotel room/ Sac/ ES	3351.3	161.60	
	Wholefoods - Meeting Supplies	3351.4	37.66	
	Roberts Awards - Plaque	3351.4	176.00	
	CV Sport - Guidebook	3391.2	10.33	
	Wal-Mart - Funnels	3391.2	15.24	
	Paypal - Fish Maint.	3391.4	248.95	
	Bulk Reef Supply - Ammonia pack	3391.4	77.34	
	Pentair Aqu ECO - Proline bacteria	3391.4	195.13	
	Wal-Mart - Wipes & Sanitizer	3391.6	97.77	
	Home Depot - Heater	3392	74.71	
	CTC - subscription	3392	20.00	
	PC Professional - Database	3411	1,125.00	
	Sub-total		7,104.43	
	Total		103,980.80	

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
LIST OF WARRANTS DATED FEBRUARY 29, 2016.

WAR NO	PAYEE	FOR	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
039916A	Biological Specialist	Total salary less deductions for payroll period	1011	2,656.14	
039916A	Mosq Control Tech	"	1011	2,093.61	
039916A	Vector Biologist	"	1011	2,818.73	
039916A	Vector Biologist	"	1011	2,777.30	
039916A	Mosq Control Tech	"	1011	2,010.64	
039916A	Environmental Specialist	"	1011	2,662.98	
039916A	District Manager	"	1011	3,993.92	
039916A	Asst Mosq Control Tech	"	1011	1,953.53	
039916A	IT Specialist	"	1011	2,876.99	
039916A	Entomologist	"	1011	3,222.41	
039916A	Field Supervisor	"	1011	3,050.07	
039916A	Finance Manager	Total salary less deductions for payroll period	1011	2,519.58	
039916A	Seasonal	"	1011	1,137.90	
039916A	Vector Biologist	"	1011	3,271.66	
039916A	Mosq Control Tech	"	1011	2,392.45	
039916A	Mosq Control Tech	"	1011	1,988.58	
039916A	Mechanic Specialist	"	1011	3,002.04	44,428.53
039916A	IRS	Federal Tax Withheld	1011	7,499.28	
		Medicare Tax Withheld	1011	838.79	
		District Contribution to Medicare	1311	838.78	
		State Tax Withheld	1011	2,350.62	11,527.47
039916A	State of California	Employees contributions	1011	16.00	
040016	Public Employees' Retirement System	Employee paid member contributions, 7%, 6.5%	1011	4,149.19	
		District contribution 9.353%, 6.73%	1211	5,166.66	9,331.85
040116	Aetna Life & Annuity	Employee contributions	1011		150.00
040216	Calpers 457 Plan	Employees contributions - PERS 457	1011		2,580.00
040316	Calpers	Health insurance	1411		31,931.04
040416	Jefferson Pilot Financial	Life insurance premium	1411		70.20
040516	T Scott Donahue	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
040616	James Doggett	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
040716	Robert Dickinson	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
040816	Richard Guarienti	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
040916	Eric Hentschke	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
041016	Elisa Marquez	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
041116	Katherine Narum	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
041216	Scott Paulsen	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
041316	Wendi Poulsom	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
041416	Ronald Quinn	TIL - 1030th meeting / signed warrant 1-26-16	3351.5		200.00
041516	Ursula Reed	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
	Jan Washburn	Trustee in lieu expenses - 1030th meeting	3351.5		-
041616	George Young	Trustee in lieu expenses - 1030th meeting	3351.5		100.00
041716	AT&T	Yellow pages listing	3392		62.00
041816	Airgas	Dry ice cut block slab	3131.1		15.07
041916	Cintas	Personal supplies	3031	44.25	
		Laundry service	3071	88.98	133.23
042016	Erika Castillo	Reimbursement for Booth purchases	3392		175.00
042116	Cardno	MVCAC Programmatic EIR	3411		852.02
042216	Grainger	Sealant Tape	3231		7.54
042316	Municipal Resource	Human resources services	3411		6,787.80
042416	PG & E	Utilities	3271		1,497.21
042516	Sonitrol	Monitoring charges	3551		717.49
042616	Techniclean	Towel, tissue, seat cover	3051		230.22
042716	Verizon	Communication expenses	3291.4		409.10
042816	Wright Express	Fuel expenses, statement ended 02-15-16	3351.1		2,155.61

Total Warrants

114,361.38

Alameda County Mosquito Abatement
As of February 29, 2016. (8 of 12 mth, 66.67%)

		EXPENDED IN FEBRUARY	EXPENDED TO DATE	BUDGETED	BALANCE	% EXPENDED
SALARY & BENEFITS						
1011 Salary and Wages		126,837.51	1,034,455.84	1,573,549.00	539,093.16	66%
1411 Contribution to Medicare		1,675.59	13,989.90	26,781.00	12,791.10	52%
1311 Contribution to Retirement		10,333.32	162,786.17	202,026.00	39,239.83	81%
1211 Contribution to Health Care		33,049.04	296,460.50	443,302.57	146,842.07	67%
	TOTAL SALARY & BENEFITS	171,895.46	1,507,692.41	2,245,658.57	737,966.16	67%
SERVICE AND SUPPLIES						
3031 Clothing and Personal Supplies		373.96	5,246.82	8,500.00	3,253.18	62%
3051 Household Expenses		530.22	3,140.93	5,500.00	2,359.07	57%
3071 Laundry Service and Supplies		330.82	4,848.60	9,000.00	4,151.40	54%
3111 Office Expenses		1,035.35	8,196.73	20,000.00	11,803.27	41%
3121 Computer & Software		874.37	6,800.67	12,000.00	5,199.33	57%
3131 Laboratory						
3131.1	Mosquito Surveillance	339.37	8,876.84	15,000.00	6,123.16	59%
3131.2	Disease Surveillance	8.99	4,899.05	7,155.00	2,255.95	68%
3131.3	Mosq pool testing	0.00	8,709.33	36,000.00	27,290.67	24%
3131.4	Hood certification	270.00	270.00	200.00	-70.00	135%
3131.5	Misc lab eqpt & supplies	470.24	2,352.96	6,285.00	3,932.04	37%
3131.6	Reimbursement for light traps	0.00	0.00	200.00	200.00	0%
	Laboratory Total	1,088.60	25,108.18	64,840.00	39,731.82	39%
3171 Small Tools and Instruments		0.00	309.33	2,500.00	2,190.67	12%
3211 Maintenance - Structures & Improvement		681.19	4,842.37	20,000.00	15,157.63	24%
3231 Maintenance Equipment		929.92	8,692.37	45,000.00	36,307.63	19%
3271 Utilities		2,090.00	15,264.98	22,000.00	6,735.02	69%
3291 Communication						
3291.1	Telephone service & internet	1,000.00	9,108.57	13,500.00	4,391.43	67%
3291.2	Public Notices	0.00	0.00	500.00	500.00	0%
3291.3	Website & email hosting	0.00	172.58	270.00	97.42	64%
3291.4	Cell phone services	409.10	5,708.74	10,000.00	4,291.26	57%
	Communications Total	1,409.10	14,989.89	24,270.00	9,280.11	62%
3331 Memberships, Dues, Subscriptions		144.00	14,540.00	20,700.00	6,160.00	70%
3351 Transportation & Travel						
3351.1	Fuel & GPS	2,306.71	25,010.03	44,000.00	18,989.97	57%
3351.2	Misc Travel	0.00	0.00	0.00	0.00	0%
3351.3	Meetings & conferences	736.60	9,569.86	45,000.00	35,430.14	21%
3351.4	Board meeting expenses	213.66	501.45	800.00	298.55	63%
3351.5	Trustee in lieu	1,300.00	7,800.00	16,800.00	9,000.00	46%
	Transportation & Travel Total	4,556.97	42,881.34	106,600.00	63,718.66	40%
3391 District Special Expenses						
3391.1	Pesticides	2,709.31	62,758.12	175,000.00	112,241.88	36%
3391.2	Field supplies	25.57	160.07	500.00	339.93	32%
3391.3	Sentinel Chickens	0.00	0.00	0.00	0.00	0%
3391.4	Fish & Fish Maint	521.42	3,315.26	4,000.00	684.74	83%
3391.51	Aerial Pool Survey	0.00	0.00	17,000.00	17,000.00	0%
3391.52	Permits	0.00	1,104.00	3,000.00	1,896.00	37%
3391.53	Continuing Education fees	0.00	1,816.00	4,000.00	2,184.00	45%
3391.54	Board Plaques & nameplates	0.00	239.80	500.00	260.20	48%
3391.55	Seasonals (post ads, pre-empl phy)	0.00	0.00	1,000.00	1,000.00	0%
3391.6	Spray equipment & Safety	181.17	3,260.54	17,000.00	13,739.46	19%
	District Special Expenses Total	3,437.47	72,653.79	222,000.00	149,346.21	33%
3392 Community Education		331.71	4,597.66	33,000.00	28,402.34	14%
3411 Professional and Specialized Services		27,915.55	118,812.94	224,887.00	106,074.06	53%
3471 Insurance - Collision, Liability etc		0.00	42,532.00	42,350.00	-182.00	100%
3491 Workers Compensation Insurance		0.00	63,736.00	60,745.00	-2,991.00	105%
3531 Insurance Fund - SIRS		0.00	0.00	0.00	0.00	0%
3551 Rents, Leases - Equipment		717.49	6,064.48	9,350.00	3,285.52	65%
	TOTAL SERVICES & SUPPLIES	46,446.72	463,259.08	953,242.00	489,982.92	49%

CAPITAL						
5111 Structures and Improvements	0.00	8,200.13	190,000.00	181,799.87	4%	
5311 Equipment	0.00	10,468.50	58,000.00	47,531.50	18%	
	TOTAL CAPITAL	0.00	18,668.63	248,000.00	229,331.37	8%
Reserve fo Contingencies	0.00	0.00	50,000.00	50,000.00		
OPEB Trust Reimbursement	0.00	0.00	145,000.00	145,000.00		
	<i>Annual Operating Expenditures</i>	<i>218,342.18</i>	<i>1,989,620.12</i>	<i>3,641,900.57</i>	<i>1,652,280.45</i>	
OTHER						
Dry Period Cash (60%)	0.00	0.00	2,714,106.00	2,714,106.00	0%	
Reserve for Capital Replacement	0.00	0.00	1,116,840.00	1,116,840.00	0%	
	Total Other	0.00	0.00	3,830,946.00	3,830,946.00	0%
	Total Expenditure	218,342.18	1,989,620.12	7,472,846.57	5,483,226.45	

Agenda item 9c.1031**STATEMENT OF EXPENDITURES - FEBRUARY 29, 2016.**

	Budget Year 15-16		
	EXPENDITURES	TO-DATE	BUDGETED
Salary & Wages	171,895.46	1,507,692.41	2,245,658.57
Service and Supplies	46,446.72	463,259.08	953,242.00
Capital Expenditures	0.00	18,668.63	248,000.00
Reserve for Contingency	0.00	0.00	50,000.00
OPEB Trust Reimbursement	0.00	0.00	145,000.00
TOTAL	218,342.18	1,989,620.12	3,641,900.57
			1,652,280.45

IV. CASH BALANCE - February 29, 2016 : \$ XXXXXX (Does not include interest revenue for February)

Sincerely,

Ryan Clausnitzer
District Manager

Alameda County Mosquito Abatement District

BOARD OF TRUSTEES
Richard Guarienti, President
Kathy Narum, Vice-President
Robert Dickinson, Secretary
Scott Paulsen
Wendi Poulsen
Scott Donahue
George Young
Elisa Marquez
James N. Doggett
Eric Hentschke
Jan O. Washburn
Ursula Reed
Ronald E. Quinn

Ryan Clausnitzer
District Manager
ryan@mosquitoes.org

MONTHLY STAFF REPORT – February 2016

1. OPERATIONS

A. Narrative

Service requests for the month of February were around three times that of an average February. This is attributed to the large amount of attention given to the Zika virus by the media and government. Field staff utilized this situation to help inform the public of the necessity to manage or eliminate mosquito breeding sources on their property. It has also been an aid in eliciting responses from various property owners, property managers, and code enforcement entities.

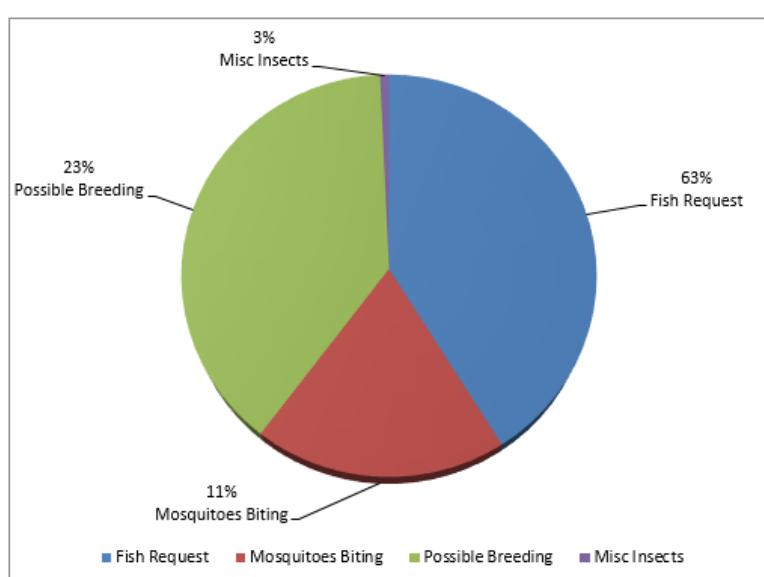
The majority of mosquitoes encountered on service requests (including fish requests) were *Culiseta incidens*. Also implicated were *Culex tarsalis* and *Culiseta inornata* four times, and *Culex pipiens* and *Aedes washinoi* twice. This is the first detection of an adult *Ae. washinoi* for the year. This is notable and highlights a trend of the last couple of years - *Ae.washinoi* and *Aedes squamiger* have been trending toward earlier emergences than they have in the past. The norm since at least the early 1990's was to see the first emergence of adults of either species in mid to late March.

Inspections and treatments for February continued on the district's main winter species: *Ae. squamiger*, *Ae.washinoi* and *Cs. inornata*. *Cx. tarsalis*, as predicted, made its first appearance and larvae were treated in sources throughout the county. It will be critical to keep the numbers of emerging *Cx. tarsalis* low which will be a big aspect of ACMAD's ability to combat the West Nile virus in 2016. This effort will continue until the onset of next winter.

Joseph Huston
Field Operations Supervisor

B. Operational Data

1. Service Requests



Total Service Requests	=143
February- Ten year average	=59.36
February- Five year average	=62.17
February- One year average	=109
Range (10 yr) =	29-143

Mosquito species attributed to service request:

Cs incidunt	=26
Cx pipiens	=2
Cs inornata	=4
Cx tarsalis	=4
Ae washinoi	=2
Crane Flies	=1

2. Other

Number of all injuries during **2016** = 0

3. Activity Report

Administration	826.5
Larval Surveillance & Control	853.75
Disease Monitoring	85.75
Laboratory	221.5
Equipment & Facility Maintenance	147
Public Education	68
Interagency Communication	26.5
Fish Rearing and Maintenance	27.75
Safety	58
Misc	5
Regular Hours	2319.75
ETO Hours Accrued	82.75
Total Work	2402.5

Vacation Hrs Used		64
Sick Hours Used		68.75
Workers Comp.		0
ETO Used		20.5
Total Leave		153.25
Total Work - Leave		2402.5
Total Hours		2555.75

2. LAB

Below is a summary of the activities from the Mosquito Lab for February, 2016

Budget

- As of February 29, 2016 (8 months of 12, 67 % of the year), 39 % of the lab budget has been expended. Because the weather remained cool and wet during the month of February, expenditures in Mosquito and Disease Surveillance categories have not increased substantially from the prior month. Of note, greater funds for Hood Certification were expended than had been budgeted (135 % of the budget, or \$70 over-budget) because we had the chemical fume hood with the biosafety cabinet (the chemical fume hood had never been certified).

Mosquito Abundance Monitoring

- Mosquito abundance increased moderately within and areas near to costal marshes, with *Culex erythrothorax* and *Cx. tarsalis* the dominant species. *Culiseta incidunt*, *Cx. pipiens* and *Aedes* species that are native to coastal regions (i.e. natural fauna of the Bay Area) made minor contributions to the moderate increase in mosquito abundance for the month of February.
- Permission was obtained by the ACMAD Entomologist to place mosquito traps at the facility operated by the US Customs Services at the Port of Oakland so that we can monitor for potential introductions of non-native mosquitoes. This surveillance is of importance because the US Customs Services facility is the only site in Alameda County where a high numbers of containers carried by transcontinental shipping vessels are opened for inspection (they are otherwise sealed until arriving at their final destinations throughout the state). As such, regular monitoring for invasive mosquitoes at this site may provide an early warning of mosquito invasion that would otherwise be detected only after the species had entered and potentially become established in the surrounding community, or the final destination of the container.

Disease Monitoring

- **WNV in the month of February.** There have been no mosquitoes or birds found to contain WNV, WEE or SLE during the month of February.
- **Increased surveillance for imported mosquito-borne disease.** During meetings with the Alameda County Department of Public Health (ACDPH), we conveyed a request that the public health nurse ask persons with a mosquito-vectorized disease for additional information related to mosquito bite incidents and permission for ACMAD to inspect their property for potential mosquito breeding sites. A script containing this information and questions was prepared by the Entomologist and reviewed by the Environmental Specialist at ACMAD and District Managers of ACMAD and Alameda County Vector Control Services District before being provided to the Director at the Division of Communicable Disease Control and Prevention at ACDPH.
- **2016 WNV Proficiency Panels.** The Mosquito Lab at ACMAD has successfully passed the 2016 proficiency panels for detection of WNV using the RAMP assay and RT-QPCR for triplex detection of WNV, SLE and WEE. Of note, this proficiency panel was more complex relative to the prior year because test samples included mosquitoes (prior years did not) and this year we were required to achieve a detection value for a dilution series of a WNV-containing sample.

Research

- **Poster Presentations at Research Conference.** The Entomologist and Biological Specialist presented posters (one each) at the 2016 Annual Meeting of the Mosquito and Vector Control Association of California. Both posters are summarized below and images of the poster provided at the end of the Lab Report.
 - **Biological Specialist Poster:** The information presented in the poster by the Biological Specialist, entitled "Mosquito trap modifications for improved utility in abundance monitoring", was generated in collaboration with the Mechanic and Entomologist at ACMAD. Their work highlighted the value of securing traps to the soil with stakes or platforms that reduce the potential for traps spilling over, and a loss of collected mosquitoes. This poster was extremely well received by colleagues at other agencies who commented on the simplicity of the approach and positive impact adopting it will have on their mosquito surveillance practices.
 - **Entomologist Poster:** The information presented in the poster by the Entomologist, entitled "Comparison of RNA extraction methods for detecting viruses in mosquitoes: MagMAX wins!", was generated in collaboration with the Biological Specialist at ACMAD and the Lab at San Mateo Mosquito

and Vector Control. The work was designed to determine which of two RNA extraction methods produces higher quantity or better quality RNA for use in RT-PCR assays to detect WNV, WEE and SLE. Two technologies predominate for isolating RNA from cells were tested: (1) those using silica membranes (RNeasy spin columns; used by ACMAD) and (2) silica conjugated to magnetic particles (MagMAX; used by most other mosquito control agencies, including San Mateo Mosquito and Vector Control).

- **Methods summary**

- Purified WNV, WEE and SLE RNA was added to samples that contained 0, 1, 5, 10, 25, or 50 mosquitoes (each was in triplicate to permit statistical tests of the data). The samples were homogenized, RNA isolated using RNeasy spin columns or MagMAX, the presence of impurities estimated in each sample using spectroscopy, the RNA concentration quantified and assayed for the presence of WNV, SLE and WEE using RT-QPCR. Subsequently, each sample was clarified using centrifugation to remove the brown precipitate and the above assays performed on the clarified samples.

- **Notable findings of the study**

- When RNA was isolated using MagMAX, a brown precipitate was present in the purified RNA. This precipitate was absent when RNA was isolated using RNeasy spin columns, but could be removed from the RNA purified using MagMAX by clarifying the sample with centrifugation.
- Samples isolated using MagMAX yielded approximately twice as much RNA as those isolated using RNeasy spin columns.
- Increasing the number of mosquitoes in a sample tube (i.e. pool) from 1 to 50 mosquitoes did not significantly affect the RT-QPCR assay for detecting WNV, WEE and SLE.
- The MagMAX isolation method yielded viral RNA that was detected with higher sensitivity in the RT-QPCR assay relative to RNA isolated using RNeasy spin columns.
- 3.5X more time was needed to isolate RNA from mosquito samples using RNeasy spin columns relative to MagMAX (1 h for MagMAX vs 3.5 h for RNeasy spin columns; not shown on the poster).

- **Recommendations based on the study outcomes**

- Because higher quantities of RNA were isolated from samples using MagMAX relative to RNeasy spin columns, and in significantly less time, the District should strongly consider purchasing the equipment needed to implement the MagMAX RNA isolation protocol in the ACMAD Mosquito Lab.

- **Pesticide Resistance Workshop.** The Entomologist participated in a workshop held at the Sacramento-Yolo Mosquito and Vector Control District for bringing pesticide resistance testing of adult mosquitoes to ACMAD. The pesticide resistance assays are relatively simple and inexpensive to conduct, but incur somewhat high costs to dispose of the hazardous waste generated from these assays (~\$1,400 per year). However, the Entomologist recommends that the ACMAD Mosquito Lab begin resistance testing of wild mosquito populations throughout the county so that we understand the extent of resistance and appropriate adulticide pesticides that have greatest potential to reduce mosquito abundance during a disease outbreak.
- **ACMAD Lab Mosquito Colony.** In spite of intensive efforts, our mosquito colony (*Culex pipiens*) is failing to thrive. We obtained our current colony from the San Mateo Mosquito and Vector Control District and have employed much of the same methods as they for rearing the mosquitoes. One important methodological difference is the use of blood to feed adult mosquitoes: San Mateo has the equipment to mechanically feed blood to mosquitoes, while we do not. To conduct the intended pesticide resistance studies, we require large quantities of pesticide-susceptible mosquitoes to be produced by the lab. Although the mechanical blood feeding instrument is somewhat costly (approximately \$8,000), we believe it important for conducting the pesticide resistance and other studies. However, a less costly alternative does exist: use of a mosquito colony that does not require blood to produce large quantities of eggs (i.e. an autogenous strain). While these strains are available from local agencies (e.g., Marin-Sonoma Mosquito Control), autogeny does not reflect what is considered the typical development cycle for mosquitoes. As such, results from studies using autogenous strains may not accurately reflect natural processes or resistance.

Posters Presented by ACMAD Lab Staff at the 2016 Annual Conference of the Mosquito and Vector Control Association of California:



Mosquito trap modifications for improved utility in abundance monitoring

Dereje Alemayehu, Mark Wieland and Eric J. Haas-Stapleton

Alameda County Mosquito Abatement District, 23187 Connecticut Street, Hayward CA 94545

Objective
<ul style="list-style-type: none"> Design and deploy mounting hardware for mosquito traps that improve their use in the field. Focus for 2015: <ul style="list-style-type: none"> ovitrap cup Hanging adult mosquito traps

Ovitrap Cup Holder Design

Adult Trap Mount Design

Rationale
<ul style="list-style-type: none"> Ovitrap cups are relatively unstable under typical field conditions. Within two days, one quarter or more of ovitrap cups are often knocked over and the water drained. Impact: substantially reduced utility of the trap for monitoring mosquito oviposition and increased costs for compensatory surveillance. A sturdy tree branch or building fixture is needed to support a hanging adult mosquito trap. They may be absent or unavailable (e.g. residents unwilling to have trees potentially damaged by the trap). Impact: reduced options for placement of adult mosquito traps.

Summary
<ul style="list-style-type: none"> Use of the staked ovitrap cup holder to secure the ovitrap cup into the soil substantially improved trap stability and surveillance of mosquito oviposition. The on- and in-ground adult trap mounts provided a means to place traps at sites that were otherwise unavailable due to the lack of sturdy tree branches, building fixtures, or permission for their use as trap hang sites.

Future Directions
<ul style="list-style-type: none"> Production of a larger ovitrap container that will limit loss of water due to evaporation or spillage, thereby increasing the time between inspections and reducing the cost of surveillance. Improved dry ice containers that limit the loss of parts that are essential for their function in mosquito trapping. Increase the durability of the CDC autocidal gravid ovitrap (AGO).

Acknowledgements
We thank our colleagues at Alameda County Mosquito Abatement District for impactful discussions that improved the outcome of the work described here.



It is OK to photograph this poster

Comparison of RNA extraction methods for detecting viruses in mosquitoes: MagMAX wins!

Eric J. Haas-Stapleton¹, Dereje Alemayehu¹, Nayer Zahiri² and Warren Macdonald²
1Alameda County Mosquito Abatement District, 23187 Connecticut Street, Hayward CA 94545
2San Mateo County Mosquito & Vector Control District, 1351 Rollins Rd, Burlingame CA 94010



Objective
<ul style="list-style-type: none"> Compare the efficiency of RNA extraction when viral RNA with 0, 1, 5, 10, 25 or 50 adult mosquitoes were included using RNeasy spin columns or MagMAX magnetic particles. Assessed using 3-plex reverse transcription quantitative PCR (RT-QPCR) for WNV, SLE & SLE.

Overview
<ul style="list-style-type: none"> Analyzing low quantities viral RNA isolated from mosquitoes is essential to assess the prevalence of arboviruses and the intensity of infection in mosquitoes. Two technologies predominate for isolating RNA from cells: <ul style="list-style-type: none"> Silica membranes (RNeasy spin column, Qiagen) or silica conjugated to magnetic particles (MagMAX, ThermoFisher). We evaluated the relative quantity of RNA that was isolated using RNeasy spin columns or an automated MagMAX system.
<ul style="list-style-type: none"> The optical density and quantity of the purified RNA was assessed as an indirect measure of specificity for each RNA isolation method.
Methods Summary <ul style="list-style-type: none"> Adult Culex pipiens quinquefasciatus and Aedes vexans (Meigen) were used to test buffer and the same mosquitos homogenized using a bead beater ($n = 3$ per treatment). Samples were subsequently centrifuged and the RNA isolated from the supernatant using the respective spin column or MagMAX system. The optical density (26S nm) and RNA concentration of the elutions we measured using a Nanodrop[®] spectrophotometer (The Thermo Fisher Scientific Company). The ratio of OD₂₆₀/OD₂₈₀ was used to estimate the relative quantity of RNA (FAM, SLE V/W and WEE/ABY) in each sample. Briefly, 1 µl or 10 µl of each elution was added to Thermo Fisher's QuantiStudio 5 Real-Time PCR System (ThermoFisher).

Results
96-well reaction plate containing RNA samples with TagMan master mix

Figure 1 MagMAX Isolation RNeasy Column Isolation

10 µl RNA 2 µl RNA

2 µl samples 50 25 10 50 25 10

mosquitoes

Result (Figure 1). Visual inspection of RNA elutions from the MagMAX system showed a brown precipitate that was absent in those from the RNeasy column (Figure 1).

Next Step: Evaluate the extent of brown precipitate contamination in elutions by measuring the absorbance at λ_{260} (526 nm) before (Figure 2, left) and after sample centrifugation (X 10,000 rpm for 4 min, Figure 2, right).

Figure 2. Absorbance of RNA eluted before (left) and after (right) centrifugation.

Result (Figure 2). The absorbance of the 25 and 50 mosquito per tube samples were significantly lower after centrifugation compared to the RNeasy column samples (Unpaired t tests $P < 0.01$; Figure 2). There was no significant difference in the absorbance of samples containing 0, 1, 5 or 10 mosquitoes (Unpaired t tests, $P > 0.05$).

Next Step: Determine whether presence of the brown precipitate affected RNA concentration or quality (Figure 3).

Figure 3. RNA concentration before (left) and after (right) centrifugation.

Result (Figure 3). There was no significant difference in RNA concentration of samples before and after centrifugation (Two-way ANOVA, RNAeasy $P = 0.257$, MagMAX $P = 0.879$). Significant differences in RNA concentration were observed for samples containing 0, 1, 5, 10, 25 and 50 mosquitoes. The absorbance of the 50 mosquito sample was compared (Unpaired t test, $P < 0.01$). The greatest reduction in RNA concentration (45 %) was observed for the 50 mosquito sample. RNA quality as measured by the ratio of absorbance at 260 and 280 nm was high for all samples ($260/280 = 2.15 \pm 0.147$).

Next Step: Compare amplification efficiency of WNV, SLE and WEE in each sample before and after centrifugation using triplex RT-QPCR (2 µl or 10 µl of RNA evaluated).

Results

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3. PUBLIC EDUCATION

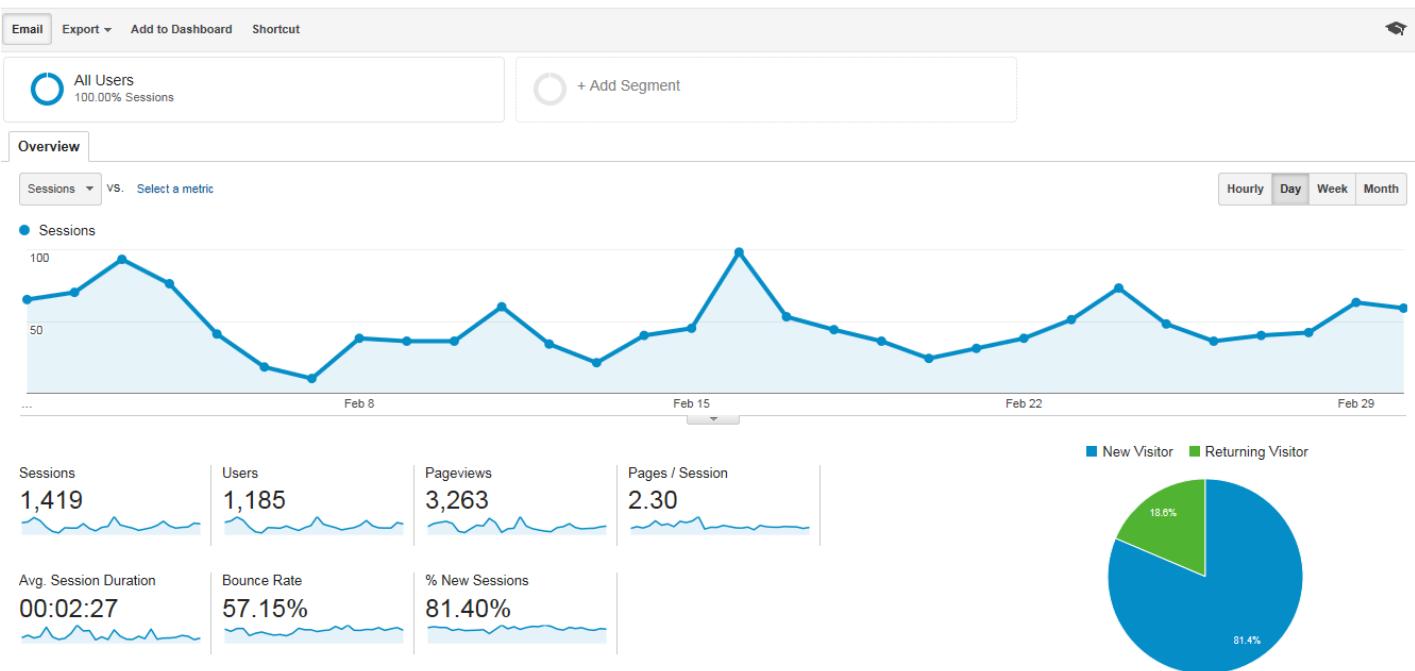
A. Public education events

- **Dublin St. Patrick's Day Festival** – Saturday, March 12th and Sunday, March 13th, 10am-5pm (100 Civic Plaza, Dublin)
- **Oakland Earth Expo** – Wednesday, April 6th, 10am-2pm (Frank H Ogawa Plaza, Oakland)
- **San Leandro Earth Day/Watershed Festival** – Saturday, April 9th, 12pm-4pm (Root Park, San Leandro)

B. Google Analytics

Audience Overview

Feb 1, 2016 - Mar 1, 2016 ▾



Page	Pageviews	% Pageviews
1. /	433	17.98%
2. /education/california-species/	347	14.41%
3. /LifeCycle.html	154	6.40%
4. /education/	151	6.27%
5. /about/staff/	93	3.86%

City	Sessions	% New Sessions	New Users	Bounce Rate	Pages / Session	Avg. Session Duration	Goal Conversion Rate	Goal Completions	Goal Value
	1,419 % of Total: 100.00% (1,419)	81.40% Avg for View: 81.40% (0.00%)	1,155 % of Total: 100.00% (1,155)	57.15% Avg for View: 57.15% (0.00%)	2.30 Avg for View: 2.30 (0.00%)	00:02:27 Avg for View: 00:02:27 (0.00%)	0.00% Avg for View: 0.00% (0.00%)	0 % of Total: 0.00% (0)	\$0.00 % of Total: 0.00% (\$0.00)
1. Oakland	116 (8.17%)	82.76%	96 (8.31%)	34.48%	2.56	00:02:12	0.00%	0 (0.00%)	\$0.00 (0.00%)
2. San Francisco	87 (6.13%)	86.21%	75 (6.49%)	49.43%	2.34	00:01:42	0.00%	0 (0.00%)	\$0.00 (0.00%)
3. Hayward	57 (4.02%)	22.81%	13 (1.13%)	21.05%	6.05	00:10:41	0.00%	0 (0.00%)	\$0.00 (0.00%)
4. (not set)	55 (3.88%)	89.09%	49 (4.24%)	72.73%	1.49	00:00:45	0.00%	0 (0.00%)	\$0.00 (0.00%)
5. Berkeley	49 (3.45%)	71.43%	35 (3.03%)	40.82%	2.41	00:04:11	0.00%	0 (0.00%)	\$0.00 (0.00%)
6. Los Angeles	40 (2.82%)	77.50%	31 (2.68%)	62.50%	2.02	00:02:34	0.00%	0 (0.00%)	\$0.00 (0.00%)
7. Fremont	28 (1.97%)	85.71%	24 (2.08%)	32.14%	3.68	00:07:09	0.00%	0 (0.00%)	\$0.00 (0.00%)
8. Sacramento	28 (1.97%)	89.29%	25 (2.16%)	60.71%	2.18	00:02:10	0.00%	0 (0.00%)	\$0.00 (0.00%)
9. New Delhi	26 (1.83%)	38.46%	10 (0.87%)	73.08%	1.27	00:00:12	0.00%	0 (0.00%)	\$0.00 (0.00%)
10. Palo Alto	25 (1.76%)	96.00%	24 (2.08%)	52.00%	2.12	00:03:44	0.00%	0 (0.00%)	\$0.00 (0.00%)

C. Facebook

All Posts Published

Published	Post	Type	Targeting	Reach	Engagement	Promote		
03/01/2016 8:12 am	 MVCAC day 2 is going on now. #mvcac2016 http://s://t.co/1pbH96rPug			50		3 2	 	Boost Post
02/29/2016 4:05 pm	 Not just great talks, there are also great posters at #mvcac2016 https://t.co/DoOr7S55HU			41		3 1	 	Boost Post
02/29/2016 11:07 am	 Zika virus panel discussion #mvcac2016 https://t.co/1q6rf2KhV3			22		1 1	 	Boost Post
02/29/2016 10:28 am	 Mosquito & Vector Control Association of California's annual conference, vector control professionals			13		1 1	 	Boost Post
02/29/2016 10:09 am	 Stephen Dobson, PhD, discussing "Autocidal Mosquito Control" with Wolbachia infected male mosquit			16		1 0	 	Boost Post
02/25/2016 9:20 pm	 Retweeted SGVMosquito (@SGVMosquito): What we know and still don't know about Zika virus. Via			36		6 3	 	Boost Post
02/25/2016 1:28 pm	Retweeted CDC_eHealth (@CDC_eHealth): New #Zika microsite offers easy way to share info and s			22		1 1	 	Boost Post
02/11/2016 8:47 am	 Retweeted SGVMosquito (@SGVMosquito): Questions about Zika? The @CDCgov provides "Zika Vir			23		0 0	 	Boost Post
02/05/2016 10:48 am	 Alameda County Mosquito Abatement District shar ed San Gabriel Valley Mosquito & Vector Control D			35		4 3	 	Boost Post
02/02/2016 10:55 am	 Retweeted SGVMosquito (@SGVMosquito): What Zika virus means to Californians & the importance			22		4 1	 	Boost Post

D. Twitter

Analytics Home Tweets Audiences Events More ▾ Alameda MAD ▾ Sign up for Twitter Ads

Tweet activity

Last 28 Days Export data

Your Tweets earned 1.9K impressions over this 28 day period

Date	Impressions
Feb 7	10
Feb 8	20
Feb 9	30
Feb 10	25
Feb 11	10
Feb 12	10
Feb 13	10
Feb 14	10
Feb 15	10
Feb 16	10
Feb 17	10
Feb 18	10
Feb 19	10
Feb 20	10
Feb 21	10
Feb 22	10
Feb 23	10
Feb 24	10
Feb 25	10
Feb 26	10
Feb 27	10
Feb 28	380
Feb 29	350
Feb 30	250
Feb 31	200
Mar 1	200
Mar 2	200

YOUR TWEETS
During this 28 day period, you earned 73 impressions per day.

Engagements
Showing 28 days with daily frequency

ENGAGEMENT RATE
4.2% Mar 4 0.0% engagement rate

LINK CLICKS
8 Mar 4 0 link clicks

On average, you earned 0 link clicks per day

RETWEETS
12 Mar 4 0 Retweets

On average, you earned 0 Retweets per day

Tweets Top Tweets Tweets and replies Promoted Impressions Engagements Engagement rate

User	Date	Content	Impressions	Engagements	Engagement rate
Alameda MAD @AlamedaMosquito	Feb 29	Stephen Dobson, PhD, discussing "Autocidal Mosquito Control" with Wolbachia infected male mosquitoes #mvcac2016 pic.twitter.com/CoC395xSsl	248	11	4.4%
Alameda MAD @AlamedaMosquito	Mar 1	MVCAC day 2 is going on now. #mvcac2016 pic.twitter.com/iphH96rPug	213	11	5.2%
Alameda MAD @AlamedaMosquito	Feb 29	Zika virus panel discussion #mvcac2016 pic.twitter.com/1q6rf2KhV3	202	11	5.4%
Alameda MAD @AlamedaMosquito	Feb 29	Not just great talks, there are also great posters at #mvcac2016 pic.twitter.com/DoOr7S55HU	164	8	4.9%
Alameda MAD @AlamedaMosquito	Feb 11	The right mosquito repellent will prevent mosquito bites! cbs12.com/news/local/bes...	141	2	1.4%

[View Tweet activity](#) [Promote](#)

Agenda item: 1031.11

Manager's Report
March 9th, 2016

- a. MVCAC Annual Conference
- b. VCJPA annual workshop
- c. Conflict of Interest Disclosures - FPPC 2015/2016 Statement of Economic Interests, Form 700: due April 1
- d. 2016 Committee assignments
 - i. District policy review project update
 - ii. Budget review with Finance Committee to begin in early April
 - iii. Interim change of a committee name from "West Nile Virus Committee" to "Public Health Emergency Committee". Permanent change to be proposed during policy review project
 - iv. Manager evaluation committee and membership to replace Ad Hoc Committee on Long Term Planning
- e. ACMAD quarterly newsletter update
- f. Trustee Harassment Training
- g. Legislative update
 - i. AB 1362: districts to allow a city selection committee to chose Trustees
 - ii. SB 1246: 7-day waiting period required of aerial pesticide applications

Alameda County Mosquito Abatement District

BOARD OF TRUSTEES

*Richard Guarienti, President
Kathy Narum, Vice-President
Robert Dickinson, Secretary
Scott Paulsen
Wendi Poulsom
Scott Donahue
George Young
Elisa Marquez
James N. Doggett
Eric Hentschke
Jan O. Washburn
Ursula Reed
Ronald E. Quinn*

Ryan Clausnitzer
District Manager
ryan@mosquitoes.org

Committee Assignments for 2016

Financial Committee

Purpose: The Finance Committee is a standing committee tasked with reviewing the annual budget, assessing the District's long term capital needs, making recommendations for designating reserves and evaluating the allocation of the OPEB Trust.

Membership: Trustees Young, Quinn, Dickinson

Status: Between April and June the committee will review the budget for the 2016-17 fiscal year, while reviewing the asset allocation of the OPEB Trust and possibly selecting a new auditing firm in the late summer.

Policy Committee

Purpose: The Policy Committee evaluates the District's Policies and updates and adds policies as needed. All District policies must be approved by a majority of the Board.

Membership: Trustees Doggett, Guarienti, and Marquez

Status: The Municipal Resource Group and staff are almost complete reviewing District policies prior to proposed changes being presented to the committee. In order for policies to change, they must have two readings and approved by the Board.

Manager Evaluation Committee

Purpose: The primary task of this committee is to review the performance of the District Manager, annually in June. Compensation changes and contract adjustments will be based on this evaluation.

Membership: Past, present, and future Board Presidents include Trustees George, Guarienti, and Narum

Status: This committee replaces the Ad Hoc Committee on Long Term Planning that was created to recruit and review the District Manager during the first year of employment. Further changes to the salary and contract can be recommended annually.

Public Health Emergency Committee

Purpose: To meet with the District Manager &/or Staff to review District surveillance and treatment information pertaining to current or emerging public health threats and make recommendations to the board if necessary.

Membership:

Status: This committee only meets on an as needed basis.

Personnel Committee

Purpose: To meet as needed if personnel issues rise to the level of an appeal to the board.

Membership: Board Officers – Guarienti, Narum, and Dickinson are members.

Status: This committee only meets on an as needed basis.



February 24, 2016

The Honorable Janet Nguyen
California State Senate
State Capitol, Room 3048
Sacramento, CA 95814

RE: SB 1246 (Nguyen) Pesticides: aerial spraying: notice from aerial pesticide sprayers and mosquito and vector control districts - OPPOSE

Dear Senator Nguyen:

On behalf of the Mosquito and Vector Control Association of California (MVCAC), we write to strongly oppose SB 1246 (Nguyen). This bill constrains vector control agencies from protecting public health from life-threatening mosquito-borne diseases by adding unrealistic and potentially dangerous notice requirements for aerial spraying. The bill would require that at least seven days before administering pesticides by aircraft or unmanned aerial vehicle over a residential area, a vector control district shall notify affected governmental agencies, school districts, chambers of commerce or similar entities, California State Assembly Members, California State Senators, United States Congressmen, and United States Senators. A lot of bad things can happen in seven days. Because of the severity of diseases like West Nile virus, yellow fever, dengue fever and now Zika virus, California vector control agencies that have cooperative agreements with the California Department of Public Health (CDPH) have always been allowed to combat the threat of disease through spraying without formal notice (3 CCR 6620), though many agencies have outreach and communications plans in the communities they protect.

In addition to the potentially deadly seven-day delay in spraying, the legislation requires information be provided that will only serve to unnecessarily frighten the public, focus attention away from the threat of disease and create a perceived threat from aerial spraying. The bill requires that a vector control agency notice shall include all of the following:

- The date and time that the spraying will occur.
- The precise areas in which pesticides will be administered.
- The type of pesticides being sprayed, identified by brand name or common chemical name.
- The amount of pesticide to be administered.
- Any precautions associated with the pesticide that are printed on the pesticide product's label or that are included in applicable laws or regulations related to the protection of persons during the application.

As we explain below, aerial spraying saves lives and the public health pesticides used to control adult mosquitoes (mosquito adulticides) in California, and around the world, are safe and pose no significant risk to human health. The information required above will only cause fear that is misplaced.

The New Deadly Threat of Mosquito-Borne Diseases in California

In recent years, due in part to drought and climate change, invasive species of mosquitoes have posed new and difficult threats to public health in California. Two invasive (non-native) mosquito species have recently been found in a rapidly growing number of California cities and localities, and are likely to spread into other areas of California. They are named *Aedes aegypti* (the yellow fever mosquito) and *Aedes albopictus* (the Asian tiger mosquito).

Unlike most native mosquito species, *Aedes aegypti* and *Aedes albopictus* bite during the day. They can lay eggs in any small artificial or natural container that holds water. *Aedes aegypti* and *Aedes albopictus* have the potential to transmit several viruses, including dengue, chikungunya, Zika, and yellow fever. None of these viruses are currently known to be transmitted locally within California, but as of February 19, three people have tested positive for Zika in California, though they acquired it out of state. Thousands of people are infected with these viruses in other parts of the world, including in Mexico, Central and South America, the Caribbean, and Asia. The presence of *Aedes aegypti* and *Aedes albopictus* mosquitoes in California poses a threat that dengue, chikungunya and Zika viruses can be transmitted in infested areas from returned infected travelers. This is new territory for California vector control agencies.

West Nile Virus Remains a Serious Threat

In addition to this latest challenge, West Nile virus continues to pose an increasing threat. Last year, there were 737 human cases from 31 counties that tested positive for WNV. In 2014, there were over 800 human cases. Moreover, 45 WNV-related fatalities were reported in 2015 to CDPH from the following counties: Butte (1), Kern (1), Los Angeles (18), Nevada (1), Orange (7), Pasadena City (1), Riverside (6), San Bernardino (3), San Diego (5), and Ventura (2). The Centers for Disease Control and Prevention (CDC) estimates that for every reported West Nile virus case, there are thirty to seventy more undiagnosed cases. These numbers are underreported and have a significant impact on mosquito control agencies' operations statewide. And though much attention has been paid to the tragic outbreak of the Zika virus, West Nile virus is still a serious illness that leads to major suffering of those infected. Young children, the elderly, and people with compromised immune systems are at the highest risk of acquiring the virus.

Mosquito control districts must act quickly to spray and control against the spread of West Nile virus. If anything, the legislature should be focusing on how to make it easier for vector control districts to

protect lives and provide additional financial support to necessary research that was de-funded in recent years.

Causing Fear and Delay Can be Deadly

California mosquito and vector control public health programs are based on real-time surveillance and assessment of the risk of disease transmission to people. Once we understand that mosquitoes can infect people, we act as quickly as we can, in terms of our operations, to control those mosquitoes before they migrate, breed, or infect people. Factors such as wind patterns, rainfall, temperature, and quick increases in the presence of West Nile virus-infected mosquitoes breeding, all factor into an agency's decision to do an aerial application, making a seven-day notice prior to application untenable. Delaying action after detection of disease increases the risk of diseases like West Nile virus to our residents.

The mosquitoes that transmit West Nile virus have a flight range of approximately 5-miles. They can breed rapidly, leading to their ability to exponentially increase their populations. Delaying action after detection of disease is irresponsible and possibly negligent. For this reason, the California Code of Regulations specifically exempts mosquito and vector control districts from notification requirements.

Many California mosquito control districts employ easy, cost-effective means to notify the public such as mass media, websites, phone messages, and automatic email systems. Email notification systems do not require additional staff nor resources as constituents sign up at will using their email address. Email notifications usually contain specific, often interactive maps, which illustrate specific information about each fogging operation such as location, time, how the pesticide applications will be applied, and links to the material safety sheets of the products used.

A seven-day delay would also force districts to treat larger areas and/or conduct more treatments to compensate for the spread of disease that occurs during that time. The additional treatment would be expensive and would make it more difficult to conduct our preventative work – necessitating even more adulticiding and potentially locking districts into a vicious cycle of catch-up trying to just keep the infected mosquitoes knocked down.

Another specific example of why the delay won't work is that some vector control agencies have used helicopters to apply liquid larvicides to saltmarshes for winter saltmarsh mosquitoes. In this case, a district would treat within a day or two after finding larvae. With these mosquitoes, if you do not treat them before they emerge as adults, they will come off in huge numbers and move inland, biting viciously during the day. If we do not larvicide in time, we will have to fog entire cities to control the adults after they leave the saltmarsh. The amount of pesticide and the area covered is much larger if you cannot treat for seven days.

Aerial Spraying Saves Lives and is Safe

All of the products used in protecting public health from mosquitoes are registered with the Environmental Protection Agency for the exact use of protecting public health from mosquito-borne diseases and/or bites. These products have proven valuable and essential for more than 30 years with no significant human health risk; whereas, the risk of West Nile virus is real and current with record-breaking numbers of human cases and deaths in the past few years.

A seminal study about the effectiveness of aerial spraying in California to stem West Nile virus concluded the following:

“Aerial application of pyrethrins in 2005 successfully disrupted the WNV transmission cycle, and that this treatment was responsible for an abrupt decrease in the number of human cases within treated areas compared with that in the untreated area. These results provide direct evidence that **aerial spraying to control adult mosquitoes effectively reduced human illness and potential deaths from WNV infection.**” (Efficacy of Aerial Spraying of Mosquito Adulticide in Reducing Incidence of West Nile Virus, California, 2005 Ryan M. Carney, Stan Husted, Cynthia Jean, Carol Glaser, and Vicki Kramert†)

California has proven that aerial spraying works. Scientific studies around the world have proven that the most common adulticide used to kill mosquitos poses no significant threat to public health. As to the safety of pyrethroids, the World Health Organization (WHO) has determined the following:

Pyrethroids are not carcinogenic, genotoxic or toxic to reproduction in experimental animals. While data from humans are very limited, it is unlikely that these insecticides pose a carcinogenic or reproductive toxicity hazard to humans.

The WHO also found that:

In conclusion, pyrethroids are insecticides characterized by a moderate acute toxicity and do not show any evidence of long-term toxicity in humans. **They do not pose any significant health risk when they are used in compliance with their directions for use,** which are intended to limit human exposure within the levels recommended for their specific applications. (Safety of Pyrethroids for Public Health Use, WHO (2005)

In plain English, this means that pyrethroids are safe to use in aerial spraying and do not cause cancer or reproductive toxicity in humans. Additional scientific studies on the risks of other adulticides to human health have determined that exposure did not exceed levels of concern. That same study also suggested that the risks of acquiring West Nile virus exceed the risk of exposure to insecticides.

The activities of California vector control agencies are closely controlled pursuant to “The Cooperative Agreement between the California Department of Public Health and Local Vector Control Agencies.” CDPH emphasizes the use of preventive measures directed toward the elimination of mosquito sources while also recognizing that the judicious use of pesticides is needed for mosquito control agencies to meet their legal requirement to protect the public from disease-transmitting mosquitoes and other vectors. This document also directs that agencies apply specific principles of pesticide use to protect the health of humans, domestic animals, wildlife, and other non-target organisms.

The Environmental Protection Agency and Department of Pesticide Regulation have used their exhaustive processes to register these products, and after stringent evaluation of the potential impacts to human, wildlife, and environmental health, has been approved.

Conclusion

SB 1246 would significantly impair mosquito control districts’ longstanding ability to control and abate mosquito populations based on real-time, scientifically-proven factors, leading to impaired public health and very possibly, increased preventable deaths in California. Given the growing number of cases of mosquito-borne illnesses, this bill would prohibit mosquito control districts from carrying out their mission. For those reasons, **MVCAC strongly opposes this bill.**

Very truly yours,

A handwritten signature in black ink, appearing to read "Edward P. Manning".

Edward P. Manning