

**AGENDA**  
1077<sup>th</sup> MEETING OF THE BOARD OF TRUSTEES  
OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT  
MARCH 11TH, 2020

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TIME: 5:00 P.M.  
PLACE: Office of the District, 23187 Connecticut Street, Hayward  
TELECONFERENCE OPTION: call-in number: 510-783-7745  
Washington Marriott Wardman Park  
Business Center, 2600 Woodley Road NW, Washington DC, 20008  
TRUSTEES: Wendi Poulson President, City of Alameda  
P. Robert Beatty, Vice-President, City of Berkeley  
Betsy Cooley, Secretary, City of Emeryville  
Cathy Roache, County-at-Large  
Shawn Kumagai, City of Dublin  
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  
City of Piedmont, vacant  
Julie Testa, City of Pleasanton  
Victor Aguilar, City of San Leandro  
Subru Bhat, City of Union City

1. Call to order.
2. Roll call.
3. President Poulson invites any member of the public to speak at this time on any issue relevant to the District. (Each individual is limited to three minutes).
4. Presentation of the President's Award Plaque to Past Board President Eric Hentschke by President Wendi Poulson (Information only)
5. Approval of the minutes of the 1076<sup>th</sup> meeting held February 12<sup>th</sup>, 2020 (**Board action required**)
6. Report from the Finance Committee regarding the 1<sup>st</sup> draft of the 2020-21 budget (Information Only)
7. Financial Reports as of January 31<sup>st</sup>, 2020: (Information only).
  - a. Check Register
  - b. Income Statement
  - c. Investments, reserves, and cash report
  - d. Balance Sheet
8. Presentation of the Monthly Staff Report (Information only).
9. Presentation of the Manager's Report (Information only).
  - a. Trustee & Staff Anniversaries

- b. Form 700 FFPP Conflict of Interest Report: Roache, Marquez, Doggett, Testa, Bhat, Poulson
- c. Expired certificates: AB1234- Doggett, Young
- d. AMCA Annual Conference: cancelled
- e. VCJPA Annual Workshop recap
- f. CSDA Annual Conference: August 24-27, 2020- Palm Desert, CA
- g. LAFCo annexation application update

10. Board President asks for reports on conferences and seminars attended by Trustees.

11. Board President asks for announcements from members of the Board.

12. Board President asks trustees for items to be added to the agenda for the next Board meeting.

13. 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](http://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](mailto:acmad@mosquitoes.org) to request an alternative format.**

## MINUTES

### 1076<sup>th</sup> MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

February 12<sup>th</sup>, 2020

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TIME: 5:00 P.M.  
PLACE: Office of the District, 23187 Connecticut Street, Hayward  
TRUSTEES: Eric Hentschke, President, City of Newark  
Wendi Poulson, Vice-President, City of Alameda  
P. Robert Beatty, Secretary, City of Berkeley  
Cathy Roache, County-at-Large  
Shawn Kumagai, City of Dublin  
Betsy Cooley, City of Emeryville  
George Young, City of Fremont  
Elisa Marquez, City of Hayward  
James N. Doggett, City of Livermore  
Jan O. Washburn, City of Oakland  
City of Piedmont, vacant  
Julie Testa, City of Pleasanton  
Victor Aguilar, City of San Leandro  
Subru Bhat, City of Union City

1. Board President Hentschke called the regularly scheduled board meeting to order at 5:02 P.M.
2. Trustees Hentschke, Poulson, Beatty, Roache, Kumagai, Cooley, Marquez, Doggett, Washburn, Testa and Aguilar were present. Trustees Young and Beatty arrived at 5:04 and 5:05 P.M, respectively. Trustee Bhat was absent.
3. Board President Hentschke invited members of the public to speak on any issue relevant to the District. Former City of Pleasanton Trustee Kathy Narum was present for Resolution 1076-1. David Alvey from Maze & Associates was present to give the presentation of the Financial Audit and Memorandum on Internal Controls for Fiscal Year 2018-19. Joseph Huston was present to report on the purchase of an unmanned aircraft system for aerial mosquito control applications. Accounting Associate Michelle Robles was also present for the audit report and to update the Bank of the West signature cards—removing former Trustees and adding new Trustees. Vector Biologist Jeremy Sette was present to record the minutes.
4. Introduction of new Board Members Ms. Julie Testa, representing Pleasanton, and Shawn Kumagai, representing the City of Dublin.  
**Discussion:** President Hentschke and the General Manager welcomed new Board Members Testa and Kumagai who introduced themselves.
5. Approval of minutes of the 1075<sup>th</sup> meeting held December 11<sup>th</sup>, 2019.  
**Motion:** Trustee Washburn moved to approve the minutes  
**Second:** Trustee Aguilar  
**Vote:** motion carries: unanimous.

6. Election of Board Officers. Gavel transferred from President Hentschke to the newly elected President.  
**Motion:** Trustee Washburn moved to approve the election of Trustees Poulson, Beatty, and Cooley as new Board President, Vice-President, and Secretary, respectively.  
**Second:** Trustee Marquez  
**Vote:** motion carries: unanimous.
7. Resolution 1076-1 honoring former City of Pleasanton Trustee Kathy Narum.  
**Discussion:**  
The General Manager thanked former Trustee Narum for her contributions and positive impact as a Board Member. President Poulson read and presented the resolution. Narum accepted the resolution and stated she was proud to serve as a Board Member and listed significant accomplishments by the both Board and staff while she served.  
**Motion:** Trustee Hentschke moved to approve Resolution 1076-1 honoring former City of Pleasanton Trustee Kathy Narum  
**Second:** Trustee Aguilar  
**Vote:** motion carries: unanimous.
8. Presentation of the Financial Audit and Memorandum on Internal Controls for Fiscal Year 2018-19 by Maze & Associates.  
**Discussion:**  
David Alvey of Maze & Associates presented the Financial Audit and Memorandum on Internal Controls for Fiscal Year 2018-19 by Maze & Associates. The General Manager thanked the Board and Finance Committee for their contributions and commended Accounting Associate Michelle Robles for her stellar work with the District's finances which led to a clean audit.  
**Motion:** Trustee Marquez moved to approve the Financial Audit and Memorandum on Internal Controls for Fiscal Year 2018-19 by Maze & Associates  
**Second:** Trustee Washburn  
**Vote:** motion carries: unanimous.
9. Review of quotes and awarding of contract for the purchase of an unmanned aircraft system (UAS, or "drone") for aerial mosquito control applications  
**Discussion:** The General Manager provided background into using drones for mosquito control applications and how this purchase aligns with ACMAD polices and the current budget. Field Operations Supervisor Joseph Huston presented quotes for the purchase of an UAS for aerial mosquito control applications and fielded the following discussion. Vice-President Beatty asked how long the UAS would last (at least three years, depending of a variety of factors). The General Manager noted that parts on the UAS are modular can be replaced individually instead of having to replace the entire unit. Trustee Testa asked if UAS aerial applications will pose any additional hazards to wildlife from the pesticide applications (UAS are preferred due to their reduced impacts and precise treatments). Trustee Testa asked if there were cameras on the drone and brought up concerns with privacy (this UAS does not have a recording camera and the District has strict UAS-specific privacy policies). Trustee Washburn mentioned that any Board Members can learn more about the control products the District uses on its website. Huston thanked Vector Biologist Tom McMahon who is also the District's certified Department of Pesticide Regulation UAS pilot on preparing this report.  
**Motion:** Trustee Aguilar moved to approve the contract for the purchase of an unmanned aircraft system for aerial mosquito control applications from Frontier Precision  
**Second:** Trustee Beatty  
**Vote:** motion carries: unanimous.
10. Review of 2020 ACMAD Board Meeting and Event Calendar.

**Discussion:**

The General Manager brought up two Board meeting scheduling conflicts with District holidays in 2020 and recommends to either cancel or reschedule the November Board Meeting as it falls on Veteran's Day.

**Motion:** Secretary Cooley moved to cancel the November 2020 Board Meeting.

**Second:** Vice-President Beatty

**Vote:** motion carries: unanimous.

11. Review Committee Assignments for 2020.

**Discussion:**

The General Manager asked if any Board Members would like to leave or join any committee, please let the General Manager know by email.

12. Presentation of the Financial Reports as of January 31<sup>st</sup>, 2020.

**Discussion:**

The General Manager presented the Financial Reports as of January 31<sup>st</sup>, 2020. Accounting Associate Michelle Robles clarified that "petty cash" was any purchase under \$50.

13. Presentation of the Monthly Staff Report for February 2020.

**Discussion:**

The General Manager presented the Monthly Staff Report for February 2020 and fielded the following discussion. Field Operations Supervisor Joseph Huston presented the Operations Report for February 2020 and explained his rationale with specifics, trends, and data used in his monthly reports. Trustee Testa asked for the name of the aggressive mosquito mentioned by Huston (Huston explained that his staff were focusing control efforts on *Aedes* genus mosquitoes, which can be particularly aggressive biters. The General Manager brought up ACMAD's efforts to monitor for potential invasive mosquitoes such as the *Aedes aegypti* mosquito. Trustee Testa brought up a typo for the staff report: change 2019 to 2020. Vector Biologist Jeremy Sette welcomed and introduced himself to new Board Members, explaining his up-to-date service and employment at ACMAD in terms of mosquito control, field work and scope, public customer service relations, FAA Part 107 drone license holder, along with hobby and passion producing music and visual media projects for himself and ACMAD. Sette presented an educational music video he filmed, produced and had personally composed music for, that would be on the District's website and social media for educational and outreach purposes. The General Manager thanked Sette and reminded the Trustees that he also composed the District's hold music.

14. Presentation of the Manager's Report for February 2020.

**Discussion:**

The General Manager presented the Manager's Report for February 2020 and fielded the following discussion. Trustee Marquez suggested moving the potential ACMAD open house to July or September. The General Manager will send out a survey to trustees and staff to confirm the best date to host open house. The General Manager mentioned that the deadline for the Form 700 FFPP Conflict of Interest Report will be due by the end of March. The General Manager commended ACMAD staff for attendance and contribution to the recent MVCAC conference and gave Trustee Bhat's report specially focused on the outreach strategies that he learned regarding invasive aedes mosquitoes. Trustee Washburn also reported on a great District showing at the MVCAC. Trustee Washburn also mentioned that for a small District, the representation and contribution by ACMAD this year was extremely impressive. He was especially impressed with first-time ACMAD presenters. Since his first MVCAC conference in 1982, this conference was the most stellar, especially due to all the contributions by ACMAD staff, which covered the gamut of the mosquito control world. The General Manager asked if any Board Members would be attending the ACSDA Annual Dinner: Trustees Aguilar, Beatty

and Poulson mentioned they could attend. The General Manager encouraged any other prospective attendees to contact him. The General Manager noted a typo for the CSDA Annual Conference date: change July to August and brought up Board Members who need to complete their required training. The General Manager reported that the LAFCo annexation of Albany did not get enough protest votes to disapprove of the annexation. There are a few administrative steps needed to complete the process. Trustee Testa mentioned that she was recently asked why Albany is not a part of the District. The General Manager noted that the Alameda County Vector Control Services District is still continuing their mosquito program, but that should cease once the annexation is final.

15. Board President Poulson asked for reports on conferences and seminars attended by Trustees. Trustee Bhat and Washburn gave their MVCAC report during the Manager's Report.
16. Board President Poulson asked for announcements from the Board. None.
17. Board President Poulson asked trustees for items to be added to the agenda for the next Board meeting. The General Manager reminded the Finance Committee that it will be meeting before the next meeting to review the 1<sup>st</sup> draft of the budget.
18. The meeting adjourned at 6:15 P.M.

**Respectfully submitted,**

Approved as written and/or corrected  
at the 1077<sup>th</sup> meeting of the Board of  
Trustees held March 11<sup>th</sup>, 2020

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Wendi Poulson, President  
BOARD OF TRUSTEES

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Betsy Cooley, Secretary  
BOARD OF TRUSTEES

Alameda County Mosquito Abatement Dist.  
**Check Register**  
For the Period From Feb 1, 2020 to Feb 15, 2020

Filter Criteria includes: Report order is by Date.

<b>Check #</b>	<b>Date</b>	<b>Payee</b>	<b>Amount</b>
2033	2/12/20	Payroll	70,769.03
2034	2/14/20	Adapco	2,849.99
2035	2/14/20	Airgas	103.78
2036	2/14/20	Argo Adventure	243.15
2037	2/14/20	AT&T	64.23
2038	2/14/20	Bhat, Subrahmanya Y	555.60
2039	2/14/20	CalPERS 457	2,668.42
2040	2/14/20	Cintas	491.28
2041	2/14/20	Coverall North America, Inc.	495.00
2042	2/14/20	Delta Dental	4,639.89
2043	2/14/20	Engravit	115.81
2044	2/14/20	Estus, Emily	4,375.00
2045	2/14/20	Hager,Kelli	88.51
2046	2/14/20	Eric Haas- Stapleton	300.00
2047	2/14/20	Industrial Park Landscape Maintenance	226.00
2048	2/14/20	McMahon, Thomas J.	722.61
2049	2/14/20	Mar-Len Supply, Inc.	147.68
2050	2/14/20	NBC Supply Corp	1,040.65
2051	2/14/20	PG&E	562.11
2052	2/14/20	SCI Consulting Group	13,058.96
2053	2/14/20	Treds	2,105.92
2054	2/14/20	Techniclean	145.40
2055	2/14/20	The Hartford	77.78
2056	2/14/20	Univar	2,414.50
2057	2/14/20	Voya Institutional Trust Company	177.41
2058	2/14/20	Waste Management of Alameda County	272.16
2059	2/14/20	U.S Bank Corporate Payment System	8,224.93
ACH	2/14/20	CalPERS Retirement	12,854.52
<b>Total Expenditures - February 15, 2020</b>			<b>129,790.32</b>

Alameda County Mosquito Abatement Dist.  
**Check Register**  
For the Period From Feb 16, 2020 to Feb 29, 2020

Filter Criteria includes: Report order is by Date.

<b>Check #</b>	<b>Date</b>	<b>Payee</b>	<b>Amount</b>
2060	2/25/20	Payroll	71,597.26
2061	2/25/20	Doggett, James N	100.00
2062	2/25/20	Hentschke, Eric Armin	100.00
2063	2/25/20	Testa, Julie	100.00
2064	2/25/20	Young, George	100.00
2065	2/25/20	ACSDA	245.00
2066	2/25/20	Adapco	526.80
2067	2/25/20	Airgas	38.02
2068	2/25/20	Argo Adventure	1,031.78
2069	2/25/20	CalPERS 457	5,336.27
2070	2/25/20	Cintas	531.99
2071	2/25/20	Grainger	398.43
2072	2/25/20	PC Professional	397.92
2073	2/25/20	PG&E	1,965.83
2074	2/25/20	Solar Technologies	54,616.00
2075	2/25/20	Spark Creative Design	525.00
2076	2/25/20	Treds	1,157.96
2077	2/25/20	Verizon	1,436.44
2078	2/25/20	Voya Institutional Trust Company	177.41
2079	2/25/20	Washburn, Jan	992.54
2080	2/25/20	WEX Bank	3,085.47
ACH	2/25/20	Aguilar, Victor	100.00
ACH	2/25/20	Beatty, Robert .P	100.00
ACH	2/25/20	Cooley, Elizabeth	100.00
ACH	2/25/20	Kumagai, Shawn	100.00
ACH	2/25/20	Marquez, Elisa	100.00
ACH	2/25/20	Poulson, Wendi Lynn	100.00
ACH	2/25/20	Roache, Cathy J Pinkerton.	100.00
ACH	2/25/20	Washburn, Jan	100.00
ACH	2/25/20	CalPERS Health	33,582.29
ACH	2/25/20	CalPERS Retirement	12,807.43
<b>Total Expenditures - February 29, 2020</b>			<b>191,649.84</b>



**Alameda County Mosquito Abatement District  
Income Statement  
February 29, 2020. (8 of 12 mth, 67%)**

<b>REVENUES</b>	<b>Actual 2017/18</b>	<b>Actual 2018/19 <sup>1</sup></b>	<b>Current Month</b>	<b>Year to Date 2019/20</b>	<b>Budget 2019/20</b>	<b>Actual vs Budget</b>
<b>Total Revenue</b>	<b>\$ 4,623,350.00</b>	<b>\$ 4,063,848.12</b>	<b>\$ 175.00</b>	<b>\$ 2,807,579.28</b>	<b>\$ 4,705,236.00</b>	<b>60%</b>

<b>EXPENDITURES</b>	<b>Actual 2017/18</b>	<b>Actual 2018/19 <sup>1</sup></b>	<b>Current Month <sup>2</sup></b>	<b>Year to Date 2019/20</b>	<b>Budget 2019/20</b>	<b>Actual vs Budget</b>
Salaries	\$1,744,412	\$ 1,894,209.00	\$ 164,174.54	\$ 1,338,654.99	\$2,425,552	55%
CalPERS Retirement	\$262,107	\$ 310,838.00	\$ 14,500.96	\$ 306,013.02	\$360,538	85%
Medicare	\$23,564	\$ 25,149.00	\$ 2,087.25	\$ 17,755.24	\$30,843	58%
Fringe Benefits	\$449,954	\$ 452,960.00	\$ 38,299.96	\$ 308,432.41	\$502,043	61%
<b>Total Salaries, Retirement, &amp; Benefits</b>	<b>\$2,480,037</b>	<b>\$ 2,683,156.00</b>	<b>\$219,063</b>	<b>\$1,970,856</b>	<b>\$3,318,976</b>	<b>59%</b>
Clothing and personal supplies (purchased)	\$ 7,308.71	\$ 8,899.00	\$ -	\$ 3,383.13	\$8,000	42%
Laundry service and supplies (rented)	\$ 9,819.37	\$ 12,603.00	\$ 561.95	\$ 7,850.90	\$12,750	62%
Utilities	\$ 29,830.25	\$ 30,161.00	\$ 2,800.10	\$ 20,269.99	\$12,600	161%
Communications-IT	\$ 102,855.59	\$ 108,868.00	\$ 2,617.75	\$ 41,638.82	\$117,100	36%
Maintenance: structures & improvements	\$ 21,374.70	\$ 13,673.00	\$ 978.02	\$ 13,009.40	\$25,000	52%
Maintenance of equipment	\$ 43,585.45	\$ 43,629.00	\$ 3,174.20	\$ 10,068.85	\$35,000	29%
Transportation, travel, training, & board	\$ 131,330.43	\$ 98,433.00	\$ 11,694.09	\$ 65,449.53	\$134,260	49%
Professional services	\$ 100,563.13	\$ 115,324.00	\$ 13,058.96	\$ 76,458.25	\$169,320	45%
Memberships, dues, & subscriptions	\$ 15,933.00	\$ 20,774.00	\$ -	\$ 22,359.00	\$22,655	99%
Insurance - (VCJPA, UAS)	\$ 131,392.69	\$ 124,688.00	\$ -	\$ 133,577.76	\$133,546	100%
Community education	\$ 64,109.47	\$ 34,861.00	\$ 953.00	\$ 10,401.12	\$40,000	26%
Operations	\$ 176,000.00	\$ 206,731.00	\$ 3,678.98	\$ 69,388.05	\$228,500	30%
Household expenses	\$ 18,101.06	\$ 18,655.00	\$ 743.58	\$ 9,851.32	\$15,850	62%
Office expenses	\$ 10,753.26	\$ 11,795.67	\$ 437.62	\$ 7,096.01	\$14,500	49%
Laboratory supplies	\$ 113,768.06	\$ 95,640.00	\$ 3,796.70	\$ 72,680.09	\$137,000	53%
Small tools and instruments	\$ 8,376.29	\$ 2,211.00	\$ 338.30	\$ 987.51	\$3,000	33%
<b>Total Staff Budget</b>	<b>\$ 985,101.46</b>	<b>\$ 946,945.67</b>	<b>\$ 44,833.25</b>	<b>\$ 564,469.73</b>	<b>\$1,109,081</b>	<b>51%</b>
<b>Total Operating Expenditures</b>	<b>\$ 3,465,138.55</b>	<b>\$ 3,630,101.67</b>	<b>\$ 263,895.96</b>	<b>\$ 2,535,325.39</b>	<b>\$4,428,057</b>	<b>57%</b>

1 - As of June 30, 2019.

2 - Total Operating Expenditures in current month do not match the check register due to accounts receivable, capital purchases, and petty cash transactions.

**Alameda County Mosquito Abatement District**  
**Investment, Reserves, and Cash Balance Report**  
**February 29, 2020. (8 of 12 mth, 67%)**

Account #	Investment Accounts	Beginning Balance	Deposits	Withdrawals	Interest Activity	Ending Balance	
1004	LAIF	\$ 1,795,048.79	\$ -	\$ (264,000.00)	\$ -	\$ 1,531,048.79	
1005	OPEB Fund	\$ 4,487,394.10	\$ -	\$ -	\$ (163,036.16)	\$ 4,324,357.94	
1006	VCJPA Member Contingency	\$ 359,799.00	\$ -	\$ -	\$ -	\$ 359,799.00	
1008	CAMP: Repair and Replace <sup>1</sup>	\$ 274,247.47	\$ 1,023,000.00	\$ (3,084.68)	\$ 1,694.29	\$ 1,295,857.08	
1009	CAMP: Public Health Emergency	\$ 523,080.11	\$ -	\$ -	\$ 723.89	\$ 523,804.00	
1010	CAMP: Operating Reserve	\$ 1,932,726.11	\$ -	\$ -	\$ 2,674.68	\$ 1,935,400.79	
1011	CAMP: Capital Reserve Fund <sup>2</sup>	\$ 35,710.63	\$ 170,000.00	\$ (54,616.00)	\$ 258.06	\$ 151,352.69	
1012	PARS: Pension Stabilization <sup>3</sup>	\$ 1,622,763.69	\$ -	\$ -	\$ 14,698.44	\$ 1,637,462.13	
<b>Total</b>		<b>\$ 11,030,769.90</b>	<b>\$ 1,193,000.00</b>	<b>\$ (321,700.68)</b>	<b>\$ (142,986.80)</b>	<b>\$ 11,759,082.42</b>	
		Beginning Balance			Withdrawals	Activity	Ending Balance
Cash Accounts							
1001	Bank of America (Payroll Account) *	\$ 114,532.12					\$ 115,456.67
1002	Bank of The West (Transfer Account) *	\$ 1,491,498.59					\$ 362,600.71
1003	County Account	\$ 126,020.35				\$ (279.15)	\$ 125,741.20
1013	Petty Cash	\$ 333.58				\$ (24.85)	\$ 308.73
<b>Total</b>		<b>\$ 1,732,384.64</b>			<b>\$ -</b>	<b>\$ (304.00)</b>	<b>\$ 604,107.31</b>

1 - \$1,023,000.00 transferred from Bank of the West to CAMP: Repair and Replace

2 - \$170,000.00 transferred from Bank of the West to CAMP: Capital Reserve fund

3- PARS - Pension Stabilization balance is as of January 31, 2020.

\* - Ending balance differs from beginning balance due to checks clearing the account.

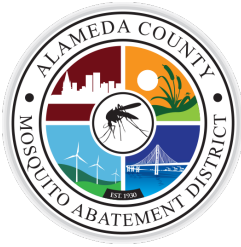
Alameda County Mosquito Abatement Dist.  
Balance Sheet  
February 29, 2020

ASSETS

Current Assets		
Cash	\$	4,324,357.94
Bank of America payroll		110,322.70
Bank of the West		444,769.76
County		125,741.15
Cash with LAIF		1,531,048.79
VCJPA- Member Contingency		359,799.00
CAMP - Repair and Replace		1,295,857.08
CAMP - Public Health Emergency		523,804.00
CAMP - Operating Reserve		1,935,400.79
CAMP - Capital Reserve Fund		151,352.69
PARS		1,637,462.13
Petty cash		<u>308.73</u>
Total Current Assets		12,440,224.76
Property and Equipment		
Acc Dep - equipment	(1,308,691.53)	
Acc Dep - stru & improv	(2,349,631.01)	
Acc Dep - conts in progress	5,523.00	
Construction in progress	590,279.99	
Equipment	1,699,506.64	
Structure/improvement	4,638,621.62	
Land	<u>61,406.00</u>	
Total Property and Equipment		3,337,014.71
Other Assets		
Net OPEB Asset	<u>716,666.00</u>	
Total Other Assets		<u>716,666.00</u>
Total Assets		<u>\$ 16,493,905.47</u>

LIABILITIES AND CAPITAL

Current Liabilities		
Accounts payable	\$	104,296.43
Acc payroll/vacation		187,668.43
Def inflow - 75		41,760.00
Def inflow pen defer GASB 68		809,861.00
Defer outflow pen cont GASB 68		(818,392.00)
Net pension liability GASB 68		<u>2,642,666.00</u>
Total Current Liabilities		2,967,859.86
OPEB Fund	<u>4,324,357.94</u>	
Total Liabilities		7,292,217.80
Capital		
Designated fund balances	4,100,295.19	
Investment in general fixed as	4,637,374.11	
Net Income	<u>464,018.37</u>	
Total Capital		<u>9,201,687.67</u>
Total Liabilities & Capital		<u>\$ 16,493,905.47</u>



23187 Connecticut Street  
Hayward, CA 94545

T: (510) 783-7744  
F: (510) 783-3903

[acmad@mosquitoes.org](mailto:acmad@mosquitoes.org)

MONTHLY STAFF REPORT – March 2020

## Board of Trustees

### **President**

Eric Hentschke

### **Newark**

### **Vice-President**

Wendi Poulson

### **Alameda**

### **Secretary**

P. Robert Beatty

### **Berkeley**

Cathy Roache

### **County at Large**

Betsy Cooley

### **Emeryville**

Shawn Kumagai

### **Dublin**

George Young

### **Fremont**

Elisa Marquez

### **Hayward**

James N. Doggett

### **Livermore**

Jan O. Washburn

### **Oakland**

vacant

### **Piedmont**

Julie Testa

### **Pleasanton**

Victor Aguilar

### **San Leandro**

Subru Bhat

### **Union City**

### **Ryan Clausnitzer**

General Manager

## 1. OPERATIONS REPORT

Alameda county received no measurable rainfall in February making it the driest February in the Bay Area in over 156 years. This, coupled with spring-like conditions, manifested into a complex dynamic for operations staff. Many insect species, including several species of mosquitoes, made early appearances during the month. Operations staff were collecting and treating larvae of *Culex tarsalis* in many sources; *Culex pipiens* adults and larvae were found as well. Towards the end of the month, operations staff also collected and treated several sources for larval *Aedes dorsalis*. Under normal conditions, operations would still be almost exclusively focused on our typical winter species of mosquitoes. The three aforementioned species are all typically active in spring and summer in Alameda county.

Often a lack of rainfall, resulting in much less standing water, is perceived by the general public as a sign of a “good mosquito year” with less mosquitoes breeding and present in the environment. This is partly true, especially in regard to some species, however, it poses some significant issues for operations staff. Both *Cx. tarsalis* and *Cx. pipiens* are competent vectors of West Nile virus (WNV), as well as of several other arboviruses. Often times, drier years are more problematic in keeping WNV in check. This is for two reasons; first, both species become active sooner than normal and are out in the environment earlier, possibly being exposed to, and potentially transmitting viruses. Second, dryer conditions drive the necessity to breed in much smaller, often difficult to locate, sources of water. This escalates the need for extra efforts on the part of operations to locate, inspect, and treat these sources. Our neighbors to the south, in Santa Clara county have already picked up a WNV infected crow. This is direct evidence of early WNV activity in our region.

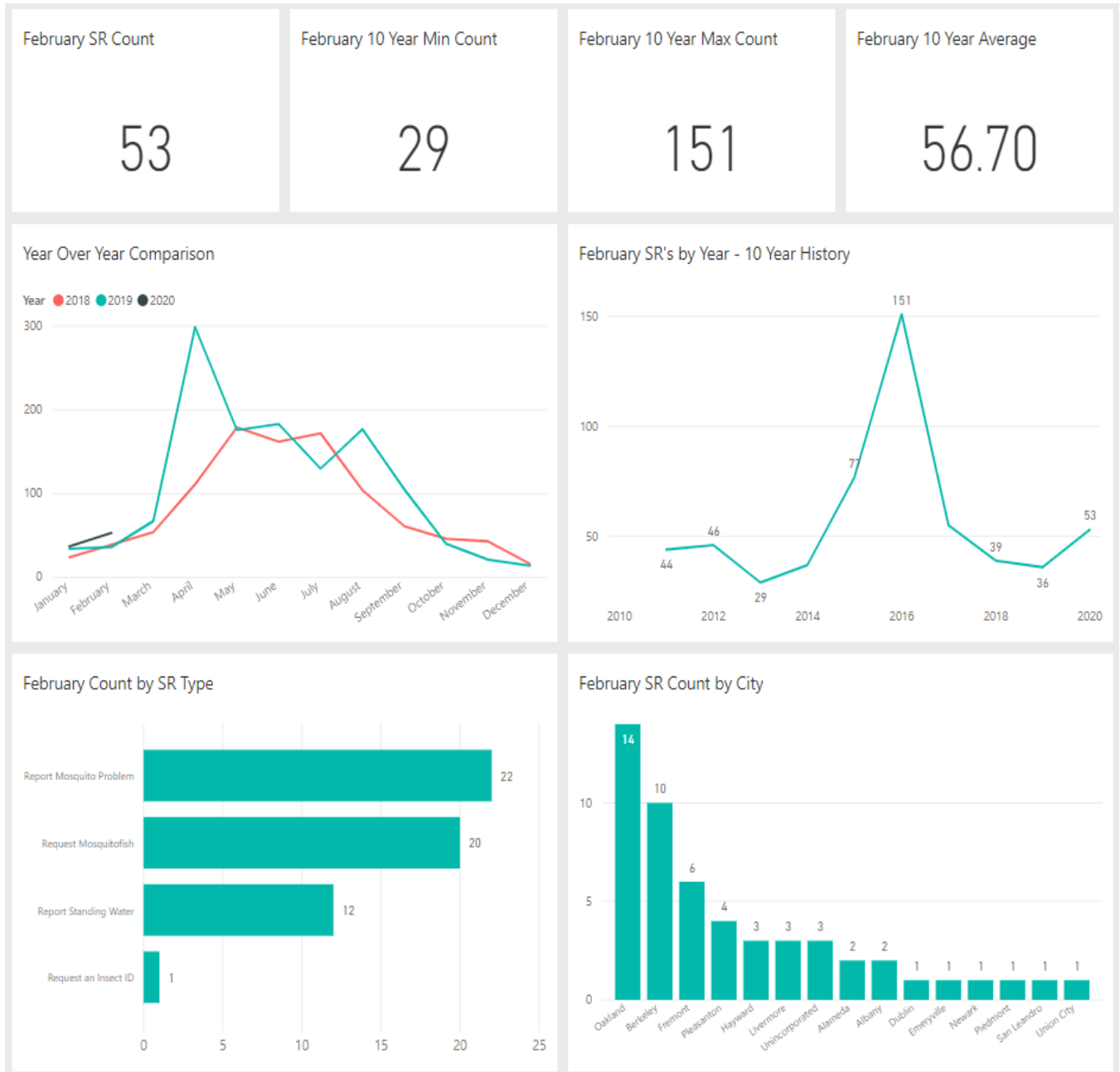
In February, operations staff continued inspecting and treating for our winter species while simultaneously ramping up inspections on sources that could produce *Culex spp.* of mosquitoes. Focus will continue to shift to these species more in the coming months. There are currently some forecasts for March rains that could flush out creeks, canals and catch basins which are prime breeding habitats for the *Culex spp.* mosquitoes. Operations staff are planning and coordinating their efforts towards *Culex spp.* regardless of rainfall.

In February, ACMAD received 53 requests for service from the public. Twenty were requests for mosquito fish. Twelve were to report standing water, mostly in containers or unmaintained swimming pools. There was one request to identify an insect. The final twenty-three requests were requests to report a “mosquito problem”. It is interesting to note that more than half of these reports were actually caused by “mosquito-like” insects. This is yet another manifestation of the spring-like conditions experienced in February. Insects such as crane flies, midges, and even may-flies were already becoming abundant and noticeable to the public. Though these insects do not bite or transmit disease, they can resemble mosquitoes to the average observer. Operations staff utilized these interactions with the public to not only discuss the natural history of these non-mosquito species but to also emphasize the importance of checking their properties and yards to be sure sources of standing water were eliminated or covered to prevent the potential of mosquito breeding in the weeks and months to come.

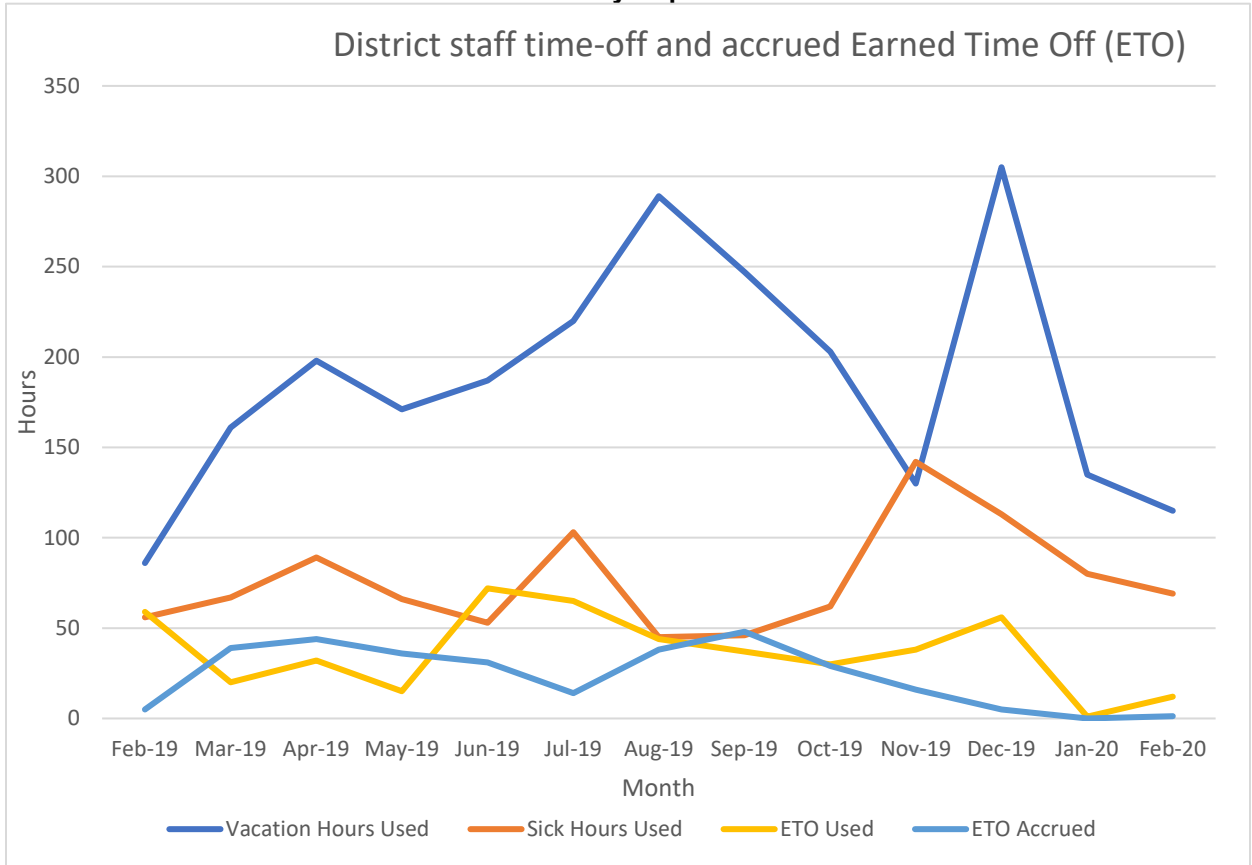
Field Operations Supervisor  
Joseph Huston

## A. District Data

### 1. Service Requests

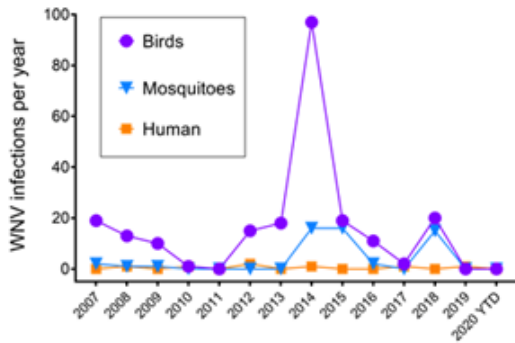


## 2. Activity Report

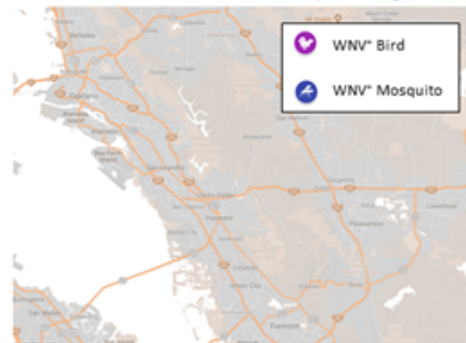


## 3. WNV Activity

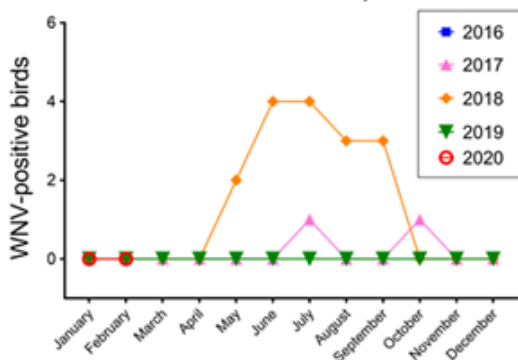
**WNV infections detected in Alameda County 2005 – 2020 YTD**



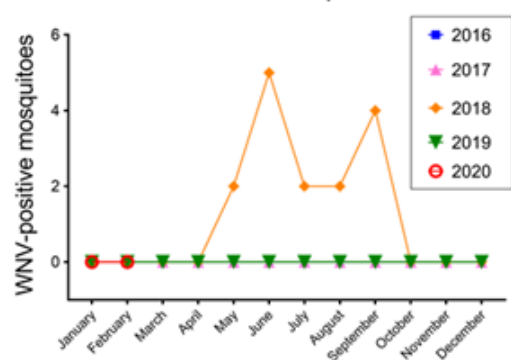
**Locations of WNV-infected mosquitoes and birds collected in Alameda County during 2020**



**WNV-infected birds collected in Alameda County**



**WNV-infected mosquitoes collected in Alameda County**



## 2. LAB

### Summary

- For Alameda County, West Nile virus (WNV) was not detected in birds or mosquitoes during February 2020. However, WNV was detected in an American crow that was collected during February in Santa Clara County, approximately six miles south of Alameda County.
- EVS CO<sub>2</sub> traps were placed in Coyote Hills Regional Park (CHRP) during February 2020 as this area typically has the highest mosquito abundance in the county. Over 19 trap nights, a total of 84 mosquitoes were collected during February (4.42 mosquitoes / trap night), which is considered low mosquito abundance for this area.
- Mosquito abundance, as measured using NJLT, remained very low for February 2020 (0.24 mosquitoes / trap night).
- Over the prior 5 years, New Jersey light traps (NJLT) have proved ineffective in areas of the county with low mosquito abundance. Therefore, NJLT were removed from these sites during February. There are currently eight NJLT in the county.

### Arbovirus Monitoring

- WNV was not detected in birds or mosquitoes during the month of February 2020. WNV was detected in an American crow that was collected during February in Santa Clara County, approximately six miles from the southern border of Alameda County.
- None of the mosquitoes or birds that were collected during 2019 were found to contain Saint Louis encephalitis virus (SLEV) or Western equine encephalitis virus (WEEV).

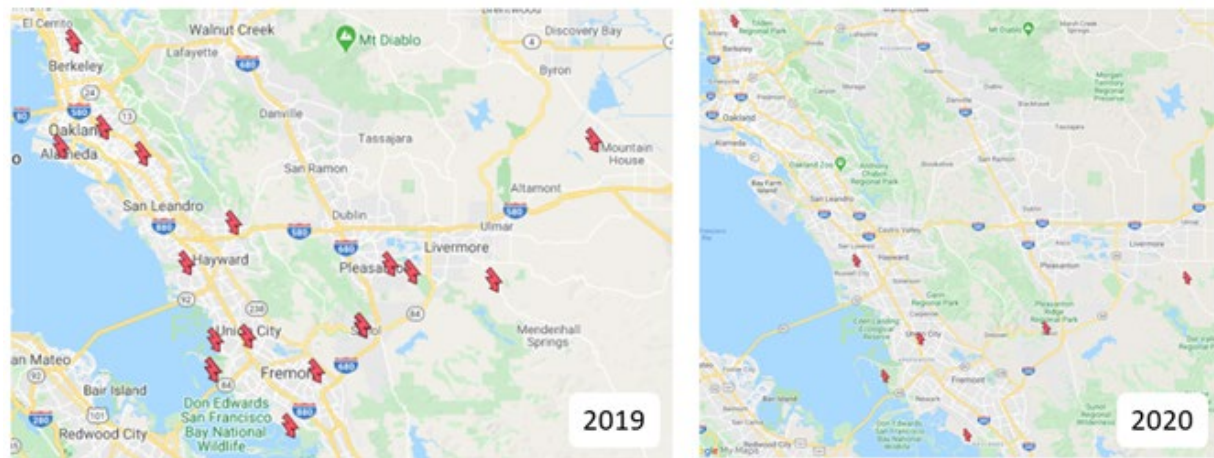
### Native Mosquito Abundance

- CHRP typically has the highest mosquito abundance in the county. Thus, this site serves proxy for when mosquito abundance is likely to increase elsewhere in the county. EVS CO<sub>2</sub> traps placed at CHRP during February 2020 collected a total of 84 mosquitoes over 19 trap nights (4.42 mosquitoes / trap night), which is considered low abundance for that area (e.g. 6,313 mosquitoes were collected in CHRP during May 2019; 16.10 mosquitoes per trap night). *Culiseta particeps*, which is not a WNV vector, was the most common species collected in the EVS CO<sub>2</sub> traps during February 2020, representing 69% of the mosquitoes that were collected.
- Mosquito abundance, as measured using NJLT, also remained very low for February 2020 (0.24 mosquitoes / trap night, respectively; total of 127 mosquitoes over 147 trap nights). In contrast, during February 2018 and 2019, 1.23 and 2.18 mosquitoes were collected per trap night, respectively. *Culiseta inornata*, which is not a WNV vector, was most abundant species collected in NJLT during February 2020, representing 44% of the mosquitoes that were collected.
- NJLT are not highly effective for monitoring mosquito abundance in areas with extensive artificial nighttime light, or where mosquito abundance is low. During 2019, the District had 18 NJLT deployed in the county, either because they had been on site for many years prior to 2015, or there were duplicate NJLT at a site to compare mosquito attractants for research projects. When we assessed the number of mosquitoes captured in NJLT since 2015, we found ten traps that caught low quantities of mosquitoes (less than 500 mosquitoes annually or were duplicated at a site). Because the mosquito abundance data that was obtained from these ten traps was not highly informative for mosquito control efforts, these traps were removed from service in the county. The location of NJLT in the county for 2019 and 2020 are shown in Figure 1.

### Invasive Aedes Monitoring

- Invasive *Aedes* mosquitoes have not been detected in any mosquito trap placed in Alameda County during 2020.

## FIGURE



**Figure 1. Location of NJLT in Alameda County for 2019 (left) and 2020 (right).** NJLT were removed from areas with low mosquito abundance or where duplicate traps were in place for research projects during 2018 and 2019.



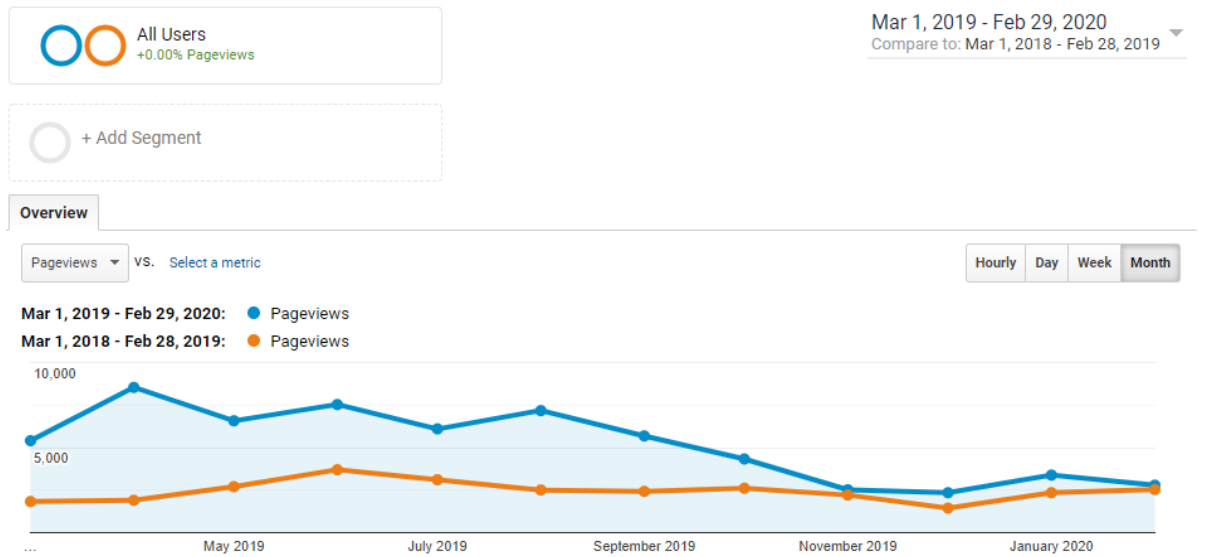
**PUBLIC EDUCATION**

**A. Events**

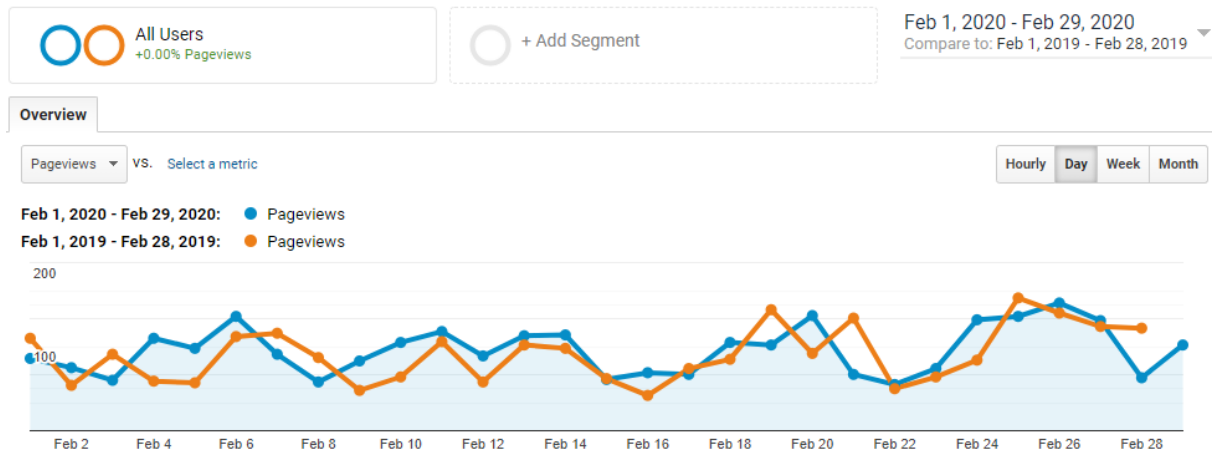
**i. Upcoming**

- **St. Patrick's Day Celebration** – Saturday, March 14<sup>th</sup> & Sunday, March 15<sup>th</sup> (Dublin)
- **Berkeley Bay Festival** – Saturday, April 18<sup>th</sup> (Berkeley)

**B. Google Analytics**

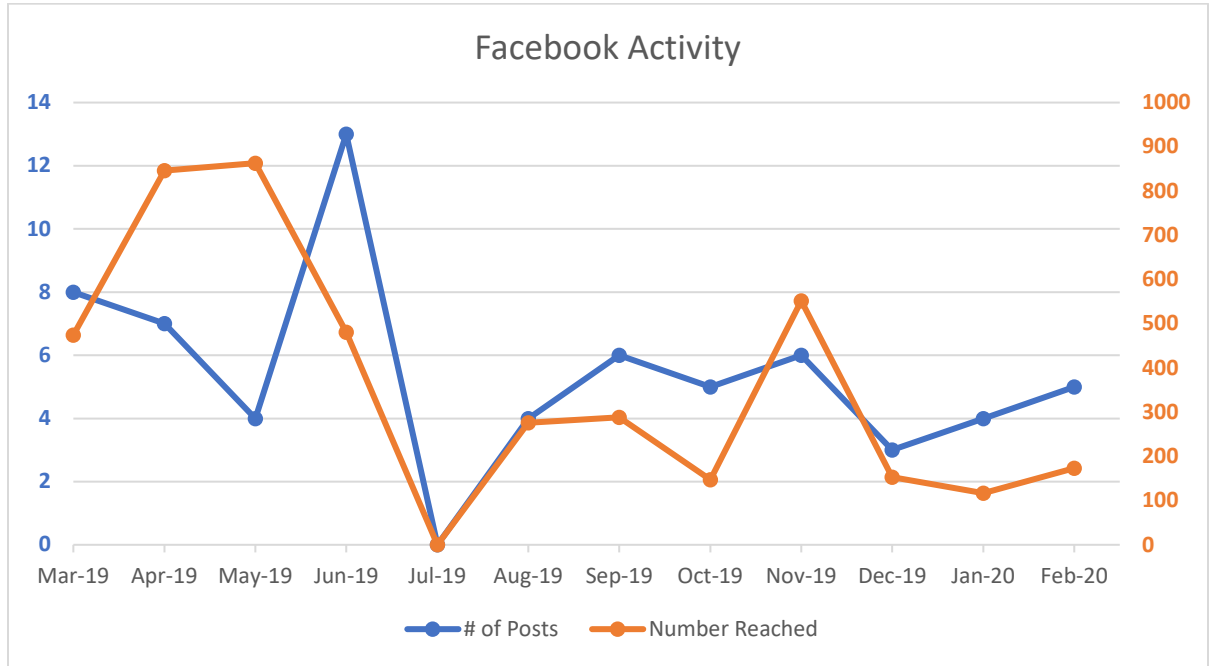


**Figure 1. Comparison of website users over the past two years**



**Figure 2. Comparison of website users over the past two years for February.**

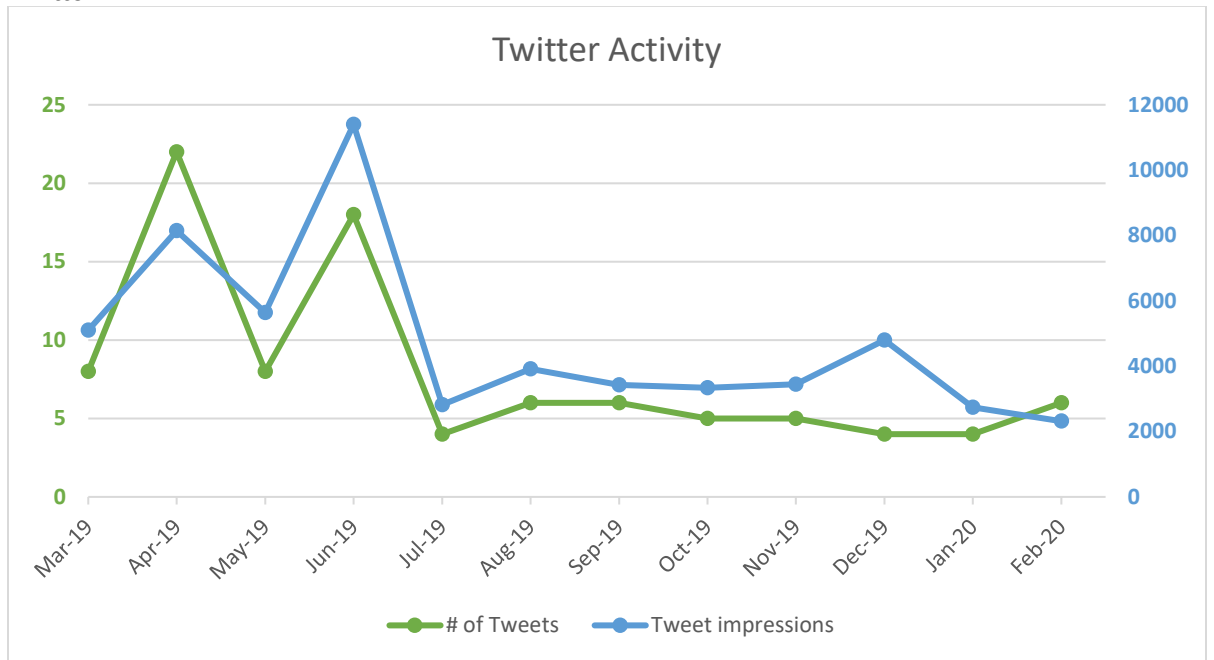
**C. Facebook**



**Total Number of Followers:** 209 (Up from 208 in January)

**February's Most Popular Post:** Our Lab Director Eric Haas-Stapleton contributed to the analysis of single mosquitoes which revealed surprises about viruses, bacteria, and genomic 'dark matter'. You can check out the article here. <https://www.biorxiv.org/content/10.1101/2020.02.10.942854v1.article-info>

**D. Twitter**



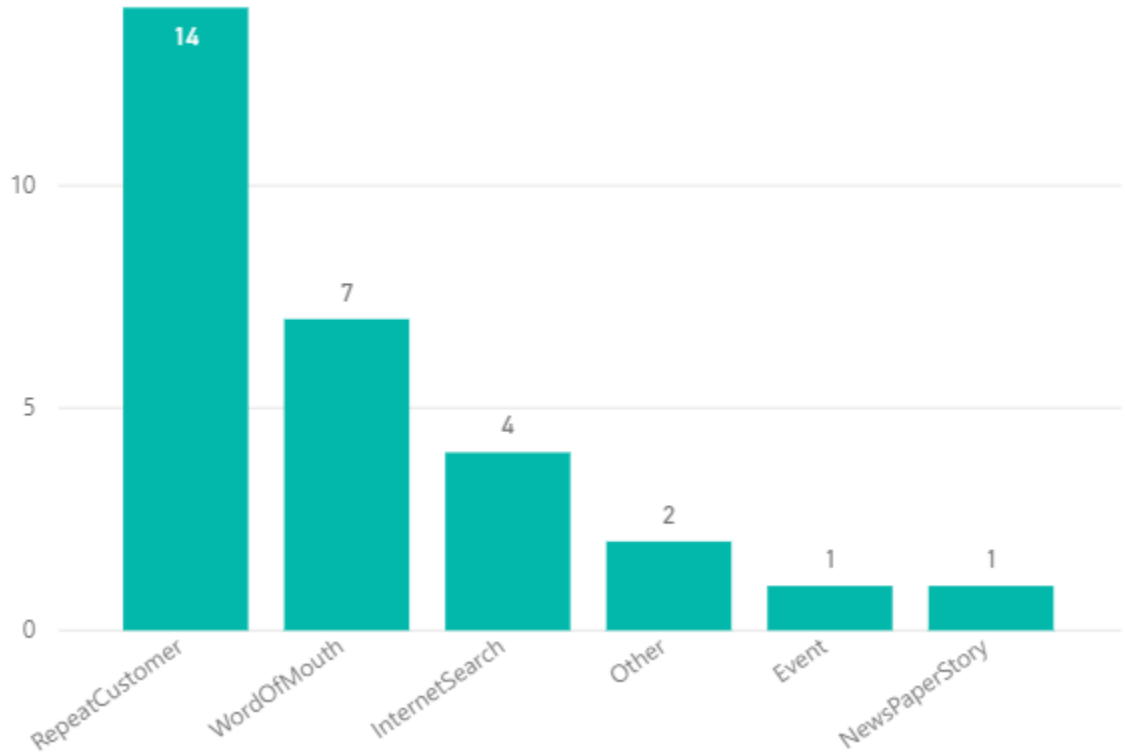
**Number of Profile Visits in February:** 23

**Total Number of Followers (New This Month):** 697 (up from 696 in January)

**Top February Tweet:** Our Lab Director Eric Haas-Stapleton contributed to the analysis of single mosquitoes which revealed surprises about viruses, bacteria, and genomic 'dark matter'. You can check out the article here. <https://www.biorxiv.org/content/10.1101/2020.02.10.942854v1.article-info>

## E. Service Request Referral Summary

Number of Requests by Channel



**Note:** Billboard, Sign, or Poster, Social Media, Movie Theater Ad, Internet Ad, Property Tax Bill, Phone Book, and District Vehicle or Employee are also options for this question but were not included on this chart because they were not selected in February. Those who selected “Other” did not specify how they heard about us.

### 4. **LEGISLATIVE UPDATE:**

ACMAD, under the umbrella of the Mosquito and Vector Association of California (MVCAC), attended the annual Legislation Day in Sacramento to support additional funding for the CalSURV Gateway, and one-time funding to assist Districts with their invasive *aedes* response. Staff met with all eight districts that represent Alameda County and provided the attached MVCAC produced materials (also found on the MVCAC website: <https://www.mvcac.org/advocacy-and-legislation/legislative-day>)



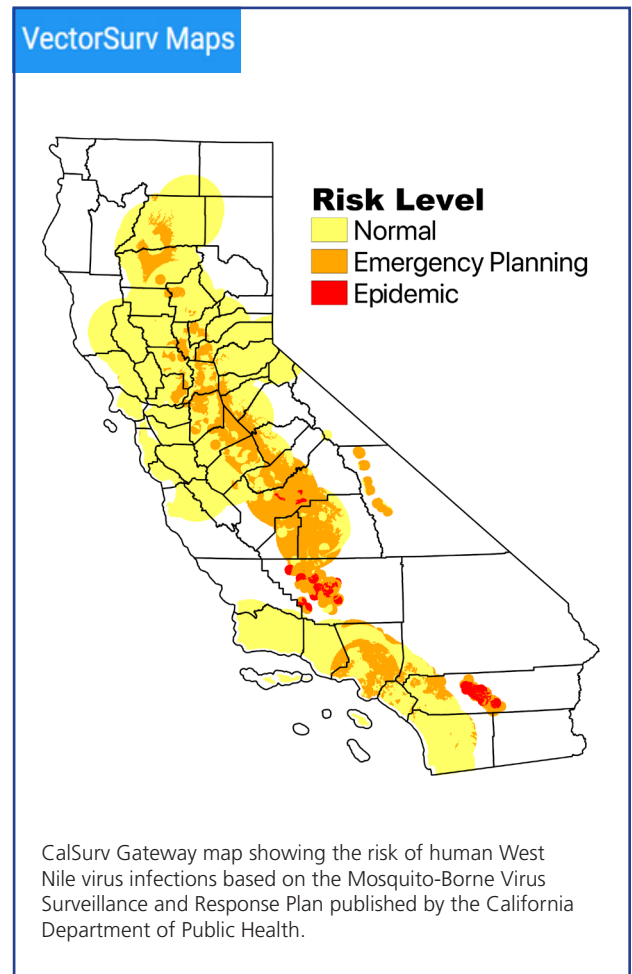
# Ongoing State Funding is Critical for Mosquito Surveillance and Research

The Mosquito and Vector Control Association of California (MVCAC) seeks ongoing state support of \$500,000 annually for the California Vectorborne Disease Surveillance Gateway (CalSurv Gateway). **Without additional funding, the future of CalSurv is in jeopardy, putting public health at risk.**

CalSurv Gateway serves 81 mosquito and vector control and public health agencies in California providing tools for real-time data collection, visualization, and analysis that allows agencies to make informed decisions on interventions. The system tracks disease-spreading mosquitoes – where they are, where they’ve been, where they may appear in the future, and where new diseases might be emerging.

- In 2019, CalSurv Gateway was codified in statute (AB 320 – Quirk) as the statewide surveillance database that enables public health and vector control agencies to proactively identify invasive and native mosquitoes, prioritize problematic areas, and develop the most effective responses to prevent the spread of mosquito-borne diseases.
- In the 2018-19 state budget, there was a one-time provision of \$500,000 directly to UC Davis to support the CalSurv Gateway. This has allowed the program to hire programmers who have developed the following new features:
  - Interactive maps and graphs of mosquito and virus activity showing real-time views of invasive mosquito spread, dengue and Zika infection risk, and mosquito abundance
  - Improved statewide tracking of insecticide resistance
  - Scalable software services that allow local agencies to interact with data and define custom reports

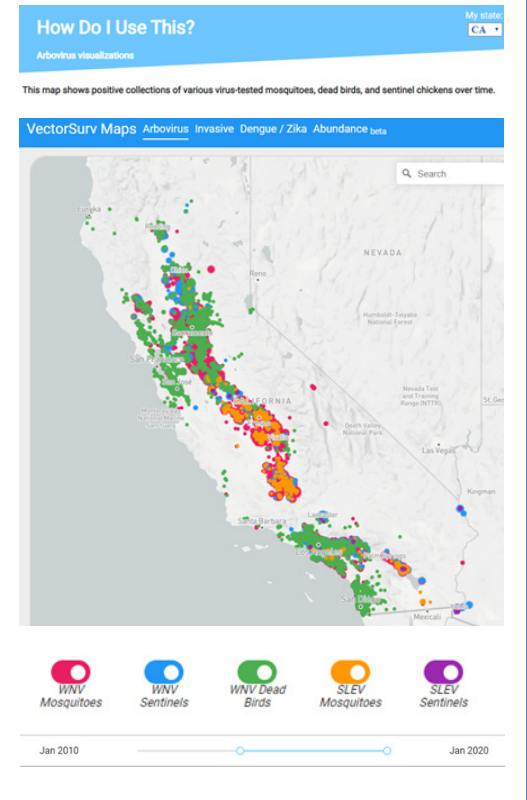
## WEST NILE VIRUS HUMAN RISK ASSESSMENT FOR THE WEEK OF JULY 27, 2019



**ADDITIONAL FUNDING IS NEEDED TO SUSTAIN AND GROW CALSURV**

- Mosquito control needs — the spread of invasive mosquitoes throughout the state, Zika virus emergence and the ongoing burden of West Nile virus — extend beyond the available resources and state support is desperately needed.
- The one-time state appropriation of \$500,000 is being used to support staffing, develop maps and research tools, and maintain software services for the CalSurv Gateway. This funding will run out in June 2020.
- Without additional funding, the CalSurv program will be forced to eliminate staff who support the system, drastically impacting the ability to maintain this valuable research resource and fully support mosquito and vector control districts and public health agencies throughout the state.
- State funding is needed to ensure adequate staffing, provide certainty for future planning, and support the development of new tools such as maps showing insecticide resistance that will guide mosquito control efforts throughout the state.

**CALSURV MAP SHOWING MOSQUITO-BORNE VIRUS ACTIVITY DETECTED BY SURVEILLANCE, JANUARY 2010 – JANUARY 2020**



**Mosquito control and public health professionals need the tools to combat the spread of mosquito-borne diseases. This will ensure that California will be prepared for current and future threats from vector-borne diseases. Funding CalSurv is a cost-effective and smart investment in California’s public health.**



Scan this QR code to learn more and see our digital story map



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# Impact of Vector-Borne Diseases and the Role of Mosquito Control in California

## THE MOSQUITO IS THE DEADLIEST CREATURE ON THE PLANET

- Mosquito-transmitted diseases contribute to the deaths of nearly one million people every year worldwide and sicken millions more.
- In the United States, mosquitoes routinely transmit more than half a dozen viruses, including West Nile (WNV) and St. Louis encephalitis viruses. Some newly established mosquito species in the United States are capable of transmitting several exotic viruses such as chikungunya, dengue, and Zika, which have been transmitted locally in several states and have had devastating effects worldwide.
- There are no human vaccines available for West Nile, St. Louis encephalitis, dengue, chikungunya, or Zika viruses, which are costly to treat and can have long-term health and financial consequences.

## WEST NILE VIRUS IS A SERIOUS THREAT

- Infected mosquitoes can spread West Nile virus – a disease which can cause debilitating cases of meningitis, encephalitis, and even death. There is no cure for West Nile virus.
- West Nile virus activity was detected in 34 counties in California in 2019 and there were 214 human disease cases reported, of which 143 (66.8%) were the more severe neuroinvasive form.
- Six West Nile virus-related fatalities from six counties were reported in 2019.
- Since 2003, more than 7,000 human WNV disease cases have been reported in California, including more than 300 deaths.

## ZIKA VIRUS IN CALIFORNIA

- No local transmission of Zika virus has occurred in California, but 745 cases of travel-related Zika virus infections have been reported since 2015, many in areas where invasive mosquitoes have been detected. Zika virus can cause miscarriage, stillbirth, and severe birth defects among pregnant women.
- Local transmission of Zika virus has only been reported in Florida and Texas, but it is essential that California enhances its detection and prevention capabilities to ensure that mosquito control agencies, as well as local and state health departments, are adequately prepared to respond to possible local transmission events in the future.

## MOSQUITO-BORNE DISEASES HAVE SIGNIFICANT ECONOMIC IMPACTS

- The economic costs to patients can be high, including costs for inpatient and outpatient medical care and rehabilitation, nursing homes, transportation, home health aides, childcare, and loss in productivity.
- The total mean cost of West Nile virus hospitalized cases and deaths reported to the U.S. Centers for Disease Control and Prevention for 1999–2012 was ~\$778 million.
- In 2005, an outbreak of West Nile virus disease occurred in Sacramento County. The total economic impact of the outbreak, including vector control response and patients' medical costs, was \$2.98 million.

- A study published in the PLOS Neglected Tropical Diseases Journal looking at the potential economic burden of Zika across six states estimated costs of more than \$1 billion dollars if 1% of the population were infected, which would have catastrophic implications to Medi-Cal.

**MOSQUITO CONTROL WORKS**

- In 2012, the West Nile virus outbreak in Texas focused attention on the importance of having established, efficient mosquito control programs to prevent widespread disease outbreaks. The unprecedented number of human cases (1,868) and deaths (89) reinforced that mosquito surveillance and control are an important use of funds to protect public health.
- Mosquito control agencies in California have protected people against mosquito-transmitted diseases and enhanced quality of life by controlling mosquitoes for more than 100 years. The introduction of invasive mosquitoes and the threat of mosquito-borne diseases such as West Nile virus, chikungunya, dengue, and Zika reinforce the need to support these public health agencies into the future.



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# Invasive *Aedes* By the Numbers

“The long-term impact of invasive *Aedes* on our districts’ operations will be catastrophic.”

## INVASIVE *Aedes* ARE SPREADING LIKE WILDFIRE

### Districts across the state report:

- By the 3rd year of detection they had proliferated over the entire city
- Year over increase was 309%
- 2015: 1 sq. mi; 8 cities; 2019: 100 sq. mi; 31 cities

## INVASIVE *Aedes* HAVE A MASSIVE IMPACT ON MOSQUITO AND VECTOR CONTROL DISTRICTS’ BUDGETS

Invasive *Aedes* =



Labor costs  
Equipment costs  
Testing costs  
Pesticide costs  
Surveillance costs

“We had to increase our budget by 34% in FY 18/19 for staffing, equipment, chemicals and outreach to deal with the *Aedes* infestation.”

### Districts across the state report:

- Need for year-round technicians as opposed to seasonal staff
- Approximately 1000% year-over-year increase in service requests and call volume
- Outreach has increased approximately 500%
- Increased costs for surveillance, pesticides and new equipment including *Aedes*-specific traps and batteries
- Approximately \$12,000 per travel-related *Aedes* disease case in 2019



“We have maxed out the Benefit Assessment and had to reallocate staffing and resources to accommodate the increase in requests and diseases responses.”

## INVASIVE *Aedes* REQUIRE INNOVATIVE SOLUTIONS

**Invasive *Aedes* mosquitoes exploit small and cryptic water sources and have shown resistance to many commonly used insecticides, limiting the efficacy of traditional control approaches.**

- New technologies including a form of Sterile Insect Technique that utilizes a naturally-occurring bacteria called Wolbachia are being evaluated. When *Aedes* males are infected with a particular strain of Wolbachia and then are released to breed with wild female mosquitoes infected with a different strain of Wolbachia the resulting offspring are not viable.

“Initial trials using Wolbachia in Los Angeles County and Fresno County show great promise, but districts need funding to get these abatement techniques off the ground.”

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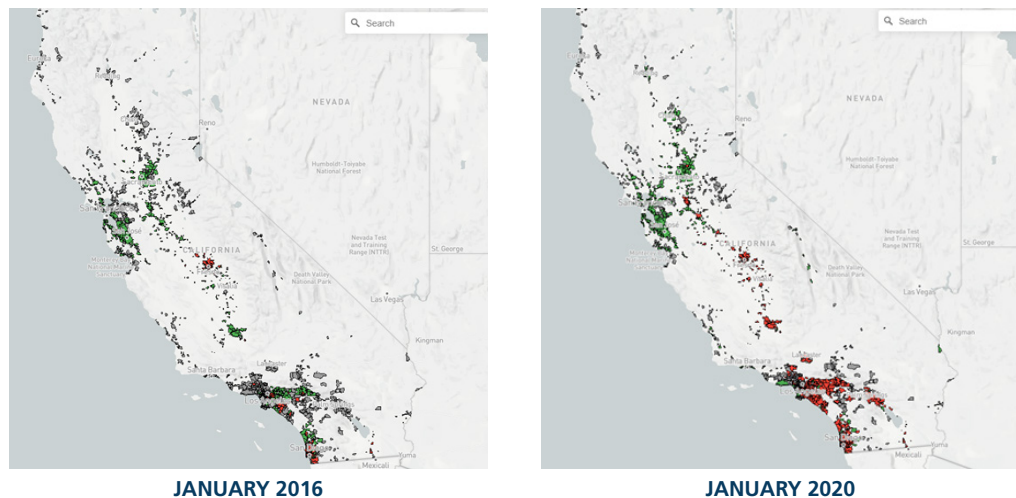




# Invasive Mosquito Species in California: A Growing and Expensive Challenge

Global warming has facilitated the spread of two invasive mosquito species, *Aedes albopictus* and *Aedes aegypti*, throughout the state. Invasive *Aedes* are vectors of Zika, dengue, chikungunya, yellow fever, West Nile virus, and dog heartworm. With over 6.5 million international travelers arriving at California ports of entry each year, the potential for local transmission of imported diseases in the state is increasing. These invasive mosquitoes are now in 16 counties in California and continue to spread. They pose a daunting challenge for mosquito and vector control districts and a serious public health threat.

**CALSURV MAP SHOWING *Aedes aegypti* (IN RED) AND *Aedes* SPECIFIC SURVEILLANCE (IN GREEN)**



## NEED FOR ADDITIONAL FUNDING TO COMBAT INVASIVE AEDES

The spread of invasive *Aedes* has put an enormous strain on mosquito control districts' budgets. For example, one Southern California district's annual operational expenses increased by 34% as a result of the introduction of invasive mosquitoes. Districts across the state report:

- **Increased costs for staff:** Mosquito seasons now extend well beyond the traditional summer months and districts need year-round technicians as opposed to seasonal staff.
- **Increased costs for surveillance, pesticides and new equipment:** Invasive *Aedes* exploit small and cryptic water sources and have shown resistance to many commonly used insecticides, limiting the efficacy of traditional control approaches and increasing the need for innovative ways to treat this difficult-to-manage species.
- **Increased costs for outreach and education:** *Aedes* females bite throughout the day, resulting in numerous irritating bites, and will follow people indoors. One district had to increase public education efforts by 200% to encourage preventative practices.

- **Increased costs to fulfill additional service requests:** One district saw a 350% increase in service requests over the past 10 years with an exponential increase in 2019 when *Aedes* were detected in their region.

**Federal funding that supported enhanced *Aedes* surveillance, control, and education has expired and districts need additional state support in order to prevent future disease epidemics and improve quality of life for Californians.**

**THE NEED FOR NEW SOLUTIONS**

In order to deal with invasive *Aedes* some mosquito control districts have invested heavily in intensive outreach campaigns (media and door-to-door) to encourage the public to help eliminate mosquito breeding sources. Others are refining techniques for wide-area immature mosquito control from air and ground vehicles, which have shown some initial success but are costly and difficult to sustain. One technique that is currently being evaluated in California is a form of Sterile Insect Technique that utilizes different strains of a naturally-occurring insect bacteria called Wolbachia. When lab reared *Aedes* males are infected with a particular strain of Wolbachia and then are released to breed with wild *Aedes* female mosquitoes infected with a different strain of Wolbachia, the resulting offspring do not survive to adulthood. Initial trials in Los Angeles County and Fresno County show great promise, but there are still funding and regulatory hurdles to overcome. Implementation and sustainability of this control method will have a considerable impact on local vector control agency resources that will require partnerships between private industry and state and local government policymakers to ensure success. Unfortunately, this promising potential solution to a growing public health and economic threat is currently unattainable for most mosquito and vector control agencies due to modest annual budgets.



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# PARTNERSHIPS

## CALSURV GATEWAY

MVCAC played an integral role in the development of the CalSurv Gateway, an online data management and visualization platform that has been used since 2006 by public health and vector control agencies. MVCAC works to secure ongoing support for the CalSurv Gateway so that agencies can better track and predict the emergence of mosquitoes, prioritize problematic areas and develop the most effective responses to mitigate the risks of vector-borne diseases.

## WEST NILE VIRUS CALL CENTER

MVCAC collaborates with the CA Department of Public Health to provide information about West Nile virus activity in California and how residents can protect themselves from mosquito-transmitted diseases. Dead birds are often the first indication that West Nile virus is active in an area. Californians are encouraged to report dead birds online at [www.westnile.ca.gov](http://www.westnile.ca.gov) or by calling toll-free 1-877-WNV-BIRD (968-2473).

## AMERICAN MOSQUITO CONTROL ASSOCIATION

MVCAC partners with the American Mosquito Control Association on federal regulatory and legislative issues that impact mosquito and vector control as well as shares information about innovative research and control techniques in California. MVCAC also helps promote "National Mosquito Awareness Week" which takes place each summer.



# OUR MEMBERS

More than sixty mosquito and vector control agencies throughout the state are members of MVCAC. Our membership represents a diverse group of experts with varied interests, all committed to protecting public health and the advancement of the science of mosquito control.

## CORPORATE MEMBERS

Mosquito control districts and entities engaged in mosquito and vector control in California

## ASSOCIATE MEMBERS

Employees of the universities of California, the state of California, or public agencies outside of California

## AFFILIATE MEMBERS

Individuals with mosquito research interest or expertise who do not qualify as Associate members

## SUSTAINING MEMBERS

Individuals, organizations, or businesses who desire to contribute financially to benefit mosquito and vector control

## HONORARY MEMBERS

Individuals who have contributed exceptional and distinguished service in the interest of mosquito or vector control in California



We are the statewide voice for mosquito and vector control professionals. We provide public health information, expertise, mosquito and vector-borne disease surveillance, innovative research, professional training, effective legislative and regulatory advocacy on behalf of California public agencies.



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# MVCAC

Mosquito and Vector Control Association of California

# MOSQUITO CONTROL MATTERS

Over a century ago, California enacted legislation to combat mosquito threats in the state. The California Mosquito Abatement Districts Act of 1915 (AB 1590) aimed to control the dangers that mosquitoes posed to California's economic development and health and well-being of its residents.

More than 100 years later, the threat is just as great, and California mosquito and vector control agencies are on the front lines of protecting public health and promoting prevention strategies for mosquito-transmitted diseases such as West Nile, St. Louis encephalitis, dengue, chikungunya, or Zika viruses.

Today, global commerce, travel, and climate change pose an ever-greater public health threat and require complex monitoring and prevention strategies. MVCAC agencies use Integrated Vector Management (IVM), an evidence-based, data-driven decision making tool used to suppress vector-borne diseases.

IVM prioritizes surveillance of mosquito populations, removal of breeding sites, and public outreach and education campaigns. It incorporates various tools to target mosquitoes at different life stages which can include physical, biological and chemical control. When implementing a control program, districts continually evaluate the strengths, weaknesses, risks, and resource cost of each type of intervention to determine what combination in each area is most appropriate for the current risk posed to public health from vectors and the pathogens they transmit.

Throughout the state, mosquito and vector control districts work to protect Californians from the discomforts, health risks and economic impacts of vector-borne diseases.

## WHAT WE DO



### ADVOCACY

MVCAC is the leading voice for mosquito and vector control in the California Legislature. Each year, the organization hosts a Legislative Day at the State Capitol where participants meet with legislators to promote the importance of mosquito and vector control. MVCAC's legislative committee and advocates monitor legislation that could potentially affect mosquito and vector control and mobilize member agencies to take action. MVCAC members also engage in grassroots advocacy at the district level.

### REGULATION & PERMITTING

MVCAC collaborates with state and federal regulatory agencies to ensure that the best vector management practices are implemented across the state in order to protect public health and the environment.

### CERTIFICATION & CONTINUING EDUCATION

MVCAC partners with the CA Department of Public Health to provide mosquito and vector control certification and continuing education. This partnership ensures that technicians receive training based on the latest science allowing them to use the most advanced techniques as well as products registered with the U.S. Environmental Protection Agency.

### PUBLIC EDUCATION

MVCAC works to increase public awareness and educate Californians about the importance of mosquito and vector control through a variety of activities including "Mosquito & Vector Control Awareness Week," which takes place each spring. MVCAC also collaborates with stakeholders to promote Best Management Practices and increase education about mosquito and vector-borne disease prevention.

### MOSQUITO RESEARCH

MVCAC works with the University of California, CA Department of Public Health and the Mosquito Research Foundation to secure funding and support essential research projects benefiting member agencies and public health throughout the state.

### COLLABORATION

MVCAC provides a forum for its members to collaborate and support advancements in surveillance, laboratory techniques, and mosquito and vector control and management. MVCAC's annual conference provides an important venue for mosquito and vector professionals to stay abreast of changing trends in the industry.



**MVCAC**  
Mosquito and Vector Control Association of California

**ASSOCIATION WEBSITE:** [www.mvcac.org](http://www.mvcac.org)

**AGENCY LOCATOR BY ZIP CODE:** [westnile.ca.gov](http://westnile.ca.gov)

**CALSURV WEBSITE:** [www.calsurv.org](http://www.calsurv.org)



# State of Mosquito Control 2020

The growing public health threat to your constituents & the  
sustainability of mosquito control

Mosquito and Vector Control Association of California

February 24, 2020

*We are facing an unprecedented onslaught of new disease outbreak risks by the world's deadliest animal: Mosquitoes. California's mosquito control public health response, while adequate 10 years ago, is now stretched perilously thin.*

**West Nile virus is the most prevalent public health mosquito-borne disease in California since 2003**



**More than 7,000 Californians sick from West Nile virus since 2003**

West Nile Virus Survivor Story

- 214 Californians diagnosed in 2019
- \$142,000 in health care cost per patient
- 9%-10% hospitalized patients succumb to WNV

## **No Vaccines Available**

**As mosquito control agencies struggled to meet the financial & operational demands to reduce West Nile virus risk...**

**...Another threat moved quietly into your backyards**



## **Invasive Aedes Mosquito**

## **Secrets to their Success**

## Egg-laying Behavior

- Lays eggs individually in small water-holding containers



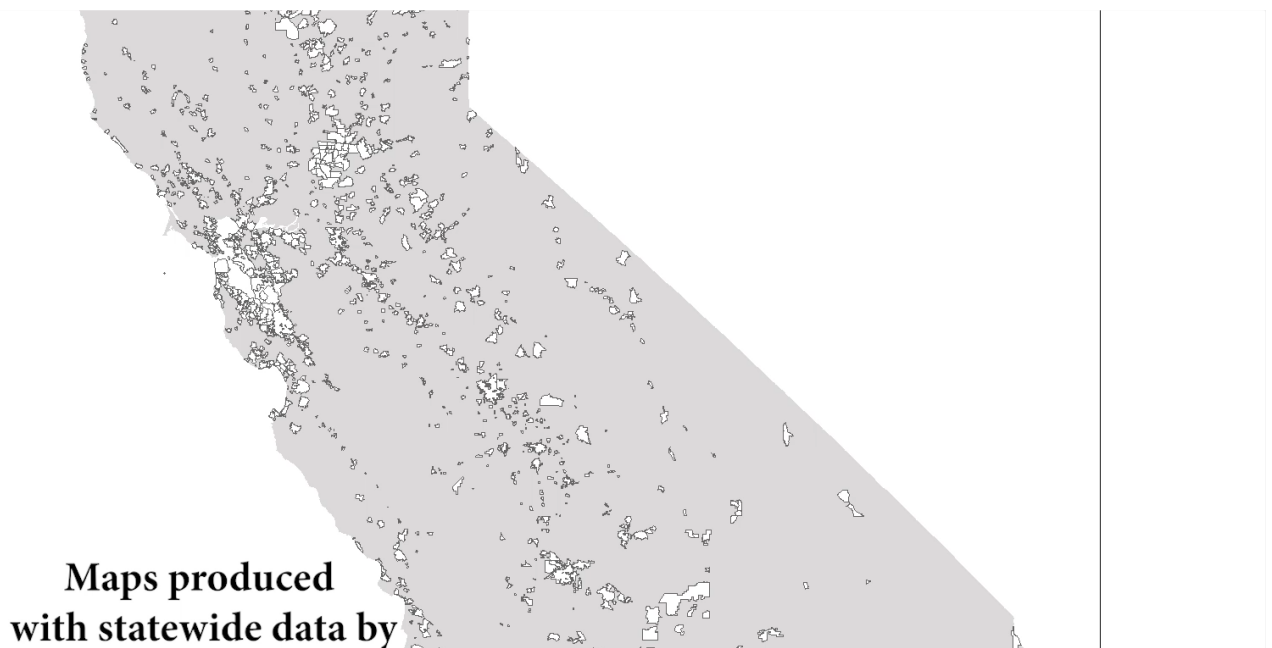
**Aggressive daytime biting behavior is causing personal discomfort and is increasing phone calls to your offices**

*I can't even spend a second outside. What are you doing about it?*

*Spraying isn't working anymore. Mosquitoes keep attacking! Can't public health fund innovative control projects like in other states?*

*Why can't my mosquito control agency spend more money to solve this Aedes mosquito problem in my neighborhood?*

## The Arrival



**As of 2011, Your Constituents' Quality of Life Reduced**

**Increased mosquito bites**

**Aedes mosquitoes can transmit:**

- Zika

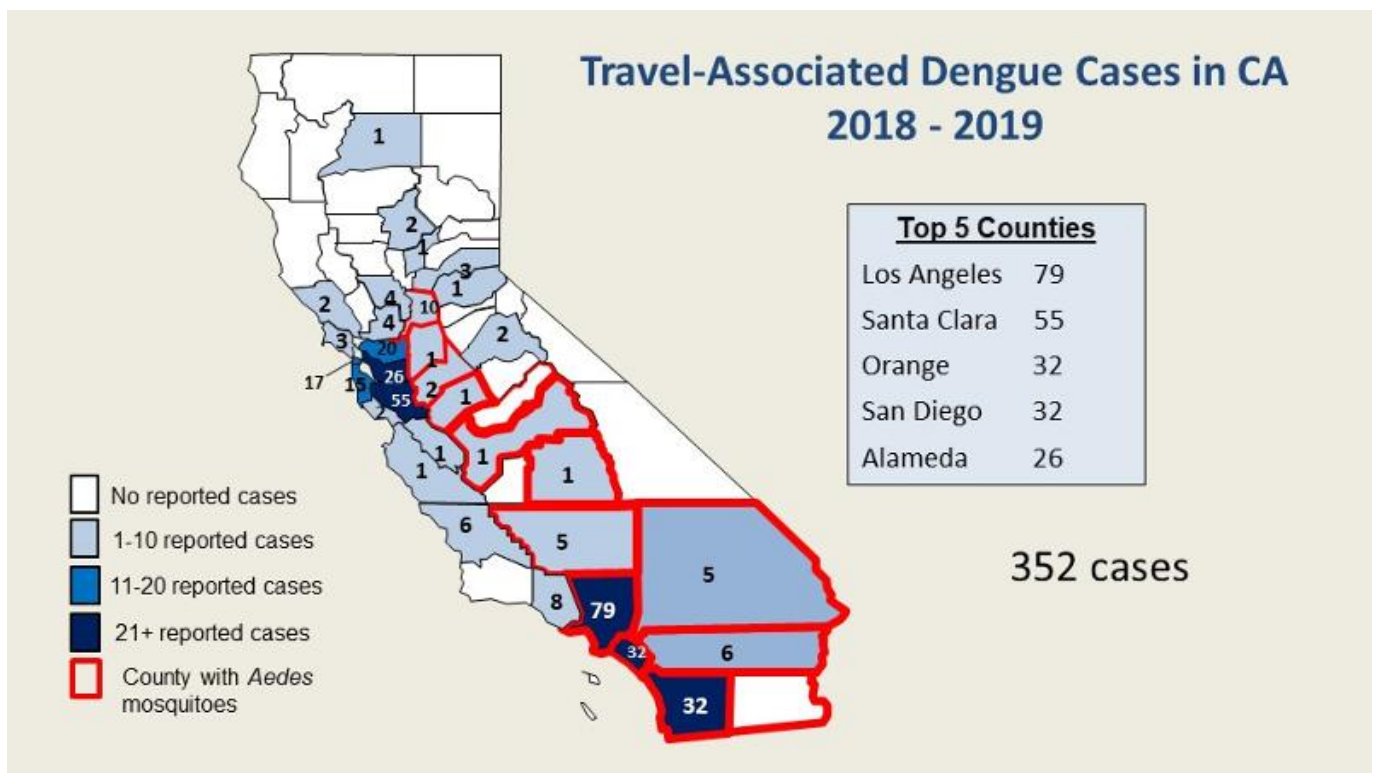


- Dengue fever
- Yellow fever
- Chikungunya
- West Nile virus
- Canine heartworm

**Currently, 16 California counties have confirmed the presence of invasive Aedes mosquitoes**

**Travelers are returning home sick**

**If invasive Aedes mosquitoes are present, the risk of a local outbreak is possible**





**For several years, federal grant funds were**

# provided to local agencies to support control of invasive Aedes mosquitoes

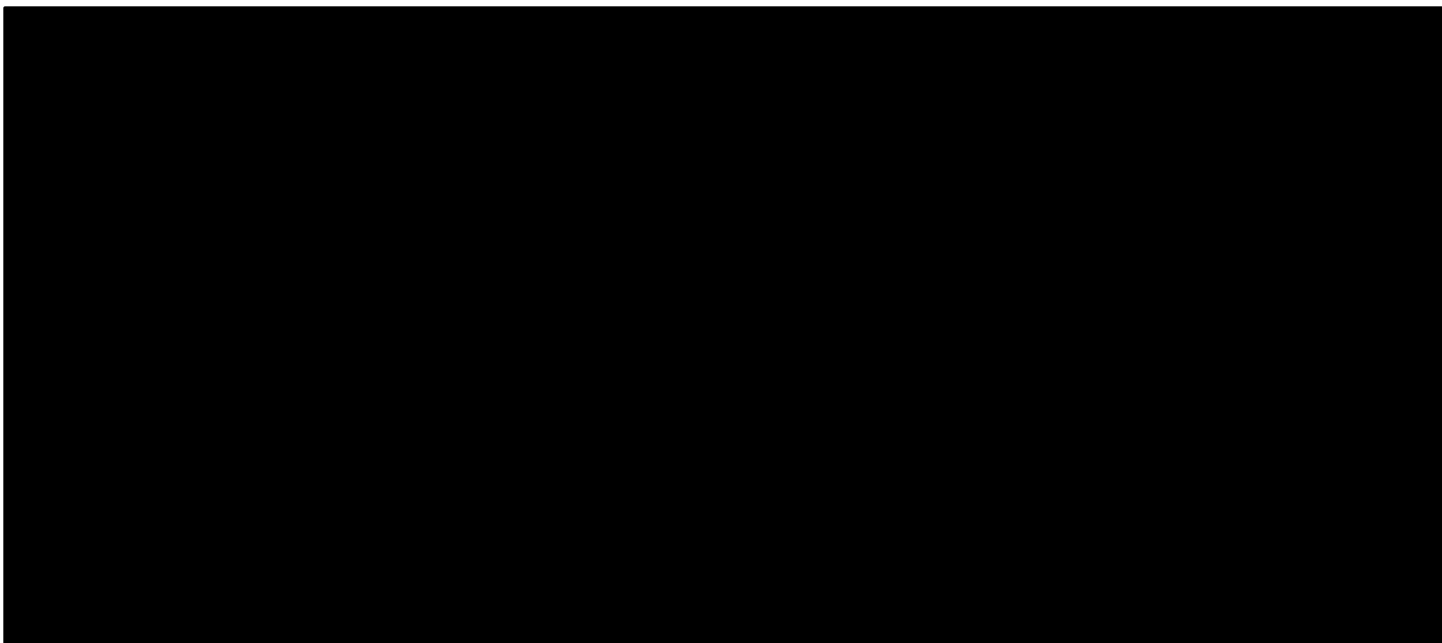




**The Federal grant funds are no longer available to local mosquito control agencies**

**Mosquito control agencies need your help.**

**Here's how:**



## Lend your voice and your vote to support mosquito control agencies

### What do mosquito control agencies need to win this fight?

#### Additional state funding to:

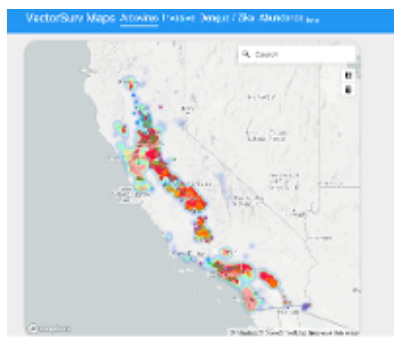
- Hire more staff
- Purchase equipment
- Conduct public outreach
- Develop new control strategies

#### "Debug Fresno" program sees success in re...

"Debug Fresno" program sees success in reducing Aedes aegypti mosquitoes, more releases on way

<https://youtu.be/8G-9lYw1Mpg?t=47>

## And additional state funding to preserve and to grow the CalSurv Gateway, a statewide database used to protect public health



- CalSurv serves 81 mosquito and vector control and public health agencies in California
- Provides tools for real-time data collection, visualization, and analysis that allows agencies to make informed decisions on interventions
- Without additional funding, the

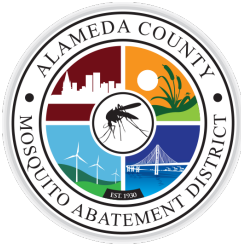
future of CalSurv is in jeopardy, putting public health at risk

- State funding is needed to ensure adequate staffing and support the development of new tools to combat the spread of mosquito-borne diseases

## Funding CalSurv is a cost-effective and smart investment in California's public health

[Link to CalSurv Map](#)

- Barber, L. M., Schleier, J. J., 3rd, & Peterson, R. K. (2010). Economic cost analysis of West Nile virus outbreak, Sacramento County, California, USA, 2005. *Emerging infectious diseases*, 16(3), 480–486. doi:10.3201/eid1603.090667
- Barker, Chris. (2020). *VectorSurv Arboviruses*. [online] Available at: <https://maps.vectorsurv.org/arbo> [Accessed Jan. 2020].
- Cdph.ca.gov. (2020). *Mosquitoes and Mosquito-Borne Diseases*. [online] Available at: <https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/MosquitoesandMosquitoBorneDiseases.aspx> [Accessed 23 Jan. 2020].



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**Background:**

ACMAD is pleased to recognize and thank the following Trustees & Staff on their anniversaries in the month of March

Trustee	City	Years of Service	Anniversary Date
Elisa Marquez	Hayward	5	March 3rd
Employee	Title	Years of Service	Anniversary Date
John Busam	Vector Biologist	18	March 1st
Erik Castillo	Regulatory & Public Affairs Director	18	March 1st
Nick Appice	Vector Biologist	6	March 5th