

AGENDA

1043rd MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

APRIL 12TH, 2017

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

1. Call to order.
2. Roll call
3. President Narum 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 1042nd meeting held March 8th, 2017 (**Board action required**)
5. Approval of terms for a contract regarding compensation and terms for a Temporary District Manager (June 1, 2017-July 31, 2017) (**Board Action Required**)
6. First draft of the 2017-18 budget for discussion (Information only)
7. Presentations (Information only):
 - a. "Zika virus epidemiology, infection and disease" by Dr. Robert Beatty, ACMAD Trustee
 - b. "Surveillance and control of invasive *Aedes*" by Dr. Eric Haas-Stapleton, ACMAD Lab Director
8. Financial Reports:
 - a. Review of warrants dated March 15, 2017 numbering 043317 through 045717 amounting to \$99,383.40 and warrants dated March 30, 2017 numbering 045817 through 049717 amounting to \$118,792.41 (Information only).

- b. Review of Budget as of March 31, 2017. (Information only).
 - c. Investments, Reserves, and Cash Balance as of March 31, 2017.
9. Presentation of the Monthly Staff Report for March 2017 (Information only)
10. Presentation of the Manager's Report for March 2017 (Information only)
- a. MVCAC Annual Conference summary
 - b. Office of Emergency Services discussion regarding disaster services and invasive *Aedes* response resources
 - c. April 5th driver safety training; ergonomic training-upcoming
 - d. Remodel projects currently stalled due to lack of bids
 - e. Mapvision implementation is nearing completion
11. Board President asks for reports on conferences and seminars attended by Trustees
12. Board President asks for announcements from members of the Board
13. Board President asks trustees for items to be added to the agenda for the next Board meeting
14. 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: 1043.4

MINUTES

**1042nd MEETING OF THE BOARD OF TRUSTEES
OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT**

MARCH 8TH, 2017

TIME: 5:00 P.M.
PLACE: Office of the District, 23187 Connecticut Street, Hayward
TRUSTEES: Kathy Narum, President, City of Pleasanton
Elisa Marquez, Vice-President, City of Hayward
Wendi Poulson, Secretary, City of Alameda
Humberto Izquierdo, County-at-Large
P. Robert Beatty, City of Berkeley
Richard Guarienti, City of Dublin
Betsy Cooley, City of Emeryville
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Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Robert Dickinson, City of Piedmont
Ed Hernandez, City of San Leandro
Ronald Quinn, City of Union City

Board President Narum called the regularly scheduled Board meeting to order at 5:03 P.M.

Trustees Narum, Marquez, Poulson, Izquierdo, Beatty, Guarienti, Cooley, Young, Doggett, Hentschke, and Washburn were present; Trustees Dickinson and Quinn were absent. Trustee Hernandez arrived at 5:07 P.M.

Board President Narum 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 1041st meeting held February 8th, 2017. (Hentschke, Guarienti)– unanimous; Trustee Washburn-abstained.

After questions from Trustee Marquez regarding the seat's term (4 years), Trustee Beatty asking how long the candidate already served (at least one term), and support offered by both Board President Narum and Trustee Guarienti based on long-standing positive working relationships--the Board nominated Georgean Vonheeder-Leopold for the Special District Alternate Seat. (Cooley, Beatty) – unanimous. Trustee Narum was also designated as the Presiding Officer and Trustee Marquez as the Presiding Officer Alternate.

After a report by the District Manager, the Board approved to reimburse affected employees the cost of one month of 100% dependent health coverage (Guarienti, Doggett) – unanimous.

Board President Narum, representing the Finance committee, summarized a meeting discussing the first draft of the annual budget. Trustee Cooley asked on the effects of not paying CalPERS directly towards the District's pension unfunded liability by rather paying into a separate fund? The District Manager will report back on this at the next Finance Committee Meeting. Trustee Beatty inquired on the total of the unfunded liability. The District Manager responded that the District's pension fund requires around twelve million dollars, but currently has around nine (80% funded) with a caveat that the amounts are based on actuarial science--with data that is almost two years old and dependent on probable market earnings. Trustee Marquez asked when the Finance Committee will meet again, and what the timeline is for the budget approval process (before the April Board meeting, with drafts presented to the Board in May and finally in June).

The Board reviewed warrants dated February 15, 2017 numbering 037717 through 040017 amounting to \$116,690.98 and warrants dated February 28, 2017 numbering 040117 through 043217 amounting to \$128,355.60. Trustee Cooley volunteered to sign warrants after the Board meeting. Trustee Marquez asked why there were two PG&E bills. Trustee Guarienti pointed out a typo—his name was not in the warrant list for payments though he was paid his in-lieu payment for board meeting attendance. These items will be looked into further by the District Manager.

The Board reviewed the budget summary received as of February 28th, 2017.

The District Manager presented the Staff report for February 2017. Trustee Washburn highlighted the fact that the ACMAD lab recently submitted a manuscript to a peer-reviewed journal for the first time in at least 25 years. Trustee Guarienti asked since there were two injuries this year, why only one injury reported in 2017? The District Manager responded that one injury occurred in 2016, and the workers' compensation time-off is only related to the most recent injury. Board President Narum reminded the Board to "like" the District's Facebook page.

The District Manager presented the Manager's report for February 2017. Trustee Washburn provided the highlights of his trip to the AMCA annual meeting including discussions on the effects catch basins have on mosquito breeding and the profound impact the Zika virus is having not only on mosquito control strategies, but also the serious health effects to newborns. Trustee Beatty offered his own knowledge on the Zika virus and his willingness to share this with the Board at a future meeting, perhaps in partnership with Trustee Washburn. Trustee Beatty also inquired how unmanned aerial systems (UAS, or "drones") can measure mosquito larvae. The District Manager mentioned the work by both the Placer and Sacramento-Yolo mosquito districts have done using an underwater camera to detect larvae via an UAS. Trustee Washburn added his experience as District Manager in 2015 helicopter-treating Coyote Hills (cost, rationale, and logistics). Trustee Hernandez asked if the District can comment on the proposed school adjacent to Coyote Hills with its mosquito-breeding capabilities. Trustee Izquierdo and Board President Narum replied that schools are exempt from local comment. Trustee Marquez commented this may be best tackled at the state level and also offered that Coyote Hills may actually be in Newark, not Fremont.

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

Board President Narum asked for announcement from the Board, Trustee Hernandez promoted an Assemblymember Bonta sponsored event, this Saturday in Fruitvale,

regarding immigration concerns. Trustee Guarienti asked for a reminder on the ACSDA Annual dinner. The District Manager will remind those who are attending closer to the date.

Board President Narum asked trustees for items to be added to the agenda for the next Board meeting. Trustees Hernandez and Cooley, emphasized their interest in hearing a presentation on the current and probable public health impact caused by the Zika virus. Trustees Beatty and Washburn will discuss this and a presentation will be on the April meeting agenda.

The meeting adjourned at 5:55 P.M.

Respectfully submitted,

Approved as written and/or corrected
at the 1043rd meeting of the Board of
Trustees held April 12th, 2017

Kathy Narum, President
BOARD OF TRUSTEES

Wendi Poulson, Secretary
BOARD OF TRUSTEES

CONSULTANT AGREEMENT

This Agreement is made and is effective as of the 12th day of April, 2017, between Jan O. Washburn ("Consultant") and Alameda County Mosquito Abatement District ("District").

WHEREAS, District needs the services of a temporary District Manager; and

WHEREAS, the parties have determined that it is desirable to enter into a consulting contract and Consultant has agreed to the terms and conditions; and

WHEREAS, District and Consultant wish to make clear their respective rights and duties and thereby to minimize the possibility of future disagreements about the terms and conditions of Consultant's retention or any possible termination of that retention; and

WHEREAS, Consultant will not receive any benefit, incentive, or compensation other than the temporary salary provided for in this Agreement;

NOW, THEREFORE, in consideration of the material advantages accruing to the parties and the mutual covenants contained herein, Consultant and District agree as follows:

- A. **Contractor Relationship.** Consultant understands and agrees that in performing the herein described services, Consultant shall act as a temporary contract employee of District. Both parties agree that Consultant is retained on a temporary, at-will basis. Both parties agree that this relationship is governed solely by this Agreement and not by any statutory provisions. Consultant shall not be entitled to any benefits accorded to District employees including, but not limited to, worker's compensation, disability insurance, retirement benefits, health benefits, vacation or sick leave accrual or pay.
- B. **Term.** The term of this Agreement shall begin on June 1, 2017 and will terminate on July 31, 2017, unless terminated by either party pursuant to Paragraph G of this Agreement. The consultant will be compensated prior to the beginning of this term for any training or meetings with the District Manager related to this Agreement. This Agreement may be extended past its termination date by direction of the Board of Trustees ("Board") and written consent of Consultant.
- C. **Consultant's Duties.** Consultant shall render his/her best professional services and skills for the benefit of District, performing all supervisory and administrative tasks generally required of an executive officer for a similarly situated public agency while the current District Manager is attending school. These District Manager functions include, but are not limited to: supervising all District administrative and financial activities; administering the annual District budget as directed by the Board; reviewing all outside contracts on behalf of the District; entering into contracts on behalf of the District, with the Board's approval of contracts in excess of seven thousand five hundred dollars (\$7,500); authorizing payments by the District and signing warrants, with the Board's approval of payments in excess of seven thousand five hundred dollars (\$7,500); serving as the primary contact with the Board; supervising the preparation of Board and Board subcommittee agendas and staff reports; attending all Board and committee meetings; supervising the continuation of all mosquito control programs for the District; overseeing the District's human resources, insurance, risk management, and occupational safety matters; hiring, firing, disciplining and promoting District employees; ensuring the District's compliance with all applicable federal, California, and local laws, including but not limited to the Americans with Disabilities Act; communicating with other government agencies and with the public; and overall responsibility for District's functioning during this interim period. Consultant shall be responsible for performing the work under this

Agreement in a manner that is consistent with the generally accepted standards for a professional public agency administrator.

- D. Compensation. In consideration for Consultant's services, District agrees to pay Consultant one hundred dollars (\$125) per hour as compensation. Although Consultant will be compensated on an hourly basis, they are exempt from the overtime provisions of the Fair Labor Standards Act, and will not be compensated for hours worked in excess of forty (40) hours in any calendar week, with pay capped at 20 hours per week. The District will comply with all applicable federal and state tax withholding obligations. In the case of a public health emergency, the Board's Personnel Committee may approve additional compensated hours. The compensation set forth in this paragraph shall be the full and sole compensation provided to Consultant, and District shall not provide Consultant with any other benefits unless specifically set forth in this Agreement.
- E Additional Compensation or Reimbursements.
1. Fringe Benefits. The Consultant shall be issued a cell phone by the District to use for District business. The Consultant shall have the use of a District car to use for District business during work hours. The District shall provide Consultant with the administrative support, office space, and computing technology necessary to perform Consultant's duties. The Consultant shall not receive any benefits in addition to that specifically set forth herein and specifically shall not include any employment benefits such as health, welfare, or retirement benefits, except that the District will comply with all applicable federal and state tax withholding obligations.
 2. Expense Reimbursement. District agrees to pay the travel, and subsistence expenses of Consultant for that official travel, meetings and occasions that are reasonably necessary to enable Consultant to pursue official or other functions for District, provided such travel is consistent with activities directed or authorized by the Board. Consultant shall use the District vehicle provided by the District, rather than their personal vehicle, for official travel. Consultant will not be reimbursed for mileage if their own personal car is used for District business.
 3. Medical or Other Unavailability. Consultant shall not accrue any personal leave during the term of this Agreement and shall not accrue illness leave during the term of this Agreement.
- F. Office Hours. District and Consultant agree that Consultant shall be present at the offices of the District 2-3 days a week between roughly 7:00 a.m. to 11:00 a.m. Monday through Friday in order to supervise and perform administrative services; however, Consultant shall otherwise perform these services at times and in such manner as Consultant determines.
- G. Termination. Either Consultant or District may terminate Consultant's retention at any time upon giving the other party thirty (30) days' prior written notice. Neither party's right to terminate this Agreement shall be limited by an implied covenant or oral agreement. In the event of termination of this Agreement for any reason, Consultant shall be entitled to payment prorated to the date of termination but shall not be entitled to severance pay of any kind. Following any notice of termination, Consultant shall fully cooperate with District in all matters relating to the winding up of their pending duties on behalf of District and the orderly transfer of any such pending work to such other employee(s) of District or the permanent District Manager.
- H. Entire Agreement. This Agreement constitutes the entire agreement between the parties and contains all the agreements between them with respect to the subject matter

hereof. It also supersedes any and all other agreements (including, but not limited to, employment or letter agreements) or contracts, either oral or written, between the parties with respect to the subject matter hereof. No party has made or relied upon any representations, warranties or commitments with respect to the subject matter of this Agreement except those specifically set forth herein. This Agreement shall be modified only with a written instrument duly executed by each of the parties.

- I. Possession and Ownership of Property. Consultant may use such District property and materials without charge as is necessary and appropriate to carry out Consultant's responsibilities hereunder. Upon termination of this Agreement, regardless of how termination may be effected, or whenever requested by District, Consultant shall immediately turn over to District all of District's property, including all items used by Consultant in rendering services for District hereunder or otherwise, that may be in Consultant's possession, or under their control. All rights, title, royalties, and interest to all work product of Consultant resulting from their performance under this Agreement, including software, systems, specifications, data, reports, opinions, and any other such information and materials as may be accumulated by Consultant in performance of work under this Agreement, whether complete or in progress, shall be vested in District.
- J. Confidentiality. The Consultant agrees that in addition to any other limitation, regardless of the circumstances of the termination or retention, they will not communicate to any person, firm, or corporation any confidential information relating to District which they might from time to time acquire in the course of carrying out their responsibilities under this Agreement.
- K. Waiver. Failure of either party to require the performance of any term or condition of this Agreement, or the waiver by either party of any breach of this Agreement, shall not prevent subsequent enforcement of any such term or any other term, nor be deemed to be a waiver of any subsequent breach.
- L. Notices. Any and all notices or communications required or permitted to be given under this Agreement shall be delivered in writing by registered or certified mail, postage prepaid, and addressed in the case of Consultant, to 623 59th Street, Oakland, California, 94608, and, in the case of the District to 23187 Connecticut Street, Hayward, California 94542, or to such other address as either party hereto shall hereafter designate by written notice to the other party. Mailed notices or communications shall be delivered upon deposit thereof in the mail in accordance with this paragraph.
- M. Review. Each party to this Agreement has had the opportunity to adequately review this Agreement, and failure to do so and any consequences thereof shall not be charged to the other party.
- N. Headings and Severability. The paragraph headings contained in this Agreement are for reference purposes only and do not constitute substantive matter to be considered in construing the terms and provisions of this Agreement. The invalidity or unenforceability of any particular provision of this Agreement shall not affect its other provisions, and this Agreement shall be construed in all respects as if such invalid or unenforceable provision had been omitted.
- O. Indemnity. The District shall defend, indemnify, and hold Consultant harmless from and against any and all liability, loss, expense, including reasonable attorneys' fees, or claims for injury or damages arising out of the performance of this Agreement.
- P. Miscellaneous.

1. Amendments. Except as otherwise specifically provided, the terms and conditions of this Agreement may be amended by mutual agreement, provided that before any amendment shall be valid or effective, it must be reduced to writing and signed by both parties. This Agreement may be extended past its termination date by direction of the Board and written consent of Consultant.
2. Binding on Heirs, Successors and Assigns. The consultant retention provisions of this Agreement are personal to Consultant, but the administrative provisions of this Agreement shall be binding upon and inure to the benefit of and shall be enforceable by the heirs, administrators, executors, successors and assigns of the parties hereto.
3. Arbitration and Attorney's Fees. If any dispute arises concerning the rights of either party regarding the terms of this Agreement, the parties shall submit that dispute to arbitration and shall accept as final and binding the decision of the duly selected arbitrator. The dispute shall be arbitrated pursuant to the California Employment Dispute Resolution Rules developed by the American Arbitration Association.
4. Drafting of Agreement. This Agreement was negotiated between the parties and shall be read as if it were prepared jointly by the parties.
5. Choice of Law. This Agreement shall be construed and enforced under the laws of the state of California.

IN WITNESS, WHEREOF, the parties hereto have duly executed this Agreement.

Dated:

By
Kathy Narum
Board President

Dated:

By:
Jan O. Washburn
Consultant

Salaries 7/1/17 - 6/31/18

Date of hire	Pos	2017/18 3.5% COLA	Longevity	Longevity Amount	New Salary	# mo	Subtotal		
Apr-16	Admin3	\$ 4,906.75	0%	\$ -	\$ 4,906.75	3	\$ 14,720		
	Admin4	\$ 5,152.09	0%	\$ -	\$ 5,152.09	9	\$ 46,369	\$ 61,089	
Jul-99	BIO5	\$ 8,594.16	3%	\$ 257.82	\$ 8,851.98	12	\$ 106,224		
Mar-14	MCT4	\$ 6,973.62	0%	\$ -	\$ 6,973.62	2	\$ 13,947		
	MCT5	\$ 7,321.07	0%	\$ -	\$ 7,321.07	8	\$ 58,569		
	VB1	\$ 7,687.12	0%	\$ -	\$ 7,687.12	2	\$ 15,374	\$ 87,890	
Apr-02	VB2	\$ 8,070.65	3%	\$ 242.12	\$ 8,312.77	12	\$ 99,753		
Nov-03	VB2	\$ 8,070.65	2%	\$ 161.41	\$ 8,232.06	12	\$ 98,785		
Feb-12	VB2	\$ 8,070.65	1%	\$ 80.71	\$ 8,151.36	12	\$ 97,816		
Mar-02	RPA5	\$ 8,676.41	3%	\$ 260.29	\$ 8,936.70	12	\$ 107,240		
Jul-12	Mgr	\$ 11,729.66	0%	\$ -	\$ 11,729.66	12	\$ 140,756		
Sep-15	MCT3	\$ 6,641.52	0%	\$ -	\$ 6,641.52	8	\$ 53,132		
	MCT4	\$ 6,973.62	0%	\$ -	\$ 6,973.62	4	\$ 27,894	\$ 81,027	
Jul-15	IT5	\$ 8,635.28	0%	\$ -	\$ 8,635.28	12	\$ 103,623		
Jul-15	LAB5	\$ 9,283.96	0%	\$ -	\$ 9,283.96	12	\$ 111,408		
Jul-91	Sup 5	\$ 9,748.22	5%	\$ 487.41	\$ 10,235.63	12	\$ 122,828		
Apr-14	VB2	\$ 8,070.65	0%	\$ -	\$ 8,070.65	12	\$ 96,848		
Sep-15	VB2	\$ 8,070.65	0%	\$ -	\$ 8,070.65	12	\$ 96,848		
May-15	MCT3	\$ 6,641.52	0%	\$ -	\$ 6,641.52	4	\$ 26,566		
	MCT4	\$ 6,973.62	0%	\$ -	\$ 6,973.62	8	\$ 55,789	\$ 82,355	
Feb-15	Mech 4	\$ 8,218.99	0%	\$ -	\$ 8,218.99	1	\$ 8,219		
	Mech 5	\$ 8,430.43	0%	\$ -	\$ 8,430.43	11	\$ 92,735	\$ 100,954	
							\$	1,595,443	

Seasonals:

Rate (ave)	#	Hours
\$ 17.00	9	1,000
		\$153,000
Unemployment	14,000	\$5,202.00
		\$158,202.00

CalPERS

	Wages	Employer rate	Unfunded Liability Payment	Total PERS Payments
9.558% Classic	\$981,657.27	\$ 93,826.80	\$ 123,389.00	\$ 217,215.80
6.930% <i>Pepra</i>	\$510,162.30	\$ 35,354.25	\$ 360	\$ 35,714.25
				\$ 252,930.05

Employer paid PERS	\$ 252,930
Seasonals	\$ 158,202
Subtotal	\$ 2,006,575
Proposed Reclassification	\$ 5,570.38
Temporary Manager	\$ 18,000
Medicare tax	\$ 25,770
Grand Total	\$ 2,055,914.97

Temp Manager

Hourly rate	Hours/day	Days/week	Cost per week	Total Cost
\$ 125	6	3	\$ 2,250	\$ 18,000

Account	BUDGET CATEGORY	FY 15-16	Actual 15-16	FY 16-17	% change	FY 17-18	% change	
610001	CLOTHING AND PERSONAL SUPPLIES (PURCHASED)	\$8,500	\$7,169	\$8,500	0%	\$8,500	0%	
610011	LAUNDRY SERVICE AND SUPPLIES (RENTED)	\$9,000	\$7,162	\$9,000	0%	\$9,000	0%	
610021	UTILITIES	\$22,000	\$22,415	\$35,900	63%			
	Garbage (Waste Mgmt)	\$1,500 x		\$2,400	60%	\$3,000	25%	
	PG & E	\$15,000 x		\$24,000	60%	\$24,000	0%	
	Hayward Water & Sewage	\$5,500 x		\$6,000	9%	\$7,000	17%	
	Biohazard and Chemical Waste Disposal	x		\$3,500 NA		\$4,000	14%	This line item was added by EHS.
610022	COMMUNICATIONS	x						
610022.1	Telephone Service & Internet (Telepacific)	\$13,500	\$13,539	\$13,800	2%	\$14,000	1%	
610022.3	Website hosting	\$270	\$242	\$850	215%	\$1,200	41%	
(NEW)	Microsoft Office 365					\$4,000		
610022.4	Cell phone service (Verizon)	\$10,000	\$8,433	\$9,000	-10%	\$17,000	89%	service and replacements, cell and tablets
610122	MAINTENANCE STRUCTURES & IMPROVEMENTS	\$15,000	\$6,739	\$15,000	0%			
61022.1	Landscaping service	x		\$3,600		\$3,600	0%	\$2,100 for reg maint, \$1,500 for new plants
61022.2	Facility Maintenance	x		\$10,000		\$25,000	150%	bird abatement, mark office, (change to FACILITY MAINT.)
	Yard Maintenance and repairs	x		\$1,400				delete and incorporate with Facility (above)
610141	MAINTENANCE OF EQUIPMENT	\$40,000	\$24,175	\$45,000	13%	\$45,000	0%	
610191	TRANSPORTATION, TRAVEL, and TRAINING							
610191.1	Fuel and GPS (WexMart)	\$40,000	\$37,042	\$40,000	0%	\$45,000	13%	
610191.3	Meetings, conferences, & travel	\$45,000	\$21,956	\$35,000	-22%	\$35,000	0%	From travel document
610191.4	Board meeting expenses	\$800	\$501	\$1,000	25%	\$800	-20%	
610191.5	Board payments in lieu	\$16,800	\$12,056	\$16,800	0%	\$16,800	0%	
610461.53	Continuing Education fees	\$4,000	\$3,771	\$4,000	0%	\$4,210	5%	increase from \$120-\$134 pp
610191.7	Staff Training (staff development/ college courses)	\$15,000 x		\$80,000	433%	\$55,000	-31%	\$46,000 for MPA
610261	PROFESSIONAL SERVICES	\$172,500	\$159,499 x	x	x	x	x	
610261.1	Audit	\$13,000 x		\$13,000	0%	\$13,000	0%	
610261.2	Actuarial reports	\$3,000 x		\$3,000	0%	\$5,500	83%	CalPers (2,000) and OPEB (3,500)
610261.3	Helicopter service	\$25,000 x		\$30,000	20%	\$35,000	17%	
610261.4	Legal Services	\$15,000 x		\$20,000	33%	\$13,000	-35%	
610261.5	MVCAC Research Foundation	\$5,000 x		\$5,000	0%	\$5,000	0%	
	Pre-employment physicals, hearing tests, respirator tests	\$1,000 x		\$0	-100%	\$0		May be added in future, currently not a policy
610261.7	Tax collection service (SCI)	\$35,000 x		\$35,000	0%	\$35,000	0%	
610261.8	Payroll service (OnePoint)	\$5,500 x		\$6,000	9%	\$10,000	67%	
610261.9	Environmental consultant services for regulatory issues	\$10,000 x		\$5,000	-50%	\$12,000	140%	
610261.10	HR Services (Municipal Resource Group)	\$60,000 x		\$25,000	-58%	\$15,000	-40%	
610261.11	OPEB management (PFM)	x		\$0		\$22,000		Interfund transfer
(NEW)	Financial advising	x	x	x		\$1,500 NA		new

Account	BUDGET CATEGORY	FY 15-16	Actual 15-16	FY 16-17	% change	FY 17-18	% change	
610351	MEMBERSHIPS, DUES & SUBSCRIPTIONS	\$20,625	\$14,540					
	AMCA (sustaining membership)	\$4,000 x		\$4,000	0%	\$4,000	0%	
	CSDA \$5,000 + \$50 for local chapter	\$5,500 x		\$5,500	0%	\$5,100	-7%	
	MVCAC	\$10,000 x		\$12,000	20%	\$12,000	0%	
	SOVE	\$325 x		\$200	-38%	\$0	-100%	
	LAFCo	\$650 x		\$778	20%	\$780	0%	
	ESA	\$150 x		\$172	15%	\$150	-13%	
	Misc Memberships (REHS, HAZWOPR)	x		\$285		\$100	-65%	HAZWOPR (100)
610378	INSURANCE - VCJPA	\$44,083	\$42,532			\$120,000		Not final until May
	Liability	\$31,824 x		\$37,473	18%			
	Property	\$1,934 x		\$6,429	232%			
	General Fund	\$8,325 x		\$7,676	-8%			
	Fidelity/Fraud	\$2,000 x		\$2,000	0%			
610374	Workers Compensation Insurance	\$63,736	\$63,736	\$61,560	-3%			
	Insurance fund-SIRS	\$25,000	\$0	\$25,000	0%			Deductable
610451	COMMUNITY EDUCATION	\$33,000	\$12,450					
	Supplies	\$11,000 x		\$11,000	0%	\$11,000	0%	
	WNV Ads	\$11,000 x		\$11,000	0%	\$11,000	0%	
	Printing	\$11,000 x		\$11,000	0%	\$11,000	0%	
(NEW)	Website redesign					\$20,000		
610461	DISTRICT SPECIAL EXPENSE							
610461.1	Pesticides	\$175,000	\$155,761	\$200,000	14%	\$200,000	0%	
610461.2	Field supplies (dippers etc)	\$500	\$576	\$1,000	100%	\$2,200	120%	
	Sentinel Chickens	\$0	\$0	\$0		\$0		
610461.4	Fish and Fish Maint.	\$4,000	\$4,534	\$4,000	0%	\$6,000	50%	ULV lights, food upgrade, fry project
610461.51	Aerial Pool Survey	\$17,000	\$17,000	\$17,000	0%	\$20,000	18%	
610461.52	Permits	\$3,000	\$1,104	\$3,000	0%	\$100	-97%	NPDES, Ditching
610461.54	Board plaques and nameplates	\$500	\$240	\$1,000	100%	\$500	-50%	
(NEW)	Safety	\$2,000 x		\$2,000	0%	\$2,000	0%	
610461.6	Spray equipment	\$15,000	\$8,276	\$12,000	-20%	\$30,000	150%	adulcider/sprayer tracking module
620021	HOUSEHOLD EXPENSES	\$5,500	\$4,629	\$5,000	-9%			
	Janitorial service	\$0 x		\$0		\$6,500		new srvc & 1/yr floor & carpet cleaning
	Supplies	\$0 x		\$0		\$2,000		liners, wipes, kitchen, TP, paper towels
	Drinking water system & filter	\$450	\$137	\$480	7%	\$510	6%	
	Alarm service - Sonitrol	\$8,000	\$9,025	\$9,000	13%	\$11,000	22%	

Account	BUDGET CATEGORY	FY 15-16	Actual 15-16	FY 16-17	% change	FY 17-18	% change	
620041	OFFICE EXPENSES	\$21,400	\$14,195					
	Office Supplies (2 copiers + 5000 supplies)	\$20,000 x		\$20,000	0%	\$10,000	-50%	
	Postage	\$1,000 x		\$2,000	100%	\$2,500	25%	
	Pitney Bowes - postage meter rental	\$400 x		\$400	0%	\$550	38%	
620042	INFORMATION TECHNOLOGY							
620042.1	Computers, supplies and software	\$12,000	\$10,541	\$15,000	25%	\$15,000	0%	
620042.2	Contract services for Computer network	\$4,000		\$4,000	0%			
620042.3	3rd party IT consultant	\$30,000		\$25,000	-17%	\$30,000	20%	
(NEW)	Mapvision service fee					\$27,800		
(NEW)	Backhaul					\$600		
	New server (over \$5,000 capital)							
620141	LABORATORY SUPPLIES	\$79,240	\$50,891					
620141.1	Mosquito Surveillance - traps, dry ice, reimbursments	\$9,400	\$13,833	\$20,000	113%	\$25,000	25%	Increased mosquito abundance surveillance & resistance testing.
620141.2	Disease surveillance	\$7,155	\$6,995	\$4,000	-44%	\$42,500	963%	Reduction because of supply carryover from FY 15-16
620141.3	Mosquito pool testing (taken out of District special expense)	\$36,000	\$25,384	\$41,150	14%			Add-to disease surveillance
620141.5	Lab equipment and supplies	\$6,285	\$4,411	\$5,500	-12%	\$21,500	291%	Autoclave & storage shed
620141.6	Reimbursement for light traps (to property owners)	\$200	\$0	\$200	0%			Add-to mosquito surveillance
620141.4	Pesticide resistance testing of mosquitoes (e.g. kdr)	\$20,000 x		\$8,744	-56%	\$7,000	-20%	
	Research	\$0 x		\$9,000		\$9,000	0%	
620261	SMALL TOOLS AND INSTRUMENTS	\$1,500	\$1,155	\$2,500	67%	\$8,500	240%	new argo lift, band saw, Go-Devil(outboard)
	Total	\$985,642		\$1,114,797	13%	\$1,143,000	3%	

<u>Employee</u>	PERS Plan Code	PERS RATES 2017	PERS RATES 2018 (est)	Total PERS Costs	Dental 2018 Rates	Total Dental	Life Ins. Rates 2017/18	Total Life Ins. 2017/18	Vision 2016/17 Rates	Total Vision	SDI	Benefit Cost per person
	3753	1,906.81	2,059.35	23,796.99	251.93	3,023.16	9.25	111.00	32.52	390.24	982.12	28,303.51
	1041	733.29	791.95	9,151.46	94.06	1,128.72	9.25	111.00	13.20	158.40	770.03	11,319.61
	1043	1,906.81	2,059.35	23,796.99	251.93	3,023.16	9.25	111.00	32.52	390.24	954.44	28,275.83
	1041	733.29	791.95	9,151.46	251.93	3,023.16	9.25	111.00	13.20	158.40	954.44	13,398.46
	1041	733.29	791.95	9,151.46	94.06	1,128.72	9.25	111.00	13.20	158.40	848.82	11,398.40
	1043	1,906.81	2,059.35	23,796.99	251.93	3,023.16	9.25	111.00	32.52	390.24	972.59	28,293.98
	4503	1,906.81	2,059.35	23,796.99	251.93	3,023.16	9.25	111.00	32.52	390.24	1,414.40	28,735.79
	1041	733.29	791.95	9,151.46	94.06	1,128.72	9.25	111.00	13.20	158.40	663.77	11,213.35
	4542	1,466.78	1,584.12	18,305.41	161.05	1,932.60	9.25	111.00	20.50	246.00	929.53	21,524.54
	1042	1,466.78	1,584.12	18,305.41	161.05	1,932.60	9.25	111.00	20.50	246.00	1,175.44	21,770.45
	1062	1,466.78	1,584.12	18,305.41	251.93	3,023.16	9.25	111.00	20.50	246.00	1,076.40	22,761.97
	1041	733.29	791.95	9,151.46	94.06	1,128.72	9.25	111.00	13.20	158.40	515.97	11,065.55
	1041	733.29	791.95	9,151.46	94.06	1,128.72	9.25	111.00	13.20	158.40	891.26	11,440.84
	1041	733.29	791.95	9,151.46	94.06	1,128.72	9.25	111.00	13.20	158.40	848.82	11,398.40
	1041	733.29	791.95	9,151.46	94.06	1,128.72	9.25	111.00	13.20	158.40	698.45	11,248.03
	1043	1,906.81	2,059.35	23,796.99	251.93	3,023.16	9.25	111.00	32.52	390.24	905.95	28,227.34
<i>Subtotal</i>		19,800.71		247,112.86	2,744.03	32,928.36	148.00	1,776.00	329.70	3,956.40	14,602.43	300,376.05
.5% Admin Cost				1,235.56								1,235.56
Staff Totals				248,348.43		32,928.36		1,776.00		3,956.40	14,602.43	301,611.62

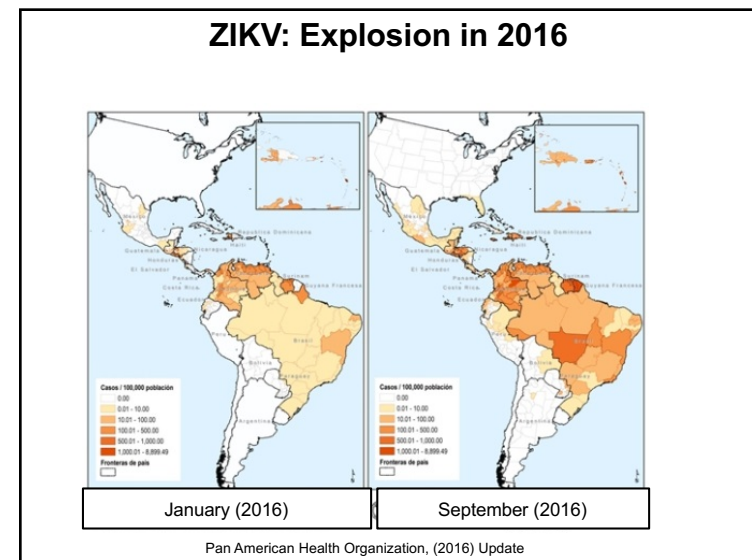
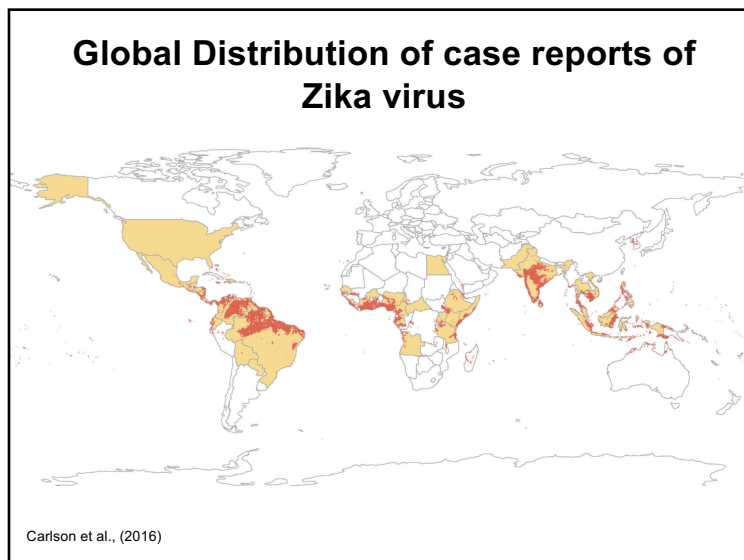
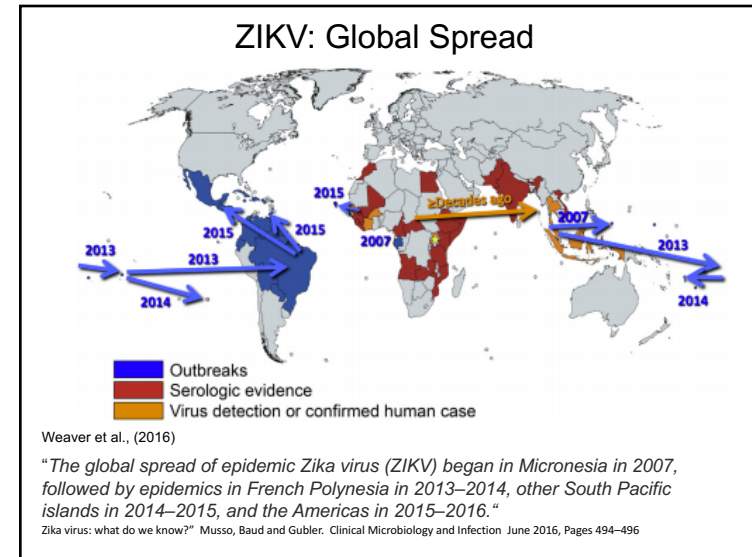
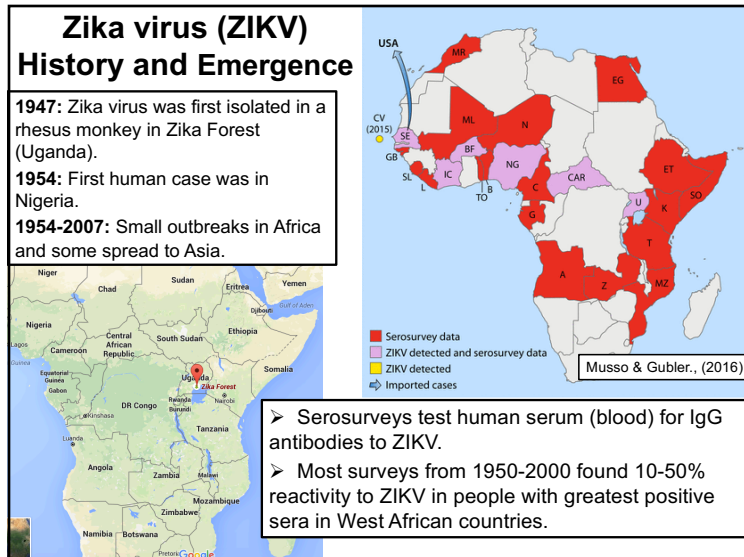
<u>Annuitant</u>	PERS Plan Code	PERS RATES 2017	PERS RATES 2018 (est)	Total PERS Costs	Dental 2017 Rates	Total Dental	Life Ins. Rates 2016/17	Total Life Ins. 2016/17	Vision 2016/17 Rates	Total Vision	SDI	Benefit Cost per person
	1141	300.48	324.52	3,749.99	-	1,200.00			33.80	405.60		5,355.59
	3391	389.76	420.94	4,864.20	94.06	1,128.72			33.80	405.60		6,398.52
	1041	733.29	791.95	9,151.46	94.06	1,128.72			33.80	405.60		10,685.78
	1321	389.76	420.94	4,864.20	94.06	1,128.72			33.80	405.60		6,398.52
	0	-	-	-	94.06	1,128.72			33.80	405.60		1,534.32
	3322	707.26	763.84	8,826.60	161.05	1,932.60			33.80	405.60		11,164.80
	1161	353.63	381.92	4,413.30	94.06	1,128.72			33.80	405.60		5,947.62
	1042	1,466.78	1,584.12	18,305.41	161.05	1,932.60			33.80	202.80		20,440.81
	3291	733.29	791.95	9,151.46	94.06	1,128.72			33.80	405.60		10,685.78
	1322	733.29	791.95	9,151.46	-	2,400.00			33.80	405.60		11,957.06
	3342	707.26	763.84	8,826.60	161.05	1,932.60			33.80	405.60		11,164.80
	1142	600.96	649.04	7,499.98	161.05	1,932.60			33.80	405.60		9,838.18
	1042	1,466.78	1,584.12	18,305.41	161.05	1,932.60			33.80	405.60		20,643.61
	1032	1,381.12	1,491.61	17,236.38	161.05	1,932.60			33.80	405.60		19,574.58
	1043	1,906.81	2,059.35	23,796.99	251.93	3,023.16			33.80	405.60		27,225.75
<i>Subtotal</i>		11,870.47		148,143.47	1,782.59	24,991.08			507.00	5,881.20		179,015.75
		.5% Admin Costs=		740.72								740.72
<u>Annuitant Totals</u>				148,884.18		24,991.08				5,881.20		179,756.46
Grand Total				397,232.61		57,919.44		1,776.00		9,837.60	14,602.43	481,368.08
									<i>Additional Retiree</i>			25,000.00
												506,368.08

CAPITAL EXPENDITURES

	2015-2016	2016-2017	2017-2018	<i>2018-2019</i>
Pesticide Shed	\$120,000			
Locker Room Expansion	\$70,000			
Brake Lathe	\$9,000			
Metal Brake	\$10,000			
New fish tank with filter and pump system	\$16,000			
Total	\$225,000			
Computer Database	\$	218,000		
Hardware (monitors & tablets)	\$	10,000		
Board room expansion	\$	40,000		
Lab equip	\$	27,000		
Total	\$	295,000		
Board room expansion			\$55,000	
V21 Explorer replacement			\$35,000	
V31 Lab Truck replacement			\$35,000	
New Argo with trailer			\$35,000	
Two UASs (application & surveillance)			\$34,000	
ATV & Trailer			\$9,000	
Smart board & library monitor			\$15,000	
Server			\$10,000	
Total			\$228,000	

Estimate of Cash Carryover from Fiscal Year 2015-16 to 2016-17

	debits	credits	balance	
Balance as of January 31 2017			\$ 5,181,245	
Warrants February 15	\$ 116,691			
Warrants February 28	\$ 128,356			
Balance as of February 28 2017			\$ 5,052,996	
Warrants March 15	\$ 99,383		\$ 4,953,613	
Warrants March 31	\$ 118,792		\$ 4,834,821	
Balance as of March 31 2017			\$ 4,754,676	<u>estimates below</u>
Warrants April 15	\$ 125,000		\$ 4,629,676	
Warrants April 30	\$ 125,000		\$ 4,504,676	
Balance as of April 30 2017		\$ 1,500,000	\$ 4,504,676	
Warrants May 15	\$ 125,000		\$ 4,504,676	
Warrants May 30	\$ 125,000		\$ 4,379,676	
Balance as of May 31 2017			\$ 5,754,676	
Warrants June 15	\$ 125,000		\$ 5,629,676	
Warrants June 30	\$ 125,000		\$ 5,504,676	
Balance as of June 30 2017				
Totals	\$ 968,175	\$ 1,500,000	\$ 5,504,676	



Zika virus Transmission

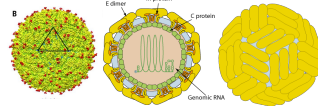
- Zika virus is another virus transmitted by *Aedes aegypti* and *Aedes albopictus* mosquitoes.
- Another Flavivirus (RNA virus) in same family as dengue, HCV and WNV.
- Most closely related to dengue viruses (dengue 1, dengue 2, dengue 3, dengue 4).
- Antibodies to Zika virus actually can bind to dengue virus and vice versa.
- However, antibodies to dengue in people with previous dengue virus infection did not seem to provide any protection from Zika infection.
- Important differences from dengue is that ZIKV can be sexually transmitted and vertically transmitted to fetus.
- Important note that ZIKV can be found in semen, cervical secretions and breast milk of infected individuals even after virus is cleared from the blood.

Long Lasting Persistence of Zika Virus in Semen (62-80 days) (Matheron et al., 2016; D'Ortenzio et al., 2016; Rowland et al., 2016).

ZIKV isolated from several body fluids: blood, urine, saliva, breastmilk, and semen and tears (Plourde et al., 2016)(Miner et al., 2016)

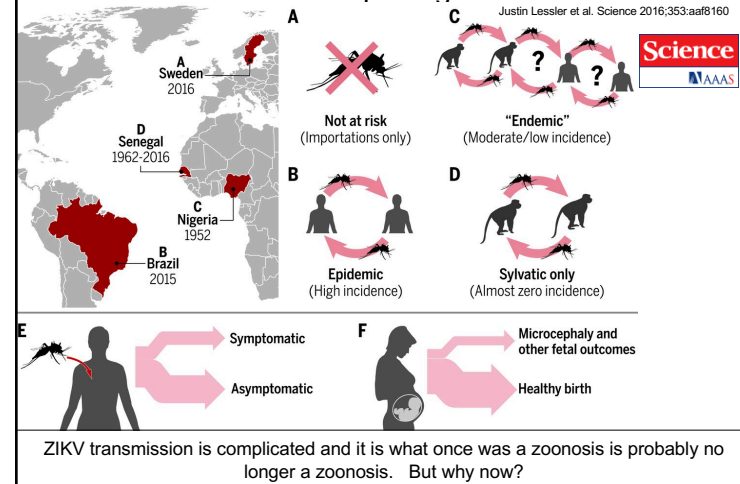
ZIKV persistence in cervical mucus (genital tract) 11 days after onset of fever (no virus in blood and urine). (Prisant et al., 2016)

ZIKV: Virion Structure

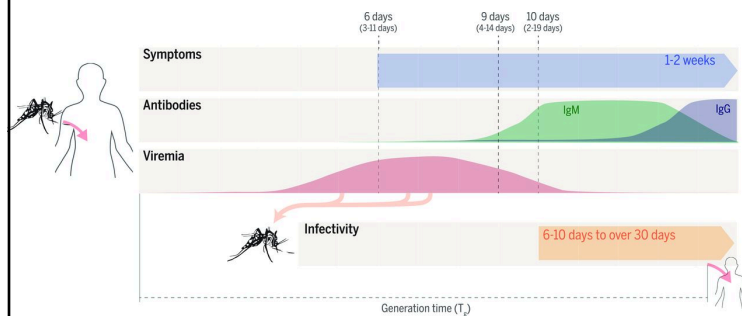


Sirohi et al, 2016

The effect of ZIKV is a function of the local transmission and viral pathogenesis



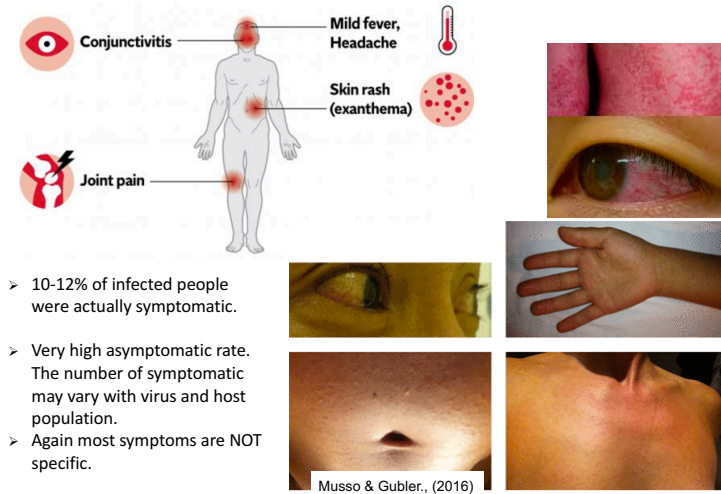
Schematic of human and mosquito infection



Justin Lessler et al. Science 2016;353:aaf8160



ZIKV: Disease




Clinical Manifestations of Zika Virus Infection

Acute infection

- Fever
- Rash
- Conjunctivitis
- Myalgia
- Arthralgia

Neurological manifestations

- Guillain-Barre Syndrome (GBS) in adults
- Congenital Zika syndrome in infants



Rash
Examples

Conjunctivitis

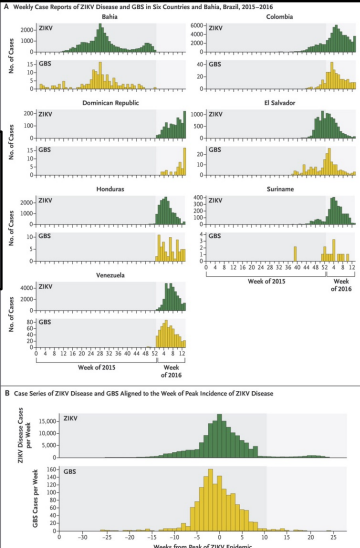
Association of Guillain-Barre syndrome with Zika infection

(dos Santos, T. NEJM, 2016)

“Guillain-Barré syndrome (GBS) is an uncommon autoimmune disorder characterized by varying degrees of weakness, sensory abnormalities, and autonomic dysfunction due to peripheral nerve or nerve root damage.”
 CDC (<http://www.cdc.gov/mmwr>)

↑ Increase in % of GBS cases in these countries correlated with Zika epidemic

- 172% in Bahia, Brazil
- 211% in Colombia
- 150% in Dominican Rep
- 877% in Venezuela



A Weekly Case Reports of ZIKV Disease and GBS in Six Countries and Bahia, Brazil, 2013–2016

B Case Series of ZIKV Disease and GBS Aligned to the Week of Peak Incidence of ZIKV Disease


ZIKV infection during pregnancy

- ZIKV has been shown to infect placenta and reach fetal tissue. ZIKV infection during first trimester probably leads to most severe microcephaly.
- ZIKV has been detected in brain glial cells and neurons, placenta, and amniotic fluid of babies with microcephaly, further linking infection during pregnancy to congenital disease.
- However, infection of the mother in the 2nd or 3rd trimester and prolonged viremia could contribute to fetal abnormalities

Congenital Zika Syndrome

Microcephaly is usually a result of the failure of the brain to grow at normal rate. The skull literally grows to accommodate growth of brain tissue.

Microcephaly is determined by measuring circumference of head.



Typical Head Size Typical Head Size

Baby with Typical Head Size Baby with Microcephaly Baby with Severe Microcephaly

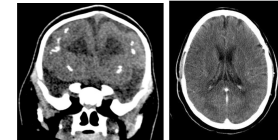
Congenital Zika Syndrome babies with microcephaly



Photos: Claudete Cardoso, MD
Courtesy of Lee Riley, MD.

Congenital Zika syndrome Additional adverse outcomes from ZIKV infection of fetus

- > Intracranial calcifications
- > Other brain abnormalities
- > Eye anomalies
- > Hearing loss
- > Impaired growth
- > Spontaneous abortion (<20 wks gestation)
- > Seizures
- > Swallowing impairment
- > Developmental delay
- > Piercing scream



Prevent Zika infection

Invasive *Aedes* surveillance and control

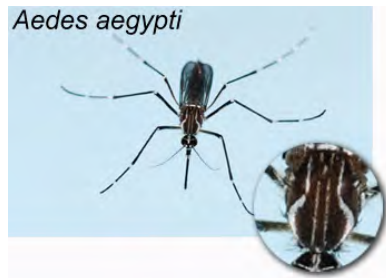


Eric Haas-Stapleton, PhD
Laboratory Director

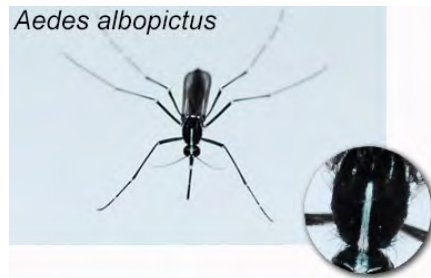
Alameda County Mosquito Abatement District

Invasive mosquitoes that spread Zika virus

Both have black and white stripes on their bodies and legs



Aedes aegypti
lyre-shaped pattern on thorax



Aedes albopictus
bright lateral line on thorax



Photo credit: <http://www.nea.gov.sg/>

Invasive *Aedes* compared to native mosquitoes

Overview

- Mosquitoes that transmit
- Habitats
- Biting behavior

Surveillance

- Trap density
- Enhanced surveillance for travel-related cases

Control

- Parcel inspection
- Breeding source reduction
- Biorational pesticide
- Chemical pesticide
- Community engagement

Native mosquitoes that probably don't spread Zika virus



Culiseta mosquitoes



Culex mosquitoes



Anopheles mosquitoes

Mosquito habitats

Native mosquitoes

Invasive *Aedes*

LARGE --- > small



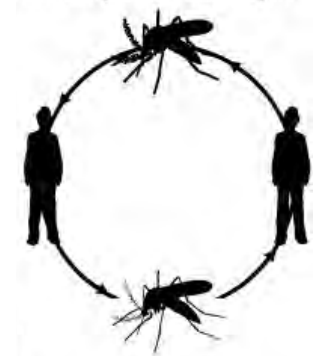
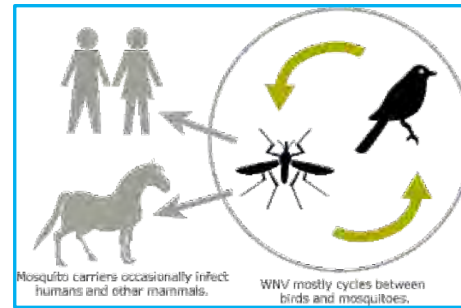
Biting preferences

Native mosquitoes

Invasive *Aedes*

Bird > human

Human > other



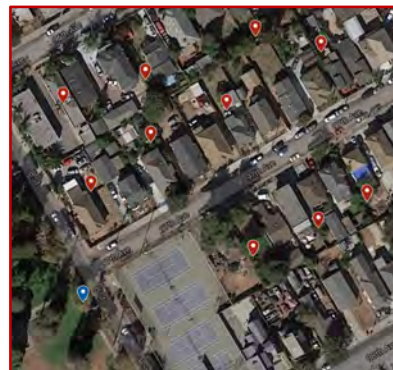
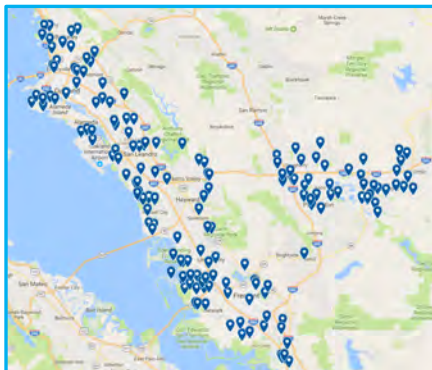
Surveillance: Trap density

Flight Distance

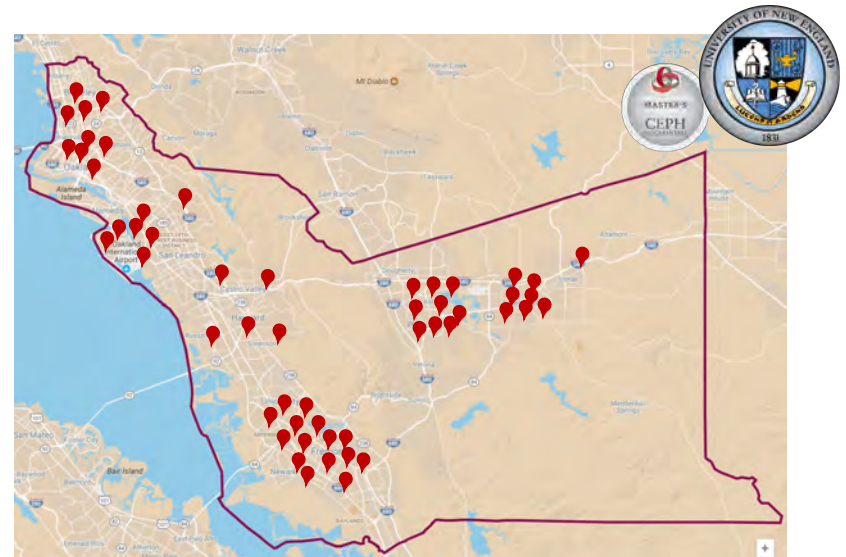
LONG (miles) ----- short (yards)

Native mosquitoes

Invasive *Aedes*



Risk-based invasive *Aedes* trap network

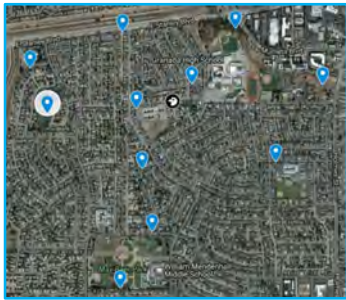


inverted teardrops illustrate hypothetical trap locations

Disease in animals triggers enhanced surveillance

Native mosquitoes

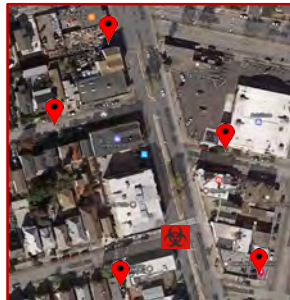
Dead bird report to hotline and testing at ACMAD



Determine if bird transmitted WNV to nearby mosquitoes

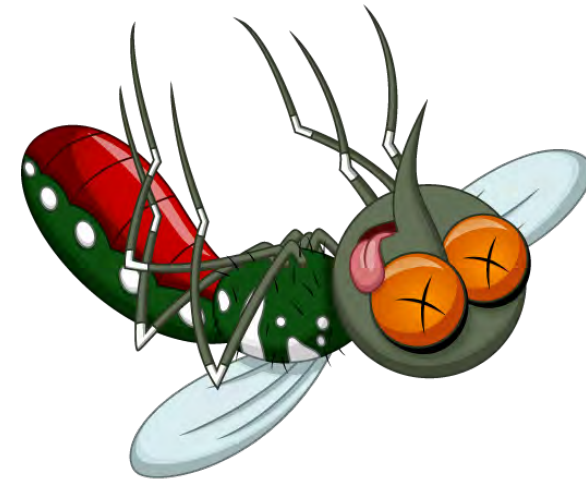
Invasive *Aedes*

Travel-related Zika reported by ACDPH



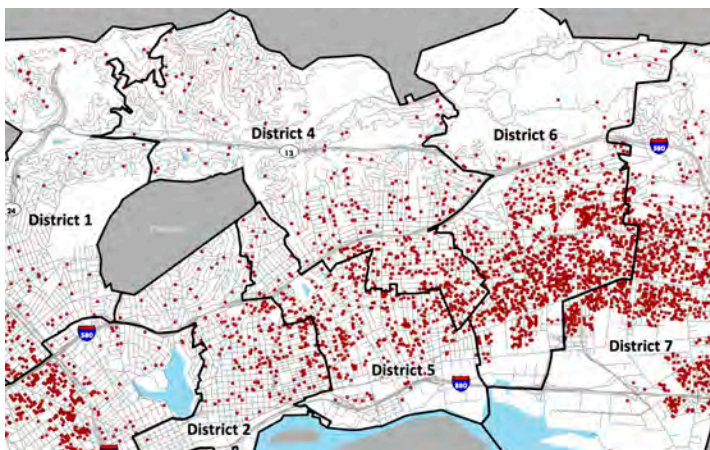
Determine if invasive *Aedes* are present that could transmit Zika

Mosquito control



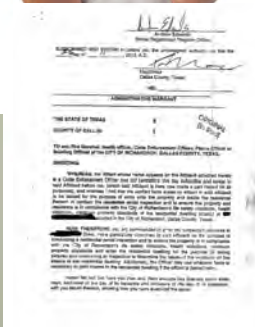
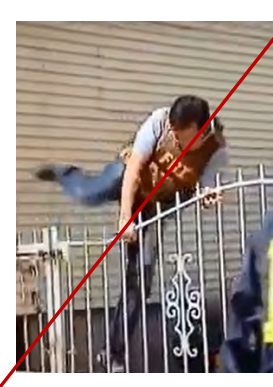
Property inspection: sanitize or treat

Each property near to where invasive *Aedes* are found would be thoroughly inspected and sanitized

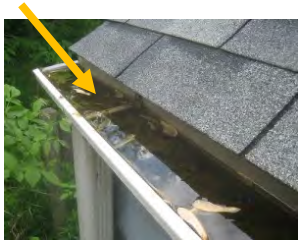


circles illustrate hypothetical parcel inspection sites

Challenges accessing properties



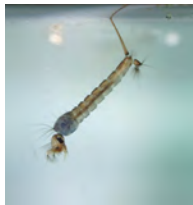
Finding *Aedes* breeding sources takes time



Breeding source reduction



Biorational pesticide applications



Chemical pesticide applications



Pesticide application in the near future



Community engagement

Native mosquitoes

- Report dead birds
- “Dump and drain” back yard containers
- Awareness campaigns

Invasive *Aedes*

- Community-driven surveillance
- Community Emergency Response Teams (CERT)
- Parcel inspection \ sanitation
- Awareness campaigns

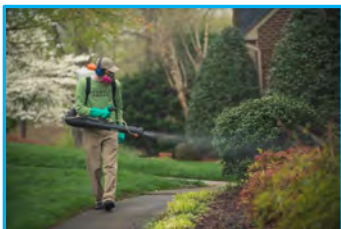


Shifting responsibility for sustained control

Native mosquitoes



Invasive *Aedes*



ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
LIST OF WARRANTS DATED **MARCH 15 2017.**

WAR NO	PAYEE	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
043317	Biological Specialist			
	Total salary less deductions for payroll period	600001	2,704.57	
043317	Mosq Control Tech	"	2,254.67	
043317	Lab Seasonal	600001	570.06	
043317	Vector Biologist	"	2,790.60	
043317	Vector Biologist	600001	2,881.09	
043317	Mosq Control Tech	"	2,220.81	
043317	Regulatory & Public Affairs Director	600001	2,795.19	
043317	District Manager	"	3,591.46	
043317	Asst Mosq Control Tech	600001	2,169.42	
043317	IT Director	"	3,010.47	
043317	Lab Director	600001	2,926.96	
043317	Field Operations Supervisor	"	3,539.52	
043317	Office Assistant	600001	1,661.83	
043317	Vector Biologist	"	3,539.77	
043317	Mosq Control Tech	600001	2,570.71	
043317	Mosq Control Tech	"	2,225.00	
043317	Mechanical Specialist	600001	3,183.83	
043317	IRS			
	Federal tax withheld (payroll)	600001	7,382.38	
043317	Medicare Tax Withheld (payroll)	600001	839.39	
043317	District Contribution to Medicare (payroll)	600401	839.39	
043317	State of California			
	State Tax withheld (payroll)	600001	2,260.47	
043317	EDD	600001	515.47	56,473.06
043417	Public Employees' Retirement System			
	Employee Contributions	600001	16.00	
	Employee Paid Member Contributions, 7% & 6.5%	600001	4,358.09	
	Employer Contribution 9.558% & 6.930%	600201	5,484.74	9,858.83
043517	Aetna Life & Annuity			
	Employee Contributions	600001		150.00
043617	CALPERS 457 Plan			
	Employee Contributions - PERS 457	600001		2,255.00
043717	Delta Dental Plan			
	Monthly Premium	600601		4,411.85
043817	Vision Service Plan			
	Health premium	600601		651.36
043917	The Hartford			
	Life Insurance	600601		78.71
044017	Airgas			
	Dry ice cut block slab	620141.1		70.76
044217	Bearing Engineering			
	Bearing insert	610141		86.56
044317	Cintas			
	Laundry service	610011	263.24	
	Bathroom Cleaning	620021	1,703.00	1,966.24
044417	Corporate Park Landscaping			
	Landscape maintenance	610122		195.00
044517	Donato Builders			
	Shed project	800002		4,625.44
044617	Dale Hardware Ace			
	Field tools	610461.2		54.57
044717	Grainger			
	Shop supplies	610141		388.49
044817	Kimball Midwest			
	Shop supplies	610141		567.80
044917	Liewer Enterprises Inc.			
	Shop supplies	610141		1,751.52
045017	PFM Asset Management			
	Investment advisory services	610261		1,676.92
045117	PG & E			
	Utilities	610021		393.27
045217	Praxair			
	Lab supplies	620141.7		29.73
045317	Quench			
	Water machine	620021		142.84
045417	Techniclean			
	Towels	620021		149.97
045517	Washburn, Jan			
	Reimbursement for MVCAC Annual Meeting	610191.3	682.65	
	Trustee in Lieu Payment	610191.4	100.00	782.65
045617	Waste Management			
	Garbage, February service	610021		197.45

WAR NO	PAYEE	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
045717	U.S Bank			
	Amazon - Boots	610001	137.70	
	Amazon - Boots	610001	132.42	
	Amazon - Boots	610001	127.09	
	Amazon - Boots for D.A	610001	142.09	
	Herman Miller - Table for study room	620041	1,162.31	
	Office Depot - Tape	620041	6.03	
	PayPal - Software for taxes	620041	39.00	
	Canon Financial - Copier rental	620041	340.23	
	Amazon - Wireless keyboard	620042	65.95	
	Amazon- Keyboard	620042	57.05	
	Amazon -Keyboard	620042	87.76	
	Best Buy - I pad supplies	620042.1	213.00	
	Best Buy - Credit	620042.1	(49.13)	
	Amazon - Paint sticks	620141.1	65.74	
	Bioquip - LED Element	620141.1	1,612.01	
	The Home Depot - Trap supplies	620141.1	25.21	
	Amazon - Bright light sticks	620141.2	14.88	
	Stericycle - Monthly charge	620141.3	188.53	
	Tech Safety - Lab supplies	620141.5	270.00	
	Amazon - Excel users guide	620141.5	37.45	
	Fisher Scientific - Desiccator Cover	620141.5	150.02	
	Amazon - Storage bags	620141.5	39.98	
	Amazon - Bug spray	620141.5	33.42	
	Fisher Scientific - Fluorescent light sticks	620141.8	65.96	
	Lampire - Chicken blood	620141.8	230.50	
	Bioquip - Insect net	620141.8	307.25	
	Amazon - Foam cutter	620261	16.45	
	Amazon - Foam cutter	620261	30.73	
	The Ford Store - Handle for V-40	610141	26.29	
	Harbor Freight Tools - Five gallon can	610141	21.94	
	Shoe Stop Shoe - Strap repair	610141	30.00	
	Amazon - Tire for V-40	610141	432.80	
	Telepacific- Communications	610022.1	1,105.89	
	GoDaddy - Renewal	610022.1	9.99	
	Chevron - Gas for van	610191.1	67.47	
	MVCAC - MVCAC Conference E.C	610191.3	235.00	
	Statehouse - Lunch E.C	610191.3	11.25	
	Wok in the Park - Lunch E.C	610191.3	15.00	
	Iron Horse - Dinner E.C	610191.3	19.66	
	Sheraton - Hotel for conference E.C	610191.3	226.39	
	Dalziel Garage - Parking E.C	610191.3	11.00	
	Dalziel Garage - Parking E.C	610191.3	9.00	
	MVCAC - MVCAC Conference E.H	610191.3	390.00	
	Town and Country - Breakfast for two	610191.3	40.48	
	Town and Country - Breakfast for two	610191.3	39.48	
	Town and Country - Lunch E.H	610191.3	12.78	
	The Counter - Breakfast E.H	610191.3	14.07	
	Stone Oven - Lunch E.H	610191.3	18.21	
	Town and County Resort - Hotel for conference E.H	610191.3	809.80	
	CSDA - Credit R.C	610191.3	(25.00)	
	Tequila Museo - Dinner R.C	610191.3	35.78	
	Statehouse - Lunch R.C	610191.3	15.62	
	Sheraton - Hotel for conference R.C	610191.3	226.39	
	MVCAC - MVCAC conference R.C	610191.3	340.00	
	Zak Taxi - Transportation R.C	610191.3	32.04	
	Ortegas - Dinner for R.C & E.H	610191.3	42.54	
	Pyramid Ale - Breakfast R.C	610191.3	17.48	
	Town and Country - Breakfast R.C	610191.3	5.00	
	Robertos Taco shop - Lunch R.C	610191.3	7.27	
	Red Fox Steak House - Dinner R.C, E.H, J.W	610191.3	134.43	
	Lyft - Transportation R.C	610191.3	6.95	
	Lyft - Transportation R.C	610191.3	17.24	
	Buffalo Wild Wings - Lunch R.C	610191.3	20.00	
	Craft Brews - Lunch R.C	610191.3	23.00	
	Lyft - Transportation R.C	610191.3	6.95	
	Lyft - Transportation R.C	610191.3	11.02	
	Town and Country - Breakfast for R.C, E.H, J.W	610191.3	61.72	
	Town and Country - Bottle water R.C	610191.3	3.39	
	Town and County Resort - Hotel for conference R.C	610191.3	809.80	
	MVCAC -MVCAC Meeting D.A	610191.3	335.00	
	MVCAC - MVCAC conference R.F	610191.3	235.00	
	Safeway - Board supplies	610191.4	50.92	
	Castro Valley Sport - Field supplies	610461.2	21.75	
	Amazon- Fish supplies	610461.4	68.84	
	REI - Board plaques	610461.5	20.00	
	Amazon - Portable Aero	610461.6	47.20	
	Myotcstore - Tick/ insect wipes	610451	609.33	
	Myotcstore - Tick/ insect wipes	610451	(7.18)	
	Constant Contract - Contract	610451	20.00	
	Best buy - I pad supplies	650031.1	87.39	
	Amazon - I pad supplies	650031.1	49.38	

12,425.38

99,383.40

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
LIST OF WARRANTS DATED MARCH 31, 2017

WAR NO	PAYEE	FOR	ACCT NO	AMT OF CHARGE	AMT OF WARRANT
045817	Biological Specialist	Total salary less deductions for payroll period	600001	2,834.58	
045817	Mosq Control Tech	"	600001	2,254.66	
045817	Lab Seasonal	"	600001	803.81	
045817	Vector Biologist	"	600001	2,942.79	
045817	Vector Biologist	"	600001	2,881.08	
045817	Mosq Control Tech	"	600001	2,220.80	
045817	Regulatory & Public Affairs Director	"	600001	2,906.94	
045817	District Manager	"	600001	4,117.87	
045817	Asst Mosq Control Tech	"	600001	2,275.89	
045817	IT Director	"	600001	3,144.64	
045817	Lab Director	"	600001	3,121.78	
045817	Field Operations Supervisor	"	600001	3,609.73	
045817	Office Assistant	"	600001	1,661.83	
045817	Vector Biologist	"	600001	3,539.76	
045817	Mosq Control Tech	"	600001	2,570.72	
045817	Mosq Control Tech	"	600001	2,225.01	
045817	Office Seasonal	"	600001	345.24	
045817	Mechanical Specialist	"	600001	3,317.71	
045817	IRS	Federal Tax Withheld	600001	7,995.61	
045817		Medicare Tax Withheld	600001	883.49	
045817		District Contribution to Medicare	600401	883.49	
045817	State of California	State Tax Withheld	600001	2,484.49	
045817	Underpayment to Bank of America	Underpayment to Bank of America	600001	365.22	
045817	EDD	Ca Disability	600001	537.08	59,193.78
045917	Public Employees' Retirement System	Employees contributions	600001	16.00	
		Employee paid member contributions, 7%, 6.5%	600001	4,374.07	
		District contribution 9.558%, 6.930%	600201	5,503.01	9,893.08
046017	Aetna Life & Annuity	Employee contributions	600001		150.00
046117	CalPERS 457 Plan	Employees contributions - PERS 457	600001		2,255.00
046217	CalPERS	Health insurance	600601		31,685.40
046317	P. Robert Beatty	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
046417	Elizabeth Cooley	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
046517	James Doggett	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
	Robert Dickinson	Trustee in lieu expenses - 1042nd meeting	610191.5		-
046617	Richard Guarienti	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
046717	Eric Hentschke	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
046817	Humberto Izquierdo	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
046917	Elisa Marquez	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
047017	Katherine Narum	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
047117	Wendi Poulson	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
047217	Ed Hernandez	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
	Ronald Quinn	Trustee in lieu expenses - 1042nd meeting	610191.5		-
047317	Jan Washburn	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
047417	George Young	Trustee in lieu expenses - 1042nd meeting	610191.5		100.00
047517	Airgas	Dry ice pellets	620141.1		302.47
047617	All-Ways Green Services	Janitorial Service	620021		512.50
047717	Adapco	Vectolex, Altosid	610461.1		4,548.04
047817	Alemayehu, Dereje	Reimbursement for Health insurance for January 2017	600001		117.35
047917	Busam, John	Reimbursement for Health insurance for January 2017	600001		117.35
048017	Cintas	Personal supplies	610001	200.89	
		Laundry service	610011	174.22	
048117	Castillo, Erika	Reimbursement for Health insurance for January 2017	600001		117.35
048217	Clausnitzer, Ryan	Reimbursement for Health insurance for January 2017	600001		117.35
048317	Cardenas, Miguel	Reimbursement for Environmental Class	610191.7		827.99
048417	Ferdan, Robert	Reimbursement for Health insurance for January 2017	600001		73.34
048517	Haas-Stapleton, Eric	Reimbursement for Health insurance for January 2017	600001		73.34
048617	Huston, Joseph	Reimbursement for Health insurance for January 2017	600001		73.34
048717	Mobile Modular Public Storage	Shed Project	800002		323.59
048817	Naylor Steel, INC	Shop supplies	620141.1		40.50
048917	Praxair	Lab supplies	620141.1		29.73
049017	PG & E	Utilities	610021		1,450.47
049117	Sonitrol	Monitoring charges and CCTV Fees	620021		743.00
049217	TTM Communications, Inc.	Voicemail reprogramming	610022.2		175.00
049317	Tire Treds	Tire Mount and Balance	610141		197.50
049417	Verizon	Communication expenses	610022.4	550.36	
		Equipment	650031.1	988.07	1,538.43
049417A	Wieland, Mark	Reimbursement for Health insurance for January 2017	600001		117.35
049517	Wright Express	Fuel expenses, statement ended 03-15-17	610191.1		2,544.05
Total Warrants					118,792.41
Total Warrants March 31st					\$ 118,792.41
Total Warrants March 15th					\$ 99,383.40
Total March Warrants					\$ 218,175.81

Alameda County Mosquito Abatement District Budget Summary
As of March 31, 2017. (9 of 12 mth, 75%)

Account #		EXPENDED IN (March)	EXPENDED TO DATE	BUDGETED	BALANCE	% EXPEND ED
SALARY & BENEFITS						
600001	Salary and Wages	\$ 127,518.12	\$ 1,249,273.61	\$ 1,700,594.00	\$ 451,320.39	73%
600401	Contribution to Medicare	\$ 1,722.88	\$ 15,755.78	\$ 24,659.00	\$ 8,903.22	64%
600201	Contribution to Retirement	\$ 10,987.75	\$ 386,769.80	\$ 422,589.00	\$ 35,819.20	92%
600601	Contribution to Health Care	\$ 37,634.09	\$ 341,124.74	\$ 500,000.00	\$ 158,875.26	68%
SERVICE AND SUPPLIES						
610001	Clothing and personal supplies	\$ 539.30	\$ 3,402.58	\$ 8,500.00	\$ 5,097.42	40%
610011	Laundry services and supplies	\$ 638.35	\$ 5,767.07	\$ 9,000.00	\$ 3,232.93	64%
610021	Utilities total	\$ 2,041.19	\$ 20,118.11	\$ 35,900.00	\$ 15,781.89	56%
Communications						
610022.1	Telephone Service & Internet	\$ 1,115.88	\$ 7,968.57	\$ 13,800.00	\$ 5,831.43	58%
610022.3	Website and email hosting	\$ -	\$ 528.33	\$ 850.00	\$ 321.67	62%
610022.4	Cell phone service (Verizon)	\$ 550.36	\$ 4,826.63	\$ 9,000.00	\$ 4,173.37	54%
610141	Maintenance of equipment	\$ 3,502.90	\$ 15,454.91	\$ 45,000.00	\$ 29,545.09	34%
Maintenance of structure and improvements						
610122.1	Landscaping service	\$ 195.00	\$ 1,755.00	\$ 3,600.00	\$ 1,845.00	49%
610122.2	Building Maintenance and repairs	\$ -	\$ 13,859.03	\$ 10,000.00	\$ (3,859.03)	139%
610122.3	Yard Maintenance and repairs	\$ -	\$ -	\$ 1,400.00	\$ 1,400.00	0%
Transportation, travel, & training						
610191.1	Fuel and GPS (WexMart)	\$ 2,611.52	\$ 26,751.49	\$ 40,000.00	\$ 13,248.51	67%
610191.3	Meetings, conferences, & travel	\$ 4,896.39	\$ 14,229.14	\$ 35,000.00	\$ 20,770.86	41%
610191.4	Board meeting expenses	\$ 150.92	\$ 379.11	\$ 1,000.00	\$ 620.89	38%
610191.5	Board payments in lieu	\$ 1,200.00	\$ 8,600.00	\$ 16,800.00	\$ 8,200.00	51%
610461.53	Continuing Education fees	\$ -	\$ 145.00	\$ 4,000.00	\$ 3,855.00	4%
610191.6	Training for trustees	\$ -	\$ -	\$ 1,000.00	\$ 1,000.00	0%
610191.7	Staff Training (automotive, IT, staff development)	\$ 827.99	\$ 9,909.47	\$ 80,000.00	\$ 70,090.53	12%
Professional services						
610261.1	Audit	\$ -	\$ 13,135.00	\$ 13,000.00	\$ (135.00)	101%
610261.2	Actuarial reports	\$ -	\$ 1,300.00	\$ 3,000.00	\$ 1,700.00	43%
610261.3	Helicopter service	\$ -	\$ -	\$ 30,000.00	\$ 30,000.00	0%
610261.4	Legal services	\$ -	\$ 1,255.84	\$ 20,000.00	\$ 18,744.16	6%
610261.5	MVCAC Research Foundation	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	0%
610261.6	UC Davis Zika virus vector competency research	\$ -	\$ 7,500.00	\$ 7,500.00	\$ -	100%
610261.7	Tax collection service - SCI	\$ -	\$ 32,371.98	\$ 35,000.00	\$ 2,628.02	92%
610261.8	Payroll service	\$ -	\$ 49.95	\$ 6,000.00	\$ 5,950.05	1%
610261.9	Environmental consultant services for regulatory issues	\$ -	\$ -	\$ 5,000.00	\$ 5,000.00	0%
610261.1	HR Services (RGS)	\$ -	\$ 99.90	\$ 25,000.00	\$ 24,900.10	0%
610261.11	OPEB service	\$ 1,676.92	\$ 13,197.82	\$ 22,100.00	\$ 8,902.18	60%
610351	Annual memberships and dues total	\$ -	\$ 17,175.00	\$ 22,935.00	\$ 5,760.00	75%
610378	Insurance total	\$ -	\$ 113,867.00	\$ 140,138.00	\$ 26,271.00	81%
610451	Community education total	\$ 622.15	\$ 8,580.81	\$ 35,000.00	\$ 26,419.19	25%
Special expenses						
610461.1	Pesticides	\$ 4,548.04	\$ 47,025.86	\$ 200,000.00	\$ 152,974.14	24%
610461.2	Field supplies (dippers etc)	\$ 76.32	\$ 114.15	\$ 1,000.00	\$ 885.85	11%
610461.4	Fish and Fish Maint.	\$ 68.84	\$ 1,315.86	\$ 4,000.00	\$ 2,684.14	33%
610461.51	Aerial Pool Survey	\$ -	\$ -	\$ 17,000.00	\$ 17,000.00	0%
610461.52	Permits	\$ -	\$ 3,232.00	\$ 3,000.00	\$ (232.00)	108%
610461.54	Board plaques and nameplates	\$ 20.00	\$ 215.80	\$ 1,000.00	\$ 784.20	22%
610461.6	Spray equipment & Safety	\$ 47.20	\$ 6,833.47	\$ 14,000.00	\$ 7,166.53	49%
620021	Household expenses total	\$ 3,251.31	\$ 13,253.31	\$ 14,480.00	\$ 1,226.69	92%
620041	Office supplies total	\$ 1,547.57	\$ 12,638.42	\$ 22,400.00	\$ 9,761.58	56%
Information technology						
620042.1	Computers, supplies and software	\$ 374.63	\$ 7,008.37	\$ 15,000.00	\$ 7,991.63	47%
620042.2	Contract services for Computer network	\$ 175.00	\$ 475.00	\$ 4,000.00	\$ 3,525.00	12%
620042.3	Database consultant	\$ -	\$ 4,717.50	\$ 25,000.00	\$ 20,282.50	19%
620141	Laboratory total	\$ 3,514.14	\$ 37,525.47	\$ 88,594.00	\$ 51,068.53	42%
620261	Small tools and instruments	\$ 47.18	\$ 2,004.25	\$ 2,500.00	\$ 495.75	80%
650031.1	Capital expenditures	\$ 1,124.84	\$ 162,706.31	\$ 295,000.00	\$ 132,293.69	55%
TOTAL EXPENDITURES		\$ 213,226.78	\$ 2,634,217.44	\$ 4,039,339.00	\$ 1,405,121.56	65%
TOTAL WARRANTS		\$ 218,175.81				
Discrepancy from Expenditures and Warrant list ¹		\$ 4,949.03				

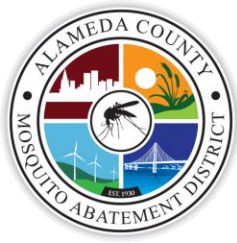
1- \$4,949.03 spent in Capital Replacement, account 800002

Investments, Reserves, and Cash Balance

Account #		Activity in March	Activity to Date	Beginning Balance 7/1/16	Current Balance	% change		
Budget Reserves								
800001	Working Capital (Dry Period Cash)	\$ -	\$ -	\$ 2,427,743.00	\$ 2,427,743.00	0.0%		
800002	Capital Replacement	\$ 4,949.03	\$ 20,937.21	\$ 544,731.00	\$ 523,793.79	-3.8%		
800003	Public Health	\$ -	\$ -	\$ 500,000.00	\$ 500,000.00	0.0%		
800004	Contingency ¹	\$	\$ 250.00	\$ 25,000.00	\$ 24,750.00	-1.0%		
VCJPA Reserve								
800006	VCJPA Contingency	\$	\$ 77,000.00	\$ 210,282.00	\$ 287,282.00	36.6%		
<hr/>								
		February Balance			March Balance	% change		
Investment Accounts								
800005	LAIF	\$ 150,599.37			\$ 150,599.37	0.0%		
	OPEB Fund	\$ 4,022,693.64			\$ 4,048,507.14	-0.6%		
<hr/>								
		February Balance	March Expenditures	Deposits ²	March Balance	% change	Payments to County (ERAF)	
Bank of America (Payroll Account)		<hr/>						
County Account		\$ 5,052,996.28	\$ 218,175.81	\$ (12,066.03)	\$ 4,754,675.62	100.0%	\$ 92,210.88	

1- Adjustment to Contingency account, from February expenses.

2- Deposits from the County



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District Manager

1. OPERATIONS

A. Narrative

Extensive inspections and treatments of hundreds of acres were conducted for *Culex tarsalis* during the month of March. This will continue for months to come due to large amounts of water still standing in sources throughout Alameda County that are perfect breeding sources for this species. Many areas that were treated for our winter species are now prime sources for *Cx. tarsalis* and will need inspections and treatments until they dry out. Aside from the district's normal sources, field staff are encountering many areas that are holding significant amounts of rainwater that will require monitoring for mosquito breeding until they dry down as well.

Most of the County's creeks, canals, and ditches still have enough flow to prevent significant mosquito breeding from occurring, but field staff are watching these sources closely. Once the flow slows or stops all together, these sources will need to be put into full inspection and treatment rotation. During March, again due to rain fall, catch basins and storm drains did not become issues for *Culex pipiens* or other mosquito species due to consistent inflow of water. These sources will require close monitoring as well as months progress. Based on field observations, lab trapping data, and service request information it appears that ACMAD's winter species treatment program has been effective. The numbers of adult *Aedes squamiger*, *Aedes washinoi*, and *Culiseta inornata* in the environment are at low numbers especially considering the rain fall totals.

Spring-like weather in the month of March helped generate a large number of requests for service. As is the norm, a lot of requests for mosquito fish were received. There were also a significant number of service requests for inspection of potential mosquito breeding sources because of extensive standing water. March was also a banner month for "mosquito-like" insects including midges and crane flies. Both of these groups of dipterans generated a large number of requests for service. We expect to see this to continue for months to come. *Culiseta incidens* also played a role in calls received by ACMAD in March. This species is active all year but can have a significant impact in spring due to people getting outside more and its ability to breed in numerous back yard sources.

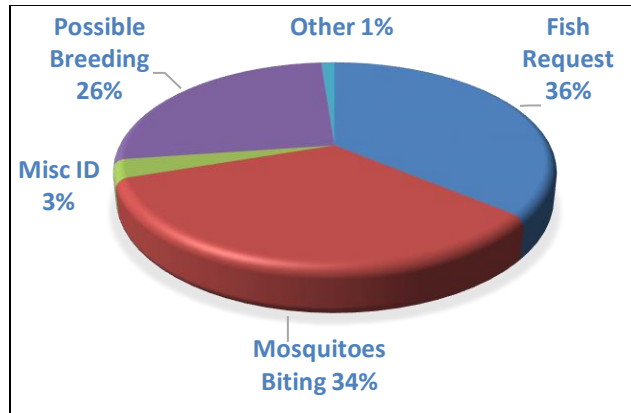
Final treatments for *Aedes sierrensis* were conducted in the first part of March. This species does not travel far from its emergence sources but can generate significant localized calls. *Ae. sierrensis* typically breeds in tree holes but will also utilize leaf filled containers, ponds, and tires. These can be difficult sources to locate and treat and field staff often adds new sources each season. This is typically a tiny mosquito but they are aggressive day time biters and can vector dog heart worm. An adult *Ae. sierrensis* bears a resemblance to two of the introduced *Aedes* species that have been located in many regions of California, so careful identifications will be conducted any time adults are collected to confirm their identity.

ACMAD's field operations were well represented at the 85th annual Mosquito and Vector Control Association of California (MVCAC) conference in San Diego in March. Field Operations Supervisor Joseph Huston gave a presentation titled "Mandated Trash Capture Devices: Impeding Trash Without Impeding Mosquito Abatement" and Vector Biologist Ben Rusmisl presented a poster titled "Suppressing *Culex erythrothorax* using Mosquito Magnet traps."

Joseph Huston
Field Operations Supervisor

B. Operational Data

1. Service Requests



March 2017 Operational Data	
Total service requests	169
March- Ten year average	128
March- Five year average	122
Last March	166
Range (10 yr) =	67-220
Insect species attributed to service request	#
<i>Culiseta incidens</i>	55
Midges	18
<i>Culex tarsalis</i>	7
<i>Aedes washinoi</i>	3
Crane flies	3
<i>Culiseta inornata</i>	1
<i>Aedes sierrensis</i>	1
Fungus gnats	1

2. Other

Number of all injuries during 2017 = 1

3. Activity Report

Vacation Hours Used	179
Sick Hours Used	162
Workers Comp.	0
ETO Used	8
Total Leave	349
ETO Hours Accrued	32.25

2. LAB

Summary

- Weather for March 2017 was warmer and less rainy than prior months, affording substantially increased opportunities for mosquito surveillance.
- No detections of arboviruses in birds or mosquitoes during March 2017.
- No invasive *Aedes* mosquitoes detected in Alameda County during 2017. Alameda County was reclassified by the California Department of Public Health as a county that does not have invasive *Aedes* mosquitoes.
- The Centers for Disease Control and Prevention (CDC) Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) awarded ACMAD \$45,000 for enhanced invasive *Aedes* surveillance and a public awareness campaign.
- *Aedes squamiger* abundance and time of emergence for 2017 does not differ substantially from what was observed during the prior three years.
- Lab personnel focused upon continued testing of the soon-to-be implemented MapVision database and data visualization software.
- Two oral and one poster presentations that contained data from the ACMAD Lab were presented at the Annual Meeting of the Mosquito and Vector Control Association of California.

Budget

As of March 31, 2017 (month 9 of 12, 75 % of the year), 42 % of the lab budget has been expended.

Mosquito Abundance Monitoring

- **Native mosquito abundance monitoring.**
 - Weather for the month of March had less rain and increased temperatures relative to the prior month (minimum and maximum average temperatures of 41.1 °F and 77.7 °F, respectively; average temperature of 56.8 °F; 2.06 inches of rain; 254.4 heat degree days; data from Vantage Pro2 weather station installed at ACMAD headquarters; Figure 1). The warm weather and reduced rain afforded increased opportunities for mosquito surveillance using CO₂ traps.
 - An average of 20.5 +/- 44.3 mosquitoes were collected per CO₂ trap night (n = 130 CO₂ trap nights during March 2017); a 39-fold increase relative to the prior month. The mosquito species driving the increased abundance relative to February include: *Aedes washioni*, *Culex erythrothorax*, and *Culex tarsalis*.
 - New Jersey Light traps (NJLT) are monitored each week of the year. During March, an average of 1.07 mosquitoes were captured per NJLT trap night (n = 385 trap nights); a 1.55-fold increase in mosquito abundance relative to the prior month.
 - *Breeding of Aedes squamiger*. The study of *Ae. squamiger* abundance in the marshes of Alameda County described in the March 2017 Lab Report to the Board of Trustees. A total of 47 *Ae. squamiger* were collected in CO₂ traps and NJLT during the month of April. Retrospective analysis of *Ae. squamiger* abundance for 2008 – 2017 show the no substantial temporal shift in the timing of *Ae. squamiger* emergence over the prior decade (Figure 2). While *Ae. squamiger* abundance was similar for 2014 – 2016, it was higher than what was observed relative to prior years.

- **Invasive *Aedes* mosquito monitoring (prepared by Dereje Alemayehu, Biological Specialist).**
 - The Lab has continued to deploy traps targeting invasive *Aedes* mosquitoes. However, to date there has been no detection of invasive *Aedes* mosquitoes collected in any of the invasive *Aedes* traps we have deployed throughout the County.
 - For the month of March 2017, we had a total of 106 invasive *Aedes* mosquito traps deployed throughout Alameda County. Out of these 51 traps are AGO (autocidal gravid oviposition) traps, 51 Ovi-bucket traps and 4 BG-Sentinel.

Table 1. Traps used by ACMAD for invasive *Aedes* surveillance.

TRAP TYPES	AGO	OVI	BG-SENTINEL	TOTAL # OF TRAPS
PERMANENT TRAPS	17	17	4	38
TOTAL # OF TRAPS FOR MARCH 2017	17	17	4	38

Arbovirus Monitoring

- **WNV in birds and mosquitoes.** No WNV-positive birds or mosquitoes were detected in Alameda County for the month of March. For the year 2017, no mosquitoes or birds have been found to contain WNV, SLE or WEE.

Preparations for Abundance Surveillance during 2017

- ACMAD applied for funding from the Centers for Disease Control and Prevention (CDC) Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) to support an intensified invasive *Aedes* surveillance and public outreach program. We were awarded \$45,000. Funds will be used to purchase ad space on an electronic billboard near Oakland Coliseum and to deploy an invasive *Aedes* trap network throughout Alameda County. This network will consist of 400 – 600 oviposition bucket traps that will be placed at higher density in areas of the county having increased risk for invasive *Aedes* mosquito breeding. These higher risk areas will be identified by Masters of Public Health student from the University of New England that will be interning with the ACMAD lab during the spring and summer of 2017.
- The lab has continued with testing and providing comment on the beta version of the MapVision database and data visualization software. Upon discovering that the workflow for entering data into MapVision is not compatible with the workflow used by the ACMAD lab, we discussed the issue with Lab Managers at other MVCD in hopes of identifying an alternate workflow that could be adopted by the ACMAD lab and used with the current beta of MapVision. Because those discussions pointed to the workflow currently used by the ACMAD lab as the most efficient, we have requested that MapVision modify the software to accommodate the current workflow used in the ACMAD lab.

Research

- Three presentations that contained data generated by the ACMAD lab were made at the Annual Meeting of the MVCAC (two oral, one poster).

Figures

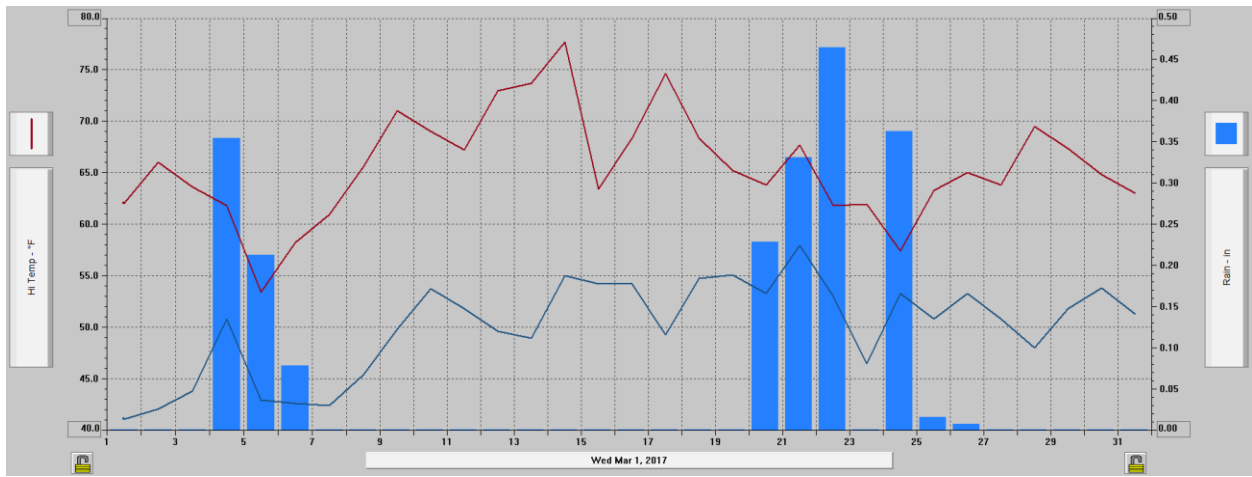


Figure 1. Temperature during the month of March, 2017 (red line is daily high temperature, blue line is daily low temperature) and rainfall (blue bars).

Aedes squamiger in traps
2008 - 2017

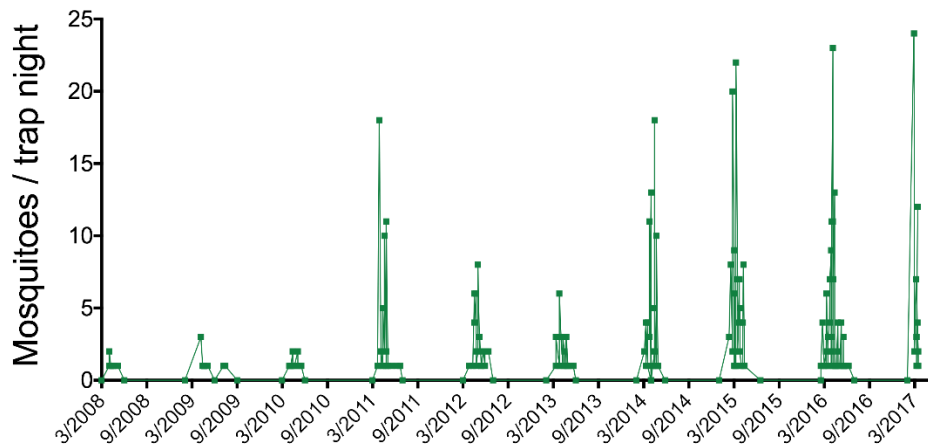


Figure 2. *Aedes squamiger* abundance from 2008 - 2017.

Submitted respectfully by Eric Haas-Stapleton, PhD on April 6, 2017.

3. PUBLIC EDUCATION

A. Upcoming Events

- **California Mosquito Awareness Week** – April 16th – April 22nd
- **Peralta Colleges EcoFest Sustainability Festival** – Thursday, April 20th, 11am-2pm (Laney College, Oakland)
- **Alameda Earth Day Festival** – Saturday, April 22nd, 10am-3pm (Washington Park, 740 Central Ave, Alameda)
- **Hayward Cinco de Mayo Festival** – Saturday, May 6th (Downtown Hayward)
- **Alden Lane Nursery Mosquitofish Giveaway** – Saturday, May 13th, 10am-2pm (981 Alden Lane, Livermore)

B. Google Analytics

	March 2017	February 2017	March 2016
Users	2,097	927	1,393
Number of Sessions	2,411	1,095	1,645
Sessions by New Visitors	2,063 (85.6%)	886 (80.9%)	1,344 (81.7%)
Pageviews	4,344	2,080	3,330
Average Session Duration	1 minute 30 seconds	1 minute 48 seconds	1 minute 38 seconds
Top Cities	Los Angeles (12.2%), Hayward (4.5%), San Francisco (4.2%), Oakland (4%), San Diego (2.9%)	Hayward (7.8%), San Francisco (3.7%), Not Set (3.6%), Oakland (3.5%), Berkeley (2.9%)	Oakland (9.3%), San Francisco (5.6%), Hayward (4.8%), Not Set (4.6%), Los Angeles (3.3%)
Top Pages	California Species (30.2%), Homepage (15.9%), Mosquito Like Insects (5.7%), Education (5.6%), Mosquitofish Request (5.1%)	Homepage (20.9%), California Species (16.9%), Education (11.8%), Mosquito Lifecycle (5.7%), About-Staff (3.7%)	Homepage (22.8%), California Species (13.5%), Mosquito Lifecycle (10.3%), Mosquitofish Request (5.9%), Education (4.6%)

C. Facebook

	March 2017	February 2017
Total Posts	5	7
Number Reached	533	326
Most Popular	DEET still the best recommended repellent	WNV+ dead bird in San Diego area
Total Number of “Likes”	122	119

D. Twitter

	March 2017	February 2017
Total Tweets	5	8
Tweet Impressions	2,883	2,173
Top Tweet (# Impressions)	DEET still the best recommended repellent	WNV+ dead bird in San Diego area (358)
Profile Visits	95	92
New Followers (Total Followers)	15 (470)	7 (455)