

**AGENDA**  
1074<sup>th</sup> MEETING OF THE BOARD OF TRUSTEES  
OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT  
NOVEMBER 13TH, 2019

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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  
Alan Brown, 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  
Robert Dickinson, City of Piedmont  
Kathy Narum, City of Pleasanton  
Victor Aguilar, City of San Leandro  
Subru Bhat, City of Union City

1. Call to order.
2. Roll call.
3. President Hentschke 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. Approval of the minutes of the 1073<sup>rd</sup> meeting held October 9<sup>th</sup>, 2019 (**Board action required**).
5. Appointment of a committee to nominate candidates for board offices (**Board Action required**).
6. Presentation: *Mosquito Control on the SF Bay Shoreline* by Regulatory & Public Affairs Director, Erika Castillo, and Lab Director, Dr. Eric Haas-Stapleton (Information only).
7. Financial Reports as of October 31<sup>st</sup>, 2019: (Information only).
  - a. Check Register
  - b. Income Statement
  - c. Investments, reserves, and cash report
  - d. Balance Sheet
8. Presentation of the Monthly Staff Report for November 2019 (Information only).
9. Presentation of the Manager's Report for November 2019 (Information only).
  - a. Staff Anniversary
  - b. Cities contacted for Trustee reappointment (or new appointment): Poulson, Beatty, Emeryville, Dublin, Newark, Piedmont, San Leandro, Union City
  - c. Summary of 11/6/19 *Special District Climate Adaptation Roundtable* in Berkeley, CA
  - d. Summary of MVCAC Fall Quarterly Meeting in Visalia, CA

- e. MVCAC Annual Conference: San Diego, CA: 1/26-1/29; AMCA Annual Conference: Portland, OR: 3/16-3/20
- f. ACMAD Trustee Open House & Group Picture: December 11<sup>th</sup>
- g. LAFCo annexation hearing: Thursday, November 14<sup>th</sup>, 2019: Dublin San Ramon Services District Board Room, 7051 Dublin Boulevard
- h. 2018-2019 Biennial Report: Spring of 2020
- i. ACMAD's 90<sup>th</sup> Anniversary Open House: Summer of 2020

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

### 1073<sup>rd</sup> MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

October 9<sup>th</sup>, 2019

---

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  
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Robert Dickinson, City of Piedmont  
Kathy Narum, 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 5:08 P.M.
2. Trustees Hentschke, Poulson, Beatty, Roache, Brown, Cooley, Young, Marquez, Doggett, Washburn, Narum, Aguilar and Bhat were present. Trustee Dickinson was absent.
3. Board President Hentschke invited members of the public to speak on any issue relevant to the District. Vector Biologist Jeremy Sette was present to record the minutes.
4. Approval of minutes of the 1072<sup>nd</sup> meeting held September 11<sup>th</sup>, 2019.  
**Motion:** Trustee Beatty moved to approve the minutes  
**Second:** Trustee Aguilar  
**Vote:** motion carries: unanimous.
5. An update on the District's LAFCo annexation of Albany.  
**Discussion:**  
The General Manager gave an update on the District's LAFCo annexation of Albany and fielded the following discussion. Trustee Washburn corrected the statements made by Alameda County Vector Control Services employee Bob Gay at the Albany City Council meeting where he stated that he retired from the San Mateo County Mosquito and Vector Control District. Trustee Washburn asked for confirmation that Mr. Gay did not retire voluntarily, rather, the Board of Trustees rejected his contract renewal (yes, in July of 2014 by a vote of 8-11-1 according to their minutes). Trustee Washburn further noted that the current District Manager of San Mateo and former District Manager of ACMAD, Chindi Peavy, was one of the whistleblowers on the financial mismanagement that may have led to the nonrenewal of Mr.

Gay's contract. Trustee Washburn also disputed the statement by Mr. Gay that if this annexation was driven by financial pressures, then why has the Benefit Assessment remained the same for eleven years and is half of what the District was approved for by the public? The General Manager confirmed that the benefit assessment was approved for \$5.00 per parcel in 2008 but the Board of Trustees has only used \$2.50 per parcel since. Also, this amount has Cost of Living Adjustments included, so the original \$5.00 approval is currently over \$7.00 per parcel. The General Manager is proud of the District's focus on efficiencies and cost controls rather than increasing revenues. Trustee Beatty remarked on the chaotic nature of the September Albany City Council meeting. The General Manager discussed the most recent LAFCo Resolution from 2018 where LAFCo again recommended the City of Albany to encourage ACMAD to annex mosquito control services in Albany, after doing the same to ACMAD and Vector Control in their 2013 resolutions. Trustee Marquez asked for clarification that the District is merely following up on, not one, but multiple LAFCo recommendations for annexation (yes). Trustee Washburn discussed the last time he as Board President, and the former District Manager Peavey, attempted unsuccessfully to resolve this with the City of Albany and Vector Control in 2012. Trustee Marquez pointed out that two Supervisors, Haggerty and Miley, recommended this action as LAFCo commissioners as recent at 2018. The General Manager mentioned that the City of Albany's City Council has no records of discussing the 2018 City of Albany LAFCo Municipal Service Review in their minutes which recommended them to encourage ACMAD to annex their mosquito services. Trustee Marquez asked if there had been any follow-up with the City of Albany regarding these omissions in their staff report (ACMAD's Regulatory and Public Affairs Director, Erika Castillo, and President Hentschke provided additional information with city staff and the Mayor). The General Manager commented that even if the District annexed Albany, Vector Control would not any lose any funding nor employees. Trustee Cooley asked about the ballot process & timing (if >25% of registered voters or property owners oppose the annexation, the annexation goes to ballot; if >50% oppose the annexation, it fails). Trustee Roache asked if Vector Control could send an email blast to Albany residents (Trustee Narum answered that yes, it is possible, but it would have to be verified by LAFCo staff and not violate the CA Political Reform Act). Trustee Marquez asked what the ballot language states (this is not completed but will be similar to the annexation application language). Trustee Bhat mentioned the Berkeley resident who spoke at September Albany City Council meeting proclaiming that he was overwhelmingly supportive of the District annexing Albany, that he was pleased with the District's services, and that the residents of Albany would greatly benefit from services from the District at that price. The General Manager also added that this speaker suggested that Albany would benefit from both ACMAD and Vector Control's services, a sentiment that he agrees with. Trustee Beatty asked for clarification on the process going forward with LAFCo (the LAFCo hearing occurs on November 14<sup>th</sup>, and if approved, it would be followed by a 60-day period to tabulate any protests or oppositions). Trustee Cooley cautioned against attacking public figures and their agencies and was glad to hear that ACMAD took the high road, on the advice of Trustee Marquez. Trustee Narum commented that she planned to reach out to the LAFCo commissioners.

6. Presentation of the Financial Reports as of September 30<sup>th</sup>, 2019.

**Discussion:**

The General Manager presented the Financial Reports as of September 30<sup>th</sup>, 2019 and fielded the following discussion. President Hentschke asked for confirmation why the District chooses to post their financial records online voluntarily and asked why Vector Control does not as they are also a special district with the same requirements (cannot speak for other government agencies, but ACMAD values transparency and accountability).

7. Presentation of the Monthly Staff Report for September 2019.

**Discussion:**

The General Manager presented the Monthly Staff Report for September 2019.

8. Presentation of the Manager's Report for September 2019.

**Discussion:**

The General Manager presented the Manager's Report for September 2019 and fielded the following discussion. Trustee Bhat commented on his attendance of the CSDA meeting with the General Manager. Trustee Narum asked if the CSDA could be held in the Tri-Valley (not likely as there are no facilities large enough to house around 1,000 attendees and the exhibitors). Trustee Narum also clarified that she had completed her training and that the General Manager should reach out to her city clerk for more details.

9. Board President Hentschke asked for reports on conferences and seminars attended by Trustees. Trustee Bhat further commented on his pleasant experience at the CSDA conference and part of the conference that was noteworthy for him was the talk on General Manager performance evaluations and how it can be used as an opportunity for Boards to evaluate not only the General Manager, but the District's performance as a whole using its strategic plan and policies as guides.

10. Board President Hentschke asked for announcements from the Board. None.

11. Board President Hentschke asked trustees for items to be added to the agenda for the next Board meeting. The General Manager noted that he will be reaching out to Board Members whose terms will be expiring at the end of the year. Trustee Marquez asked if the terms were two or four years (both, but historically he only requests a 2-year term from the City Councils unless requested otherwise, as Trustees cannot be removed by their cities or by the Board of Trustees).

12. The meeting adjourned at 5:50 P.M.

**Respectfully submitted,**

Approved as written and/or corrected  
at the 1074<sup>th</sup> meeting of the Board of  
Trustees held November 13<sup>th</sup>, 2019

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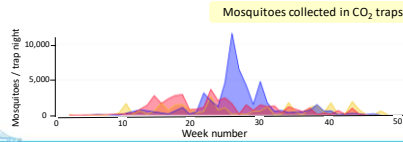
Eric Hentschke, President  
BOARD OF TRUSTEES

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P. Robert Beatty, Secretary  
BOARD OF TRUSTEES

## Summary of Lab Report for October 2019

- WNV, SLE and WEE not yet detected in birds or mosquitoes during 2019.
- Invasive *Aedes* mosquitoes have not been detected during 2019.
- Overall mosquito abundance during October 2019 was slightly lower relative to that month for the prior 2 years.
- *Culex erythrothorax* from marsh habitats were most abundant during October.



1

## Mosquito control along the SF Bay Shoreline

Erika Castillo  
Eric Haas-Stapleton



ACMAD Board of Trustees Meeting  
November 13, 2019

2

## Overview

- The changing SF Bay Shoreline
- Controlling mosquitoes in marsh habitats: past, present and upcoming
- Changes on the horizon: horizontal levees & new construction
- Engaging ACMAD to reduce impacts

3

## Sea level rise to impact SF Bay Area tremendously

**"We've effectively built on an estuary with millions of people just above sea level. We're in a highly vulnerable position in the Bay Area."**

*Patrick Barnard, Lead Author, USGS coastal geologist*

Article | Open Access | Published: 13 March 2019

**Dynamic flood modeling essential to assess the coastal impacts of climate change**

Patrick L. Barnard, Li-H. Erikson, Amy C. Foggozzi, Juliette A. Fried Hart, Patrick Limber, Andrea C. O'Neill, Maarten van Ormondt, Sean Wozniak, Nathan Wood, Maya K. Hayden & Jeanne M. Jones

Scientific Reports 9, Article number: 4309 (2019) | Cite this article

4

## Predicted sea level rise for SF Bay Area

Year	Most Likely Projections (feet)	Range (feet)
2030	8 ± 2	2 to 12
2050	11 ± 4*	5 to 24
2100	30 ± 10	17 to 66

Source: National Research Council, 2012



CITY OF OAKLAND

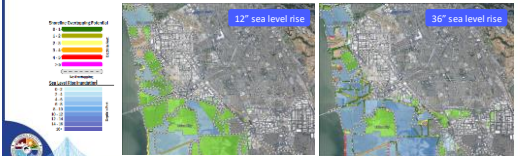


5

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Source: National Research Council, 2012



6

## Increased storm intensity

**"The predicted damage from sea level rise in California triples once tides, storms and erosion are taken into account!"**

*U.S. Geological Survey*

future climate change

https://doi.org/10.1029/2018JG002502

**Increasing precipitation volatility in twenty-first-century California**

Deborah L. Swackhamer, David M. Legler, David M. Legler & Alan J. Blum

Nature Climate Change 8, Article number: 477–483 (2018) | Cite this article



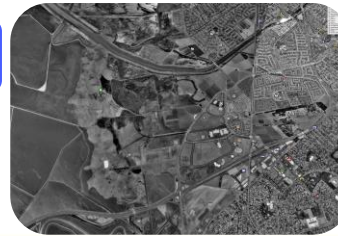
Storm surge topping levee at Hayward Regional Shoreline, 2005  
Source: First Bay Regional Parks District

7

## Building ever-closer to marshes

Our largest mosquito breeding ground:  
Coyote Hills RP

1993



8

## Building ever-closer to marshes

2019





9

### Controlling mosquitoes in the marsh

Early- mid 1900's

Civil engineering and infrastructure solutions

Harold Gray, Manager 1930 - 1955


C. Chester Robinson, Manager 1955-1971

10

### New approaches for water management

2017

demonstration horizontal ecotone levee in Alameda County



11

### Traditional & Horizontal Levees



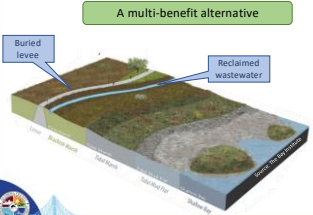
**Traditional Levee**

- Sharply sloping grey infrastructure
- Protects infrastructure from storm surge
- Low ecological diversity
- Damaged by rising sea level and extreme weather

12

### Traditional & Horizontal Levees

A multi-benefit alternative



**Horizontal Ecotone Levee**

- Gradual slope
- Protects infrastructure
- Wastewater treatment
- High ecological diversity
- Adaptive
- Recreation
- Unplanned maintenance costs
- Mosquito breeding

13

### Hurricane Superstorm Sandy brings national focus to changing climate and failed infrastructure




14

### Global planning for resilient shorelines

Richmond, Virginia USA



Shanghai, China



Chongming Island Xincunsha Master Plan

15

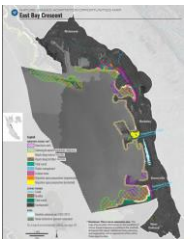
### Potential Horizontal Levee Locations

Selected Measures Suitability

NATURE-BASED

- Nearshore reefs
- Submerged aquatic vegetation
- Beaches
- Tidal marshes
- Polder management
- Ecotone levees
- Migration space preparation

○ Limited suitability   ● Some suitability   ● High suitability



Source: SF Bay Shoreline Adaptation Atlas

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### Potential Horizontal Levee Locations

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Source: SF Bay Shoreline Adaptation Atlas

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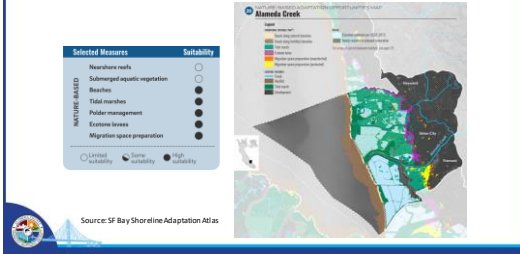
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Source: SF Bay Shoreline Adaptation Atlas

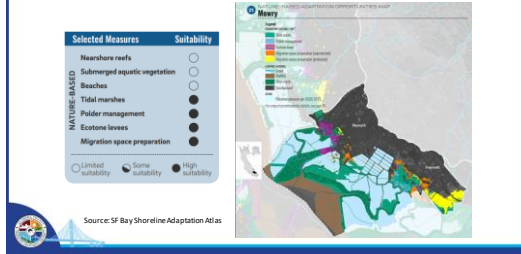
18

### Potential Horizontal Levee Locations



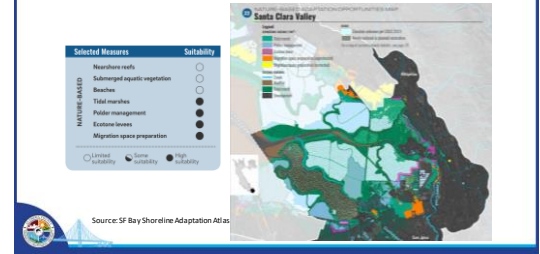
19

### Potential Horizontal Levee Locations



20

### Potential Horizontal Levee Locations



21

### 3 Operations Staff with tidal marshes



22

Goal: Evaluate plans, monitor and control mosquitoes at newly installed horizontal levees and property that abut marsh habitats

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- Regulatory: Gain a role in advising or approving new project permits
  - Monitor: Aerial imagery and mosquito abundance before and ongoing after installation
  - Control breeding: Physical and chemical
  - Abatement: High costs may be borne by land manager

23

Goal: Evaluate plans, monitor and control mosquitoes at newly installed horizontal levees and property that abut marsh habitats

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24

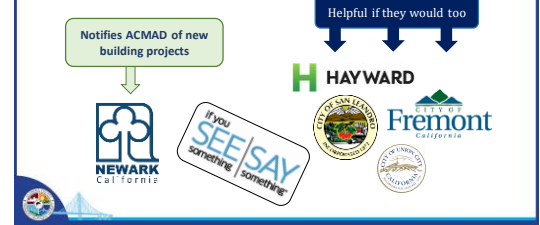
Regulatory: Gain a role in advising or approving new project permits

25

Regulatory: Gain a role in advising or approving new project permits

26

Knowing brings action



27



Monitor: Aerial imagery before and ongoing after installation



- ++ Very large land areas
- Low resolution
- Scheduling
- ++ Higher resolution
- ++ Scheduling
- + Large land areas
- Costly
- ++ Very high resolution
- ++ Scheduling
- ++ Diverse cameras
- + Inexpensive
- Small land areas



28

Monitor: mosquito abundance before and ongoing after installation



Traditional overnight mosquito traps



Automated mosquito counting and remote reporting trap



29

Goal: Evaluate plans, monitor and control mosquitoes at newly installed horizontal levees and property that abut marsh habitats

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Regulatory: Gain a role in advising or approving new project permits

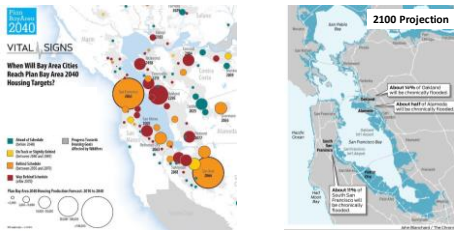
Monitor: Aerial imagery and mosquito abundance before and ongoing after installation

Control breeding: Physical and chemical

Abatement: High costs may be borne by land manager



30



New building and population growth inundated with seawater



31

Horizontal ecotone levees integrated into wastewater, wildlife and flood infrastructure



32



Impact projects before they impact us

Sustaining effective & efficient mosquito control for the next 90 years



33

Alameda County Mosquito Abatement District  
DANIELSON, CALIFORNIA



Sustaining effective & efficient mosquito control for the next 90 years



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Alameda County Mosquito Abatement Dist.  
**Check Register**  
For the Period From Oct 1, 2019 to Oct 15, 2019

Filter Criteria includes: Report order is by Date.

<b>Check #</b>	<b>Date</b>	<b>Payee</b>	<b>Amount</b>
1854	10/15/19	Payroll	77,392.84
1855	10/15/19	Airgas	524.63
1856	10/15/19	Adapco	22,467.40
1857	10/15/19	AT&T	131.23
1858	10/15/19	Bay Alarm	762.31
1859	10/15/19	Bay Central Printing	164.63
1860	10/15/19	Bhat, Subrahmanya Y	1,645.08
1861	10/15/19	CalPERS 457	2,744.91
1862	10/15/19	Cintas	780.54
1863	10/15/19	Element One Architecture	8,772.50
1864	10/15/19	Clausnitzer, Ryan	460.52
1865	10/15/19	Delta Dental	4,572.90
1866	10/15/19	Grainger	293.20
1867	10/15/19	Hayward Water System	534.42
1868	10/15/19	Industrial Park Landscape Maintenance	215.00
1869	10/15/19	JCR Custom/ Paul Builders	58,621.07
1870	10/15/19	KBA Docusys	580.49
1871	10/15/19	McMahon, Thomas J.	132.17
1872	10/15/19	PFM Asset Management	1,682.80
1873	10/15/19	PG&E	45.34
1874	10/15/19	Singh, Ranjit K.	114.05
1875	10/15/19	The Hartford	77.78
1876	10/15/19	Techniclean	71.13
1877	10/15/19	U.S Bank Corporate Payment System	18,107.83
ACH	10/15/19	CalPERS Retirement	13,177.15
<b>Total Expenditures - October 15, 2019</b>			<b>214,071.92</b>

Alameda County Mosquito Abatement Dist.  
**Check Register**  
For the Period From Oct 16, 2019 to Oct 31, 2019

Filter Criteria includes: Report order is by Date.

<b>Check #</b>	<b>Date</b>	<b>Payee</b>	<b>Amount</b>
1878	10/31/19	Payroll	78,410.53
1879	10/31/19	Doggett, James N	100.00
1880	10/31/19	Hentschke, Eric Armin	100.00
1881	10/31/19	Poulson, Wendi Lynn	100.00
1882	10/31/19	Young, George	100.00
1883	10/31/19	Airgas	1,145.20
1885	10/31/19	All-Ways Green Services	1,400.00
1886	10/31/19	Adapco	2,155.68
1887	10/31/19	Bay Alarm	78.31
1888	10/31/19	CalPERS 457	2,743.92
1889	10/31/19	CSDA	7,077.00
1890	10/31/19	Cintas	552.59
1891	10/31/19	CarQuest	35.27
1892	10/31/19	Clausnitzer, Ryan	102.18
1893	10/31/19	Delta Dental	4,572.90
1894	10/31/19	Grainger	232.02
1895	10/31/19	Integrated DNA Technologies, Inc	25.68
1896	10/31/19	Industrial Park Landscape Maintenance	215.00
1897	10/31/19	Kimball Midwest	110.86
1898	10/31/19	Makal Solutions	205.00
1899	10/31/19	PC Professional	112.18
1900	10/31/19	PG&E	1,794.81
1901	10/31/19	Repcold Distributors	7,877.00
1902	10/31/19	Schaeffer MFG.Co.	1,231.05
1903	10/31/19	The Hartford	77.78
1904	10/31/19	Voya Institutional Trust Company	354.82
1905	10/31/19	VSP	674.60
1906	10/31/19	Verizon	1,451.42
1907	10/31/19	Waste Management of Alameda County	338.45
1908	10/31/19	WEX Bank	4,263.65
ACH	10/31/19	Aguilar, Victor	100.00
ACH	10/31/19	Beatty, Robert .P	100.00
ACH	10/31/19	Bhat, Subrahmanya Y	100.00
ACH	10/31/19	Brown, Alan	100.00
ACH	10/31/19	Cooley, Elizabeth	100.00
ACH	10/31/19	Marquez, Elisa	100.00
ACH	10/31/19	Narum, Katherine	100.00
ACH	10/31/19	Roache, Cathy J Pinkerton.	100.00
ACH	10/31/19	Washburn, Jan	100.00
ACH	10/31/19	CalPERS Retirement	13,119.55
ACH	10/31/19	CalPERS Health	32,528.44

Voided check: 1884

**Total Expenditures - October 31, 2019      164,185.89**

**Alameda County Mosquito Abatement District**  
**Income Statement**  
**October 31, 2019. (4 of 12 mth, 33%)**

<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>\$ 1,869.75</b>	<b>\$ 341,507.07</b>	<b>\$ 4,705,236.00</b>	<b>7%</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	\$ 1,874,396.01	\$ 170,677.56	\$ 681,030.32	\$2,425,552	28%
CalPERS Retirement	\$262,107	\$ 310,838.21	\$ 14,994.06	\$ 246,850.46	\$360,538	68%
Medicare	\$23,564	\$ 25,149.24	\$ 2,272.10	\$ 9,066.14	\$30,843	29%
Fringe Benefits	\$449,954	\$ 452,960.30	\$ 42,504.40	\$ 156,532.25	\$502,043	31%
<b>Total Salaries, Retirement, &amp; Benefits</b>	<b>\$2,480,037</b>	<b>\$ 2,663,343.76</b>	<b>\$230,448</b>	<b>\$1,093,479</b>	<b>\$3,318,976</b>	<b>33%</b>
Clothing and personal supplies (purchased)	\$ 7,308.71	\$ 8,899.04	\$ 398.67	\$ 1,217.29	\$8,000	15%
Laundry service and supplies (rented)	\$ 9,819.37	\$ 12,602.62	\$ 1,196.07	\$ 5,082.44	\$12,750	40%
Utilities	\$ 29,830.25	\$ 30,161.25	\$ 2,713.02	\$ 10,062.33	\$12,600	80%
Communications-IT	\$ 102,855.59	\$ 108,886.22	\$ 3,138.69	\$ 14,362.11	\$117,100	12%
Maintenance: structures & improvements	\$ 21,374.70	\$ 13,673.39	\$ 10,675.70	\$ 12,754.02	\$25,000	51%
Maintenance of equipment	\$ 43,585.45	\$ 43,628.61	\$ 1,669.98	\$ 2,978.33	\$35,000	9%
Transportation, travel, training, & board	\$ 131,330.43	\$ 98,432.96	\$ 8,889.82	\$ 27,471.47	\$134,260	20%
Professional services	\$ 100,563.13	\$ 112,944.66	\$ 1,682.80	\$ 39,271.75	\$169,320	23%
Memberships, dues, & subscriptions	\$ 15,933.00	\$ 20,773.00	\$ 7,207.00	\$ 20,049.00	\$22,655	88%
Insurance - (VCJPA, UAS)	\$ 131,392.69	\$ 125,189.76	\$ -	\$ 133,141.92	\$133,546	100%
Community education	\$ 64,109.47	\$ 34,860.85	\$ 2,638.00	\$ 8,671.27	\$40,000	22%
Operations	\$ 176,000.00	\$ 206,731.27	\$ 7,200.61	\$ 50,219.83	\$228,500	22%
Household expenses	\$ 18,101.06	\$ 18,656.19	\$ 930.54	\$ 6,529.31	\$15,850	41%
Office expenses	\$ 10,753.26	\$ 11,795.67	\$ 1,067.77	\$ 2,391.90	\$14,500	16%
Laboratory supplies	\$ 113,768.06	\$ 95,640.16	\$ 13,335.61	\$ 42,483.11	\$137,000	31%
Small tools and instruments	\$ 8,376.29	\$ 2,211.74	\$ 65.68	\$ 224.99	\$3,000	7%
<b>Total Staff Budget</b>	<b>\$ 985,101.46</b>	<b>\$ 945,087.39</b>	<b>\$ 62,809.96</b>	<b>\$ 376,911.07</b>	<b>\$1,109,081</b>	<b>34%</b>
<b>Total Operating Expenditures</b>	<b>\$ 3,465,138.55</b>	<b>\$ 3,608,431.15</b>	<b>\$ 293,258.08</b>	<b>\$ 1,470,390.24</b>	<b>\$4,428,057</b>	<b>33%</b>

1 - Unaudited amount, as of July 31, 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  
October 31, 2019. (4 of 12 mth, 33%)**

Account #	Investment Accounts	Beginning Balance	Deposits	Withdrawals	Interest Activity	Ending Balance
1004	LAIF	\$ 1,229,524.18	\$ -	\$ (129,000.00)	\$ 11,046.30	\$ 1,111,570.48
1005	OPEB Fund	\$ 4,411,107.68	\$ -	\$ -	\$ (90,342.62)	\$ 4,320,765.06
1006	VCJPA Member Contingency	\$ 353,497.00	\$ -	\$ -	\$ -	\$ 353,497.00
1007	VCJPA Property Contingency	\$ 52,796.00	\$ -	\$ -	\$ -	\$ 52,796.00
1008	CAMP: Repair and Replace	\$ 291,687.07	\$ 66,170.00	\$ (23,208.27)	\$ 497.16	\$ 335,145.96
1009	CAMP: Public Health Emergency	\$ 519,782.27	\$ -	\$ -	\$ 905.85	\$ 520,688.12
1010	CAMP: Operating Reserve	\$ 1,920,540.94	\$ -	\$ -	\$ 3,347.01	\$ 1,923,887.95
1011	CAMP: Capital Reserve Fund	\$ 232,676.77	\$ 51,332.00	\$ (140,222.70)	\$ 404.37	\$ 144,190.44
1012	PARS: Pension Stabilization <sup>1</sup>	\$ 1,576,111.28	\$ -	\$ -	\$ 4,882.40	\$ 1,580,993.68
<b>Total</b>		<b>\$ 10,587,723.19</b>				<b>\$ 10,343,534.69</b>
Cash Accounts		Beginning Balance		Withdrawals	Activity	Ending Balance
1001	Bank of America (Payroll Account) *	\$ 114,822.40				\$ 39,573.94
1002	Bank of The West (Transfer Account) *	\$ 302,894.17				\$ 261,293.69
1003	County Account	\$ 557,543.34		\$ -	\$ 1,869.75	\$ 559,413.09
1013	Petty Cash	\$ 441.44		\$ -	\$ (32.24)	\$ 409.20
<b>Total</b>		<b>\$ 975,701.35</b>				<b>\$ 860,689.92</b>

1- PARS - Pension Stabilization balance is as of September 30, 2019.

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

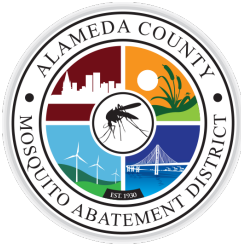
Alameda County Mosquito Abatement Dist.  
Balance Sheet  
October 31, 2019

ASSETS

Current Assets		
Cash	\$	4,320,765.06
Bank of America payroll		113,395.69
Bank of the West		360,004.32
County		559,413.09
Cash with LAIF		1,111,570.48
VCJPA - Property Contingency		52,796.00
VCJPA- Member Contingency		353,497.00
CAMP - Repair and Replace		335,145.96
CAMP - Public Health Emergency		520,688.12
CAMP - Operating Reserve		1,923,887.95
CAMP - Capital Reserve Fund		144,190.44
PARS		1,580,993.68
Petty cash		<u>409.20</u>
Total Current Assets		11,376,756.99
Property and Equipment		
Acc Dep - equipment	(1,318,915.70)	
Acc Dep - stru & improv	(2,349,631.01)	
Construction in progress		535,663.99
Equipment		1,637,308.50
Structure/improvement		4,529,022.67
Land		<u>61,406.00</u>
Total Property and Equipment		3,094,854.45
Other Assets		
Net OPEB Asset		<u>716,666.00</u>
Total Other Assets		<u>716,666.00</u>
Total Assets		<u><u>\$ 15,188,277.44</u></u>

LIABILITIES AND CAPITAL

Current Liabilities		
Accounts payable	\$	99,226.23
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		2,962,789.66
OPEB Fund		<u>4,320,765.06</u>
Total Liabilities		7,283,554.72
Capital		
Designated fund balances		4,100,295.19
Investment in general fixed as		4,637,374.11
Net Income		<u>(832,946.58)</u>
Total Capital		<u>7,904,722.72</u>
Total Liabilities & Capital		<u>\$ 15,188,277.44</u>



## Board of Trustees

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General Manager

## MONTHLY STAFF REPORT – November 2019

### 1. OPERATIONS REPORT

In response to another high-tide event at the beginning of October and to prevent a repeat of the *Aedes dorsalis* emergences that occurred in September, operations staff launched one of the most concerted efforts in recent ACMAD history targeting this species. For several days, all the operations staff conducted comprehensive treatments in the tidal marshes of Fremont and Newark. September's emergence of *Ae. dorsalis* occurred throughout the Bay Area, generating numerous calls from the public reporting day-biting mosquitoes and it even garnered television news attention. October treatment efforts proved to be highly successful as ACMAD just received three calls to report adult mosquito biting issues from the cities of Fremont and Newark for the entire month. Of the three calls, two were attributable to *Ae. dorsalis*. Low numbers of this species were also noted in post-treatment inspections and field observations while operations staff performed ditching efforts in some of these same sources.

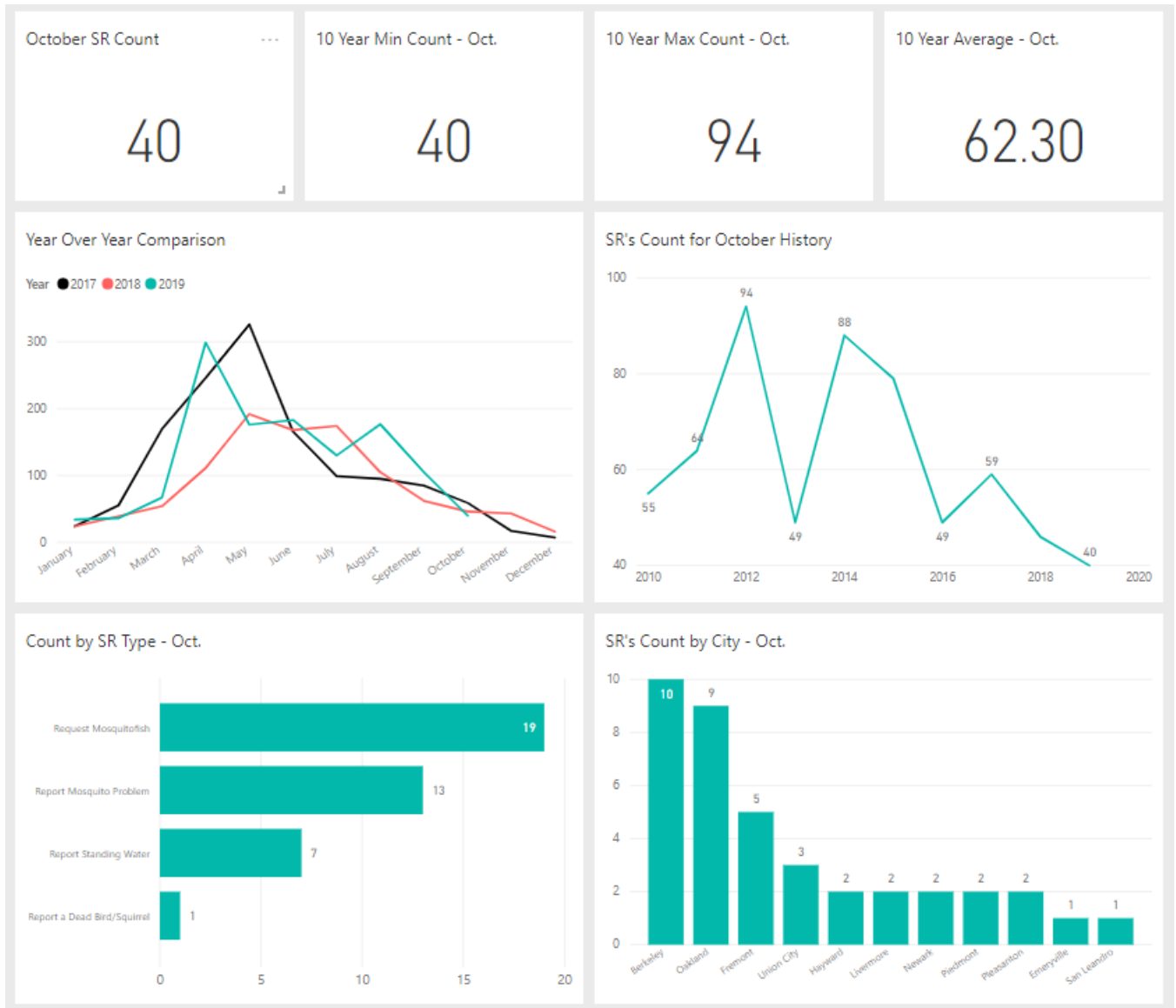
Overall, requests for services were down during in October. The overall number of requests totaled forty, well below the ten-year average for the month. Close to half of the requests responded were for mosquito fish. ACMAD received only one call during the month to report a dead bird that tested negative for West Nile virus (WNV). This is noteworthy; to date, there has been no WNV positive birds nor mosquito pools collected in Alameda county. Complete absence of WNV in our county has not occurred since at least 2011. WNV has been detected in many counties throughout the state this year. There are certainly many factors to consider when dealing with mosquito-borne diseases, but control of prime vector species plays a significant role. Operations staff have put in a great deal of effort controlling larval populations of *Culex pipiens*, *Culex tarsalis*, and *Culex erythrothorax*. These three species represent our main potential WNV vectors. Data from lab traps, light traps, field observations/inspections, and service requests indicate that adult populations of all three species in the environment are low. Operations efforts to control these species will remain consistent until the first significant rainfall events of the year occur.

Operation staff efforts also continued in October to clear and maintain ditches in tidal marsh sources. The flow of tidal waters in and out of the completed ditches has greatly improved. Many of the areas that are being cleaned have not received maintenance in many years and their flow had been very restricted. Efforts are being focused in areas that have been difficult to inspect and treat. Many of these ditches are difficult to locate until one is right on top of them due to vegetation overgrowth and partial siltation and debris. This can pose significant safety hazards during the inspection and treatment process. The goal is to get these ditches back to flowing properly, be more visible and safer for operations staff, and ultimately limit or even eliminate the need to treat some of these areas. This form of physical control can lessen the need for larval treatments well into the future and has been proven to be an effective and sustainable means of lowering mosquito populations throughout the history of our district.

Field Operations Supervisor  
Joseph Huston

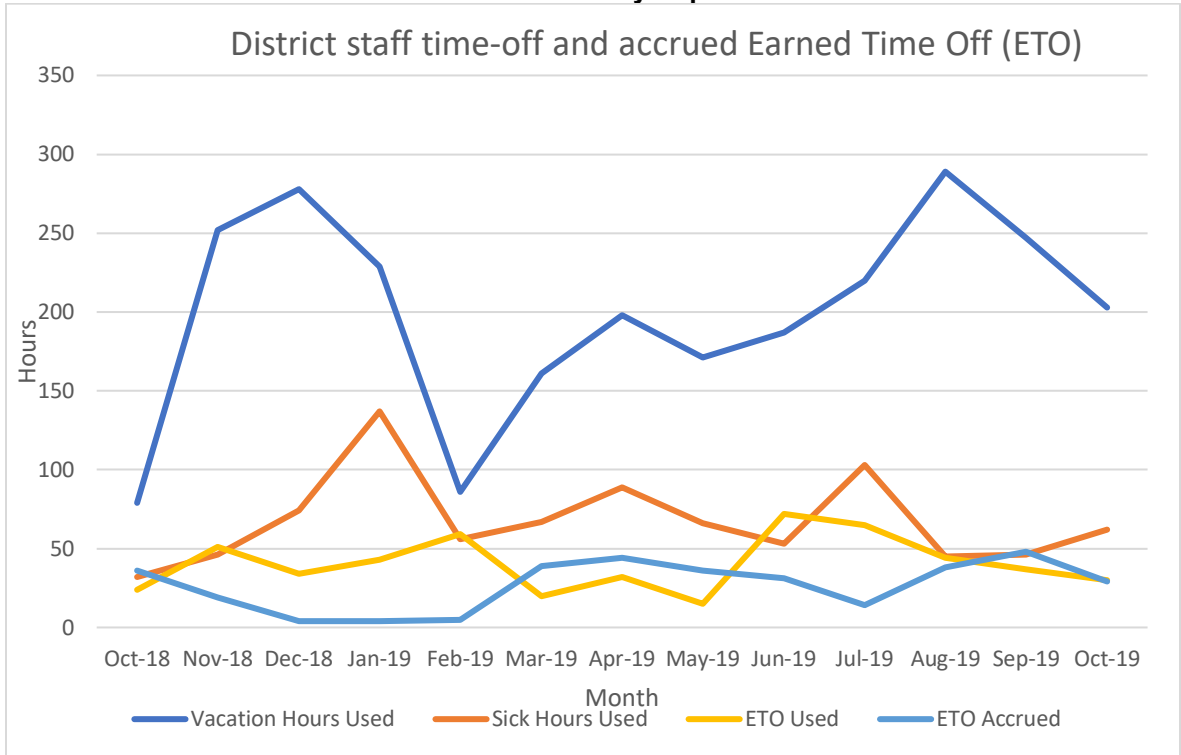
## A. District Data

### 1. Service Requests



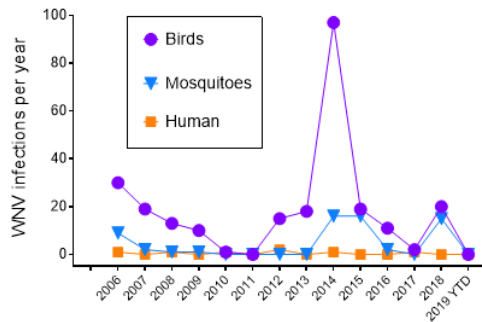


## 2. Activity Report

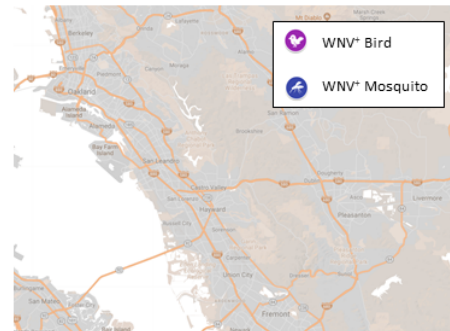


## 3. WNV Activity

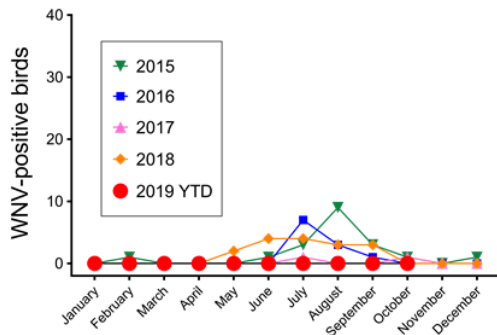
WNV infections detected in Alameda County  
2005 – 2019 YTD



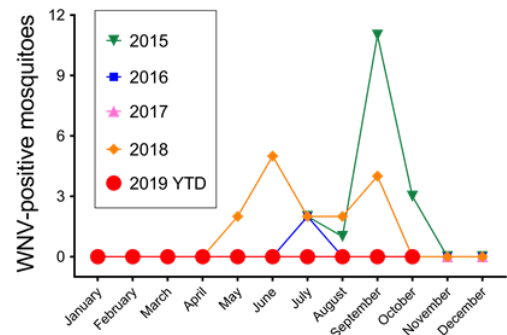
Locations of WNV-infected mosquitoes and birds  
collected in Alameda County during 2019



WNV-infected birds collected in  
Alameda County



WNV-infected mosquitoes collected in  
Alameda County



## 2. LAB

### Summary

- West Nile virus (WNV) was not detected in birds or mosquitoes during the month of October.
- Adult mosquito abundance during October 2019 was slightly lower than the same period of the prior year.
- A total of 3,049 adult mosquitoes were captured and killed by lab traps during the month of October.

### Arbovirus Monitoring

- West Nile virus (WNV) was not detected in birds or mosquitoes during the month of October 2019.
- 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).

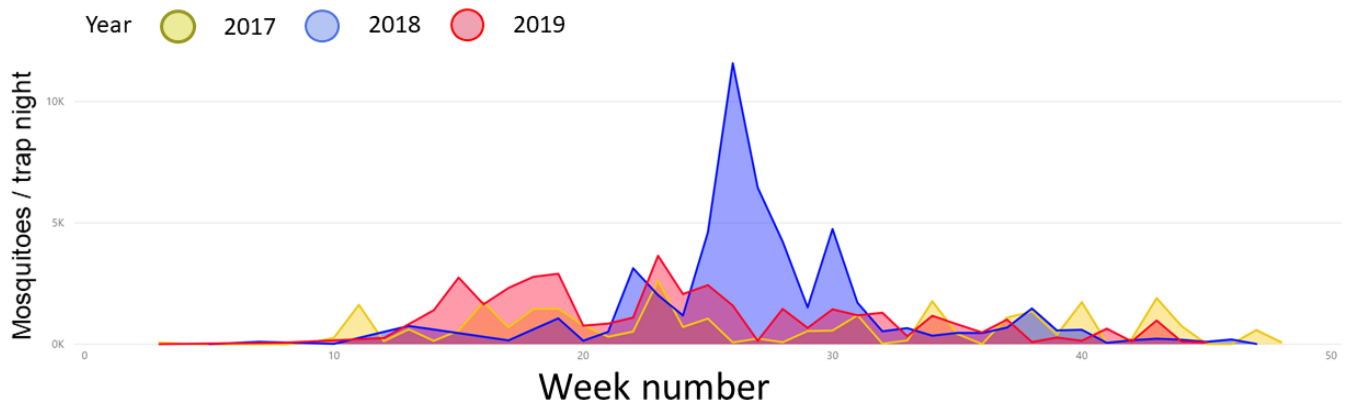
### Native Mosquito Abundance

- Over the course of the month, 258 EVS CO<sub>2</sub> traps were placed; 1,927 mosquitoes were collected and identified to species (Figure 1). There was an average of 7.47 mosquitoes per trap night, a 1.8-fold decrease in the number of mosquitoes per trap night relative to the prior month (n = 3,852 mosquitoes collected during September 2019). *Culex erythrothorax* remained the most abundant species collected in EVS CO<sub>2</sub> traps, followed by *Culex pipiens*, and *Culex tarsalis* (Figure 2). The geospatial distribution of mosquito species collected in EVS CO<sub>2</sub> traps at each trap site in the county is displayed in Figure 3. Overall, mosquito abundance during October 2019 as measured by EVS CO<sub>2</sub> traps was slightly higher than the prior year (Figure 2; 2019, red line; 2018, blue line), but slightly lower than the same period of 2017 (Figure 1; 2017, yellow line).
- Mosquito abundance, as measured using NJLT, was slightly lower than the prior month (Figure 4; 0.75 and 0.85 mosquitoes / trap night, respectively; total of 527 mosquitoes over 707 trap nights). *Culex tarsalis* was the most prevalent species collected in NJLT during October 2019, followed by *Culiseta incidens* and *Culiseta particeps* (Figure 5).

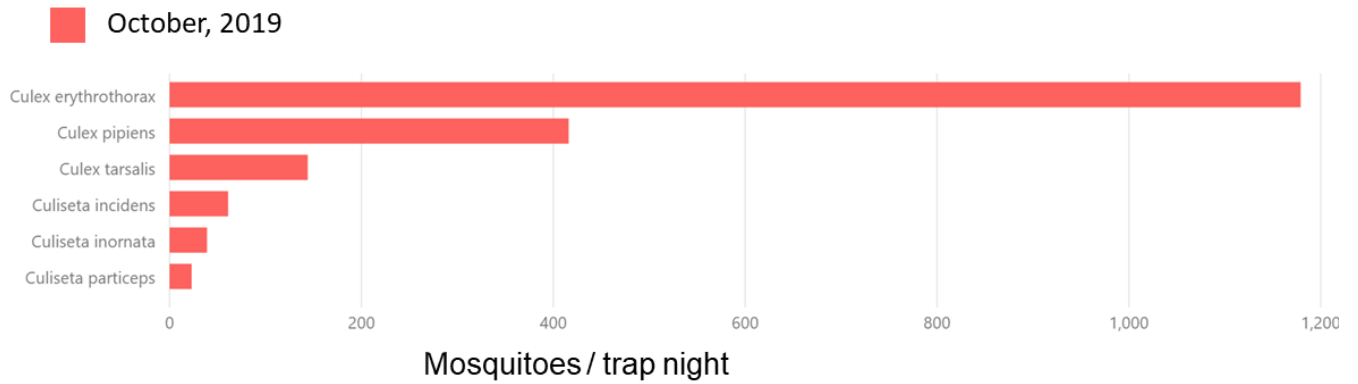
### Invasive Aedes Monitoring

- Invasive *Aedes* mosquitoes have not been detected in any mosquito trap placed in Alameda County during 2019.

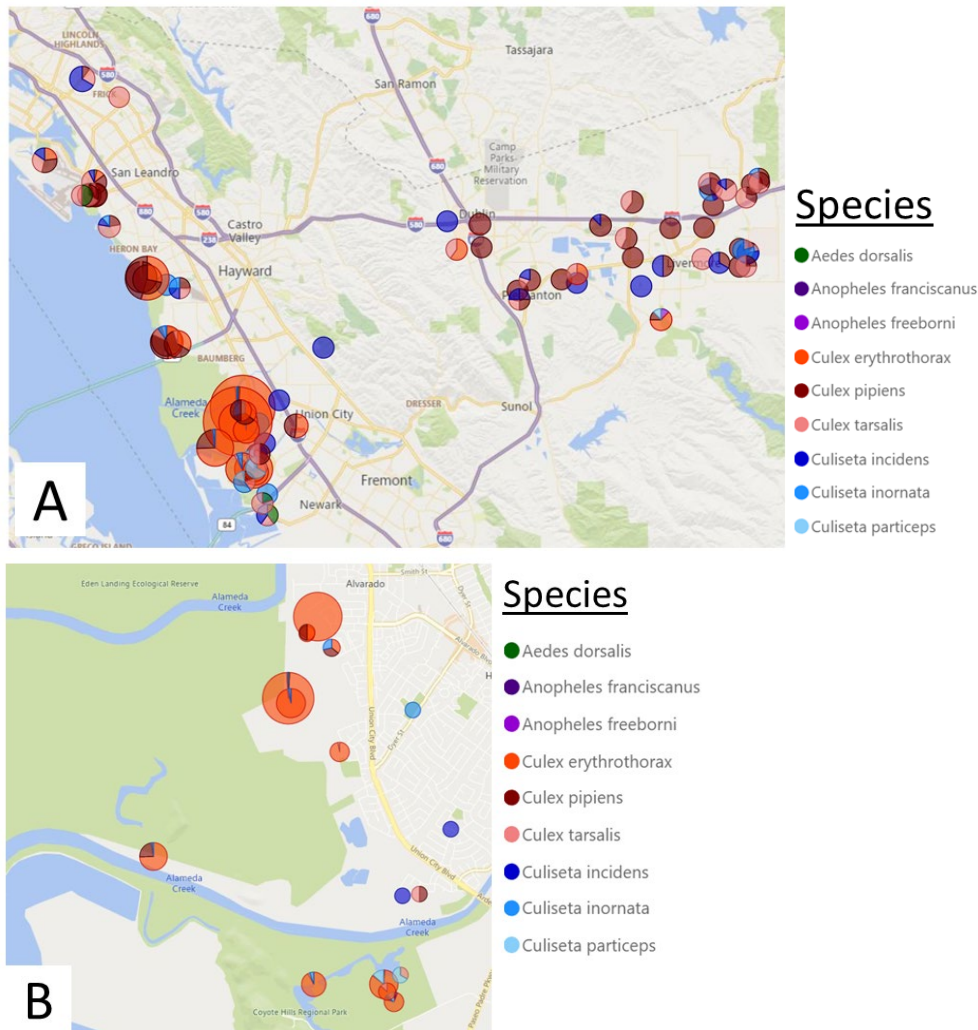
### FIGURES



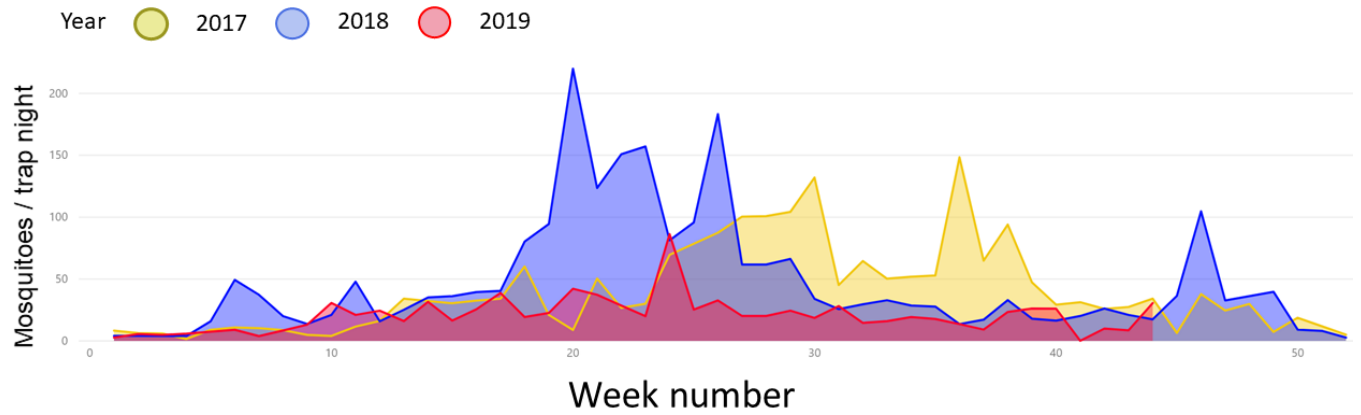
**Figure 1. Mosquitoes captured in EVS CO<sub>2</sub> traps from 2017 – 2019.** A total of 1,927 mosquitoes were captured in EVS CO<sub>2</sub> traps during October 2019 and identified to species.



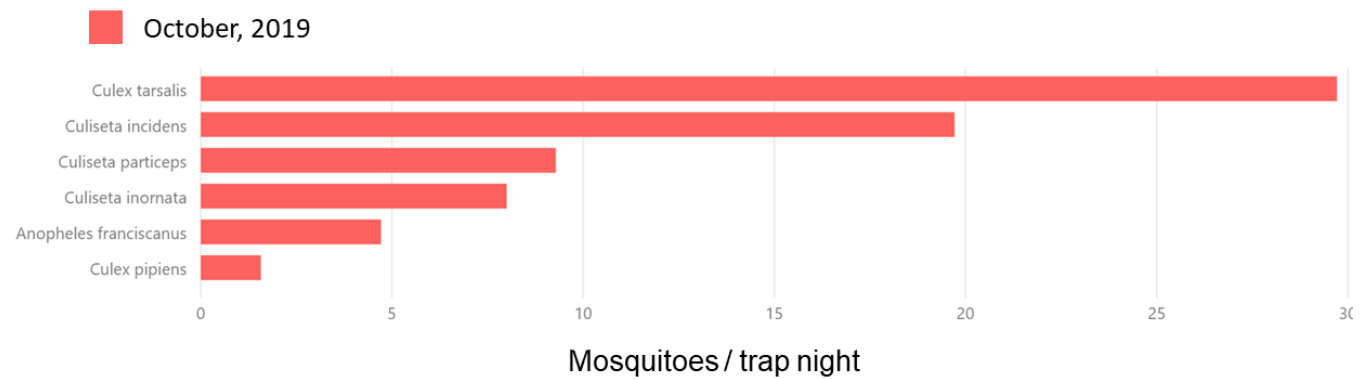
**Figure 2. The six-most abundant species of mosquito captured during October 2019 using EVS CO<sub>2</sub> traps.**



**Figure 3. Mosquito abundance by trap site evaluated using EVS CO<sub>2</sub> traps.** Pie charts over trap sites indicate the distribution of mosquito species collected at the trap site. The size of the pie charts indicates the relative number of mosquitoes at each site during October 2019. (A) Entirety of Alameda County. (B) Alameda Creek watershed.



**Figure 4. Mosquitoes captured in NJLT from 2017 – 2019.** A total of 527 mosquitoes were captured in NJLT during October 2019 and identified to species.

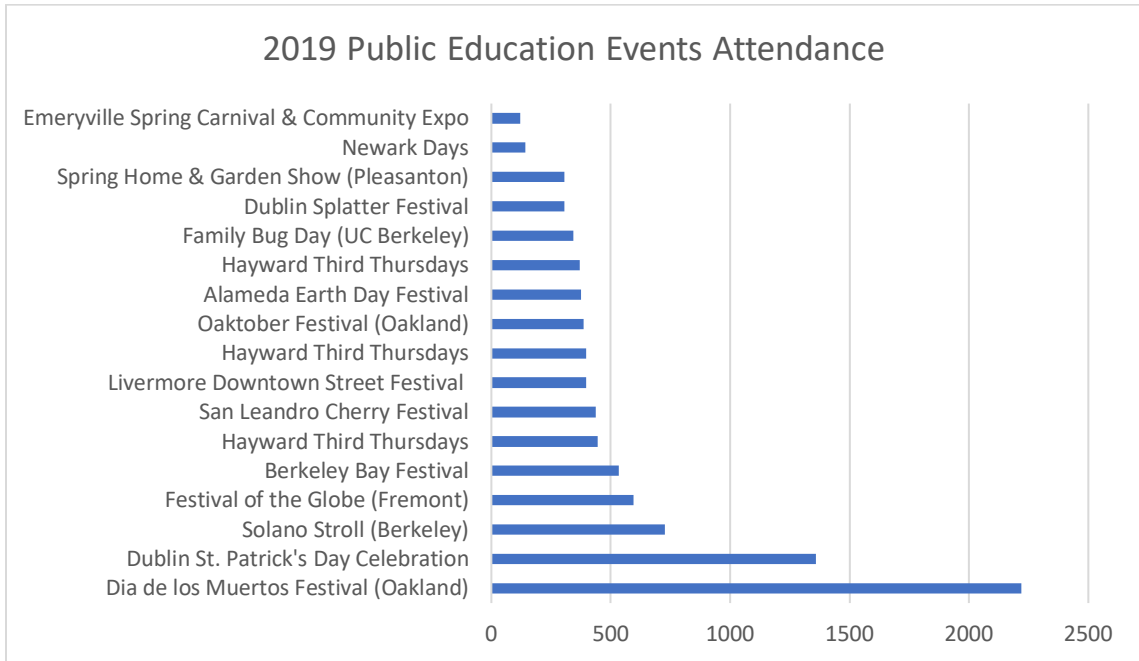


**Figure 5. The six-most abundant species of mosquito captured during October 2019 in NJLT.**

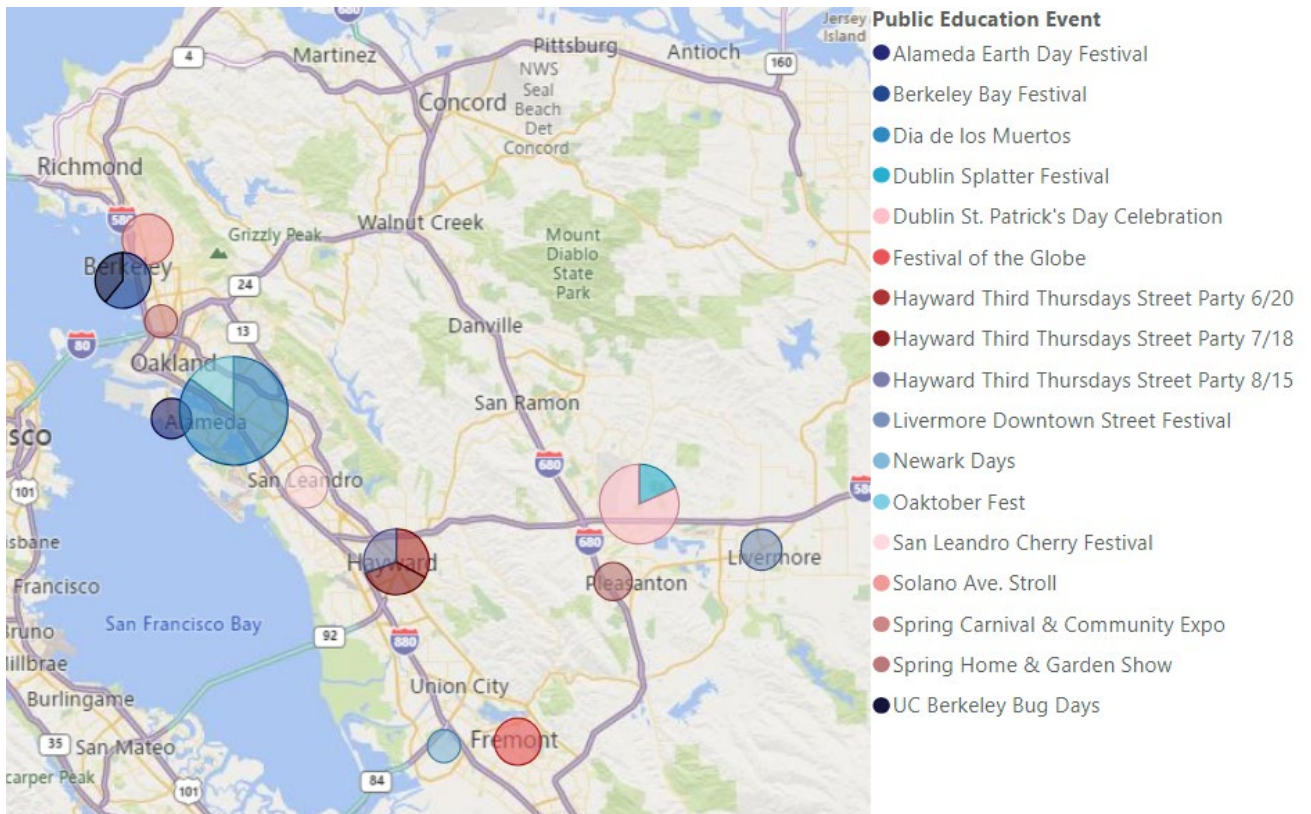
**PUBLIC EDUCATION**

**A. Events**

**i. Past**



**Figure 1. Number of visitors that attended each event**



**Figure 2. Public education events in 2019.** ACMAD participated in 24 events during 2019. Booth attendance at events held on school campuses were not recorded. Booth attendance for the shows listed on the map was almost 9,500 people.

## B. Google Analytics

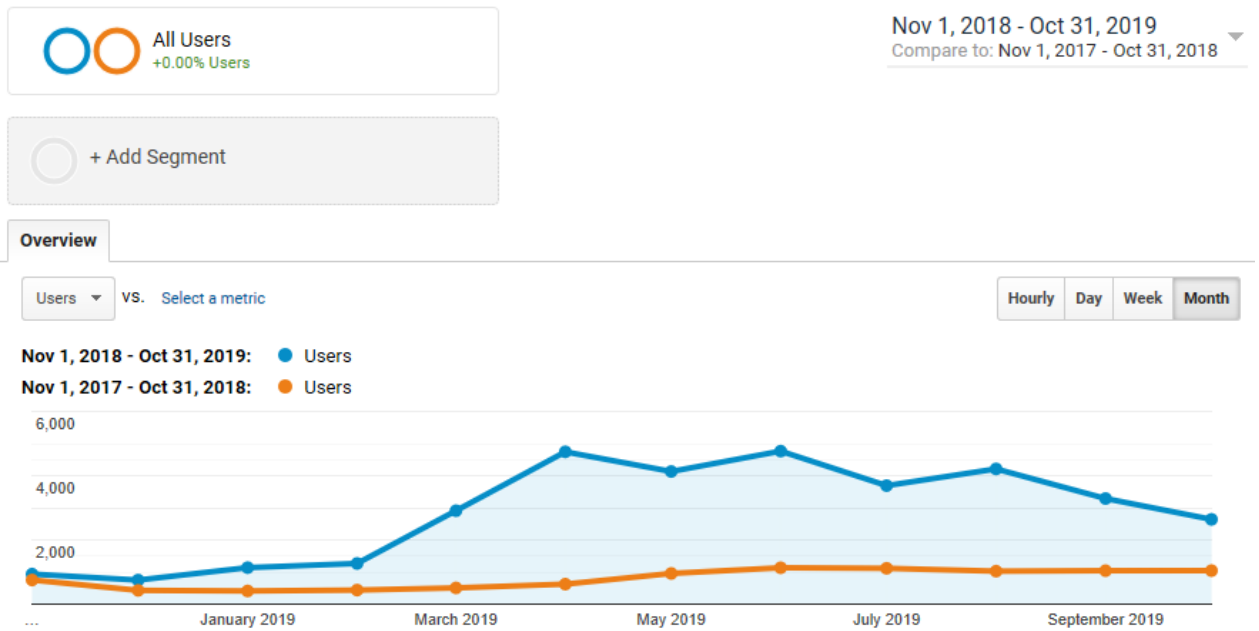


Figure 3. Comparison of website users over the past two years

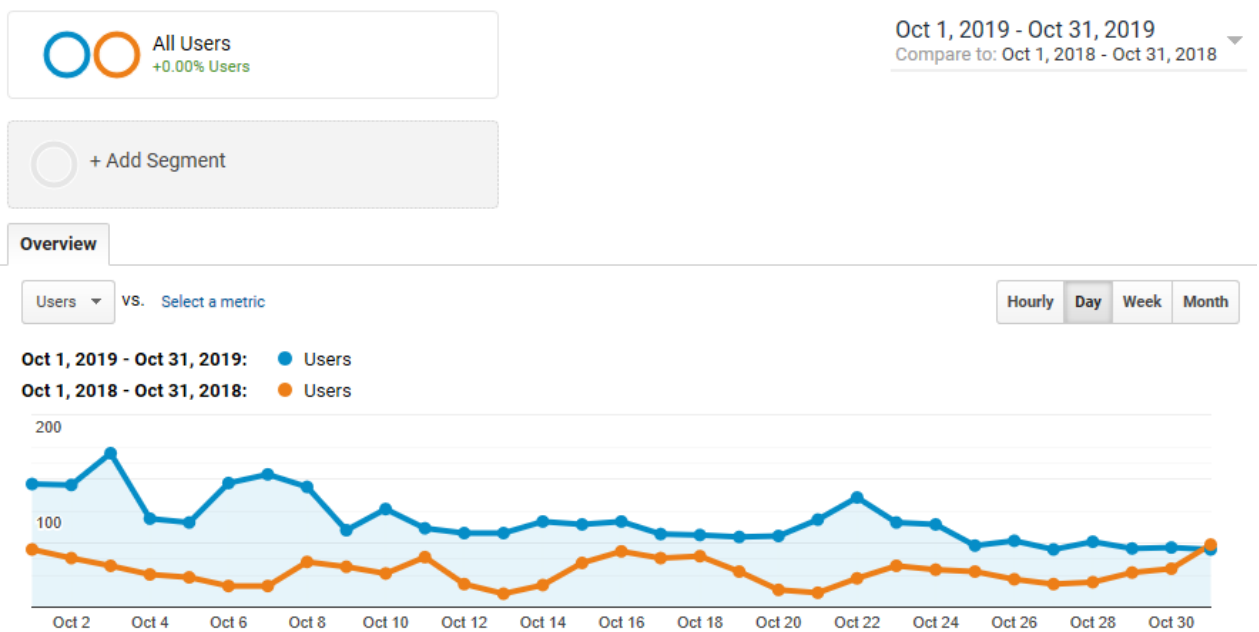
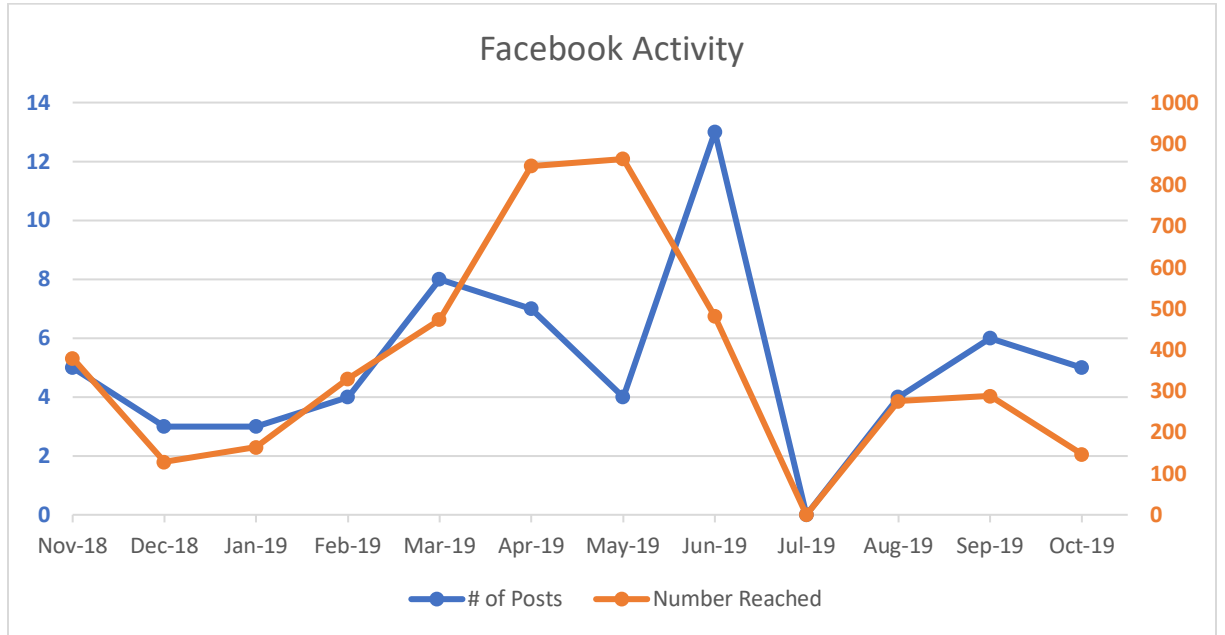


Figure 4. Comparison of website users over the past two years for October.

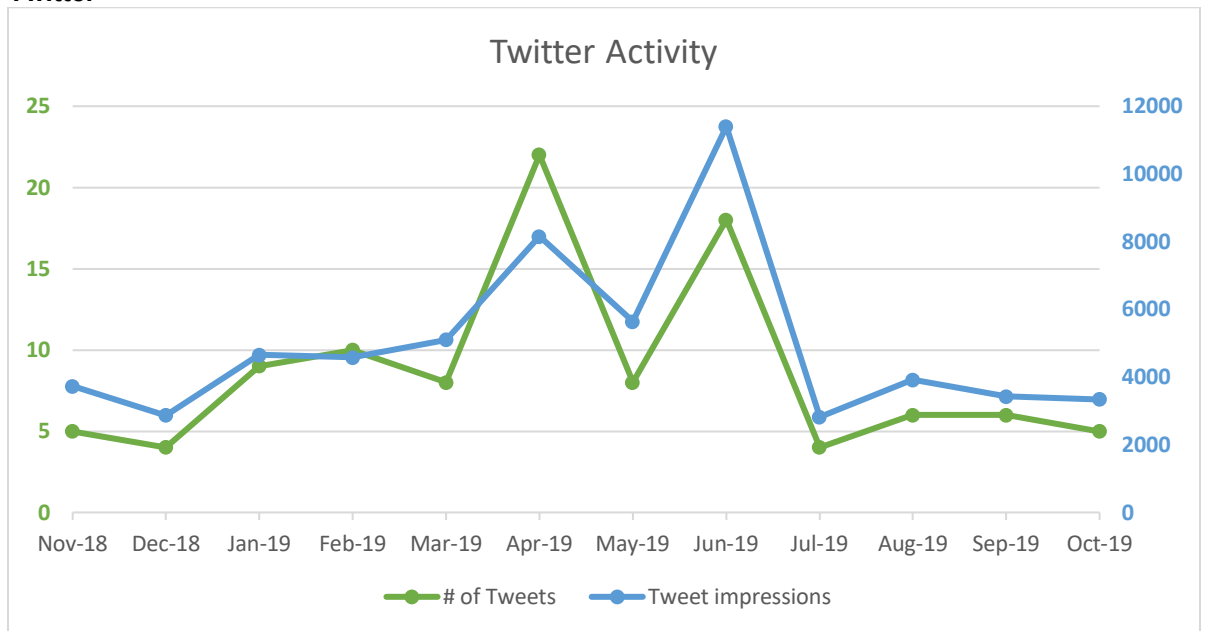
**C. Facebook**



**Total Number of Followers:** 201 (same as in September)

**October's Most Popular Post:** Quirk Bill to Help Prevent Yellow Fever, West Nile and Zika Viruses is Signed! (link)

**D. Twitter**



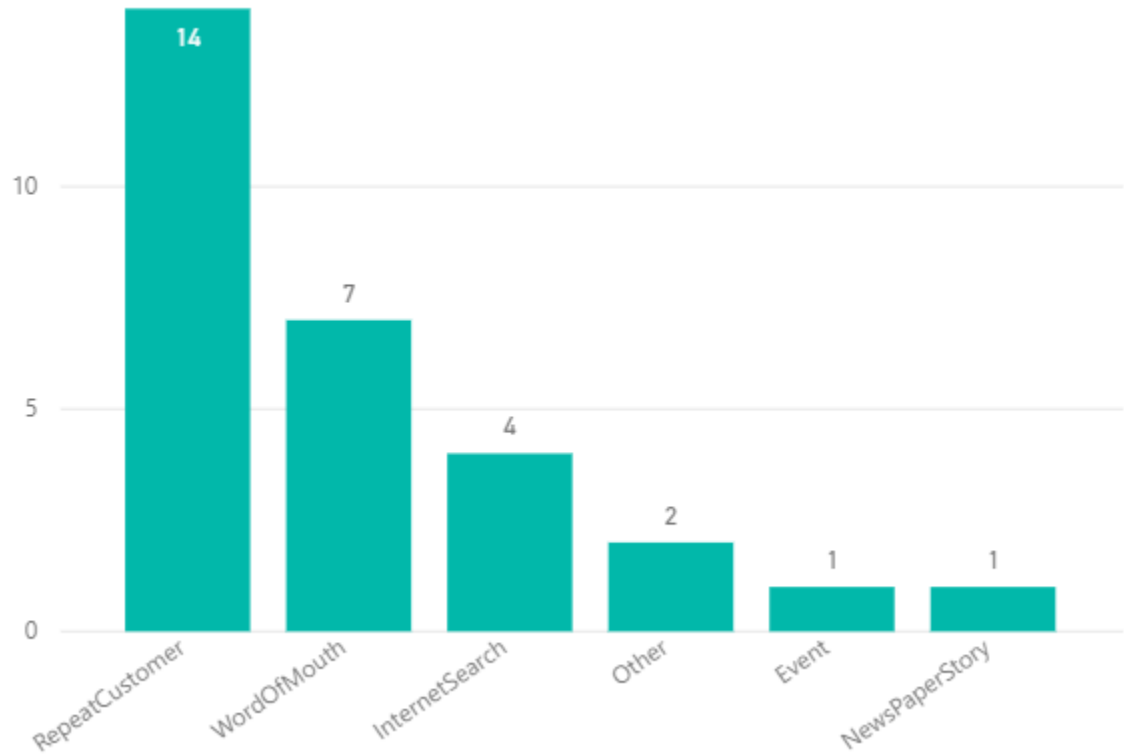
**Number of Profile Visits in October:** 28

**Total Number of Followers (New This Month):** 680 (up from 671 in September)

**Top October Tweet:** It may be cool right now, but it will be heating up again in the Bay Area later this week. Checking for standing water now could prevent having mosquitoes in your yard later on (gif).

## E. Service Request Referral Summary

Number of Requests by Channel

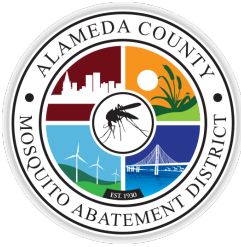


**Note:** Movie theater ads, Billboard, sign, or poster, Internet ad, social media, property tax bill, district vehicle or employee and phone book are also options for this question but were not included on this chart because they were not selected in October. Those who selected “Other” did not specify how they heard about us.

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

Nothing new to report.





23187 Connecticut Street  
Hayward, CA 94545

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

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

## Staff Anniversary Recognitions:

### Board of Trustees

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Eric Hentschke

#### **Newark**

#### *Vice-President*

Wendi Poulson

#### **Alameda**

#### *Secretary*

P. Robert Beatty

#### **Berkeley**

ACMAD is pleased to recognize and thank the following employee on their anniversary in November

Employee	Job Title	Years of Service	Anniversary Date
Neil Campbell	Vector Biologist	16	November 17th

Cathy Roache

#### **County at Large**

Betsy Cooley

#### **Emeryville**

Alan Brown

#### **Dublin**

George Young

#### **Fremont**

Elisa Marquez

#### **Hayward**

James N. Doggett

#### **Livermore**

Jan O. Washburn

#### **Oakland**

Robert Dickinson

#### **Piedmont**

Kathy Narum

#### **Pleasanton**

Victor Aguilar

#### **San Leandro**

Subru Bhat

#### **Union City**

#### **Ryan Clausnitzer**

*General Manager*



**California Special  
Districts Association**  
*Districts Stronger Together*

## Special District Climate Adaptation Roundtable

Wednesday, November 6, 2019  
Tilden Park, East Bay Regional Park District

- 8:00 AM – 9:00 AM** Registration and coffee – Sponsored by Alameda County Mosquito Abatement District
- 9:00 AM – 9:15 AM** Welcome and Opening Remarks by The Honorable Pedro Nava, Chair of Little Hoover Commission and Member of Commission on Catastrophic Wildfire Cost and Recovery
- 9:15 AM – 10:30 AM** Local Case Study Panel
- Moderator: Kyle Packham, Advocacy and Public Affairs Director, California Special Districts Association
  - Kealie Pretzlav, PhD, Consultant, Geomorphologist/Hydrologist, Guadalupe-Coyote Resource Conservation District
  - Jackie Zipkin, P.E., General Manager for East Bay Dischargers Authority
  - Len Materman, Executive Director, San Francisco Creek Joint Powers Authority
  - Chris Barton, Environmental Programs Manager, East Bay Regional Park District
- 10:30 AM – 10:45 AM** Questions from audience
- 10:45 AM – 12:00 PM** State Resources and Funding Panel
- Moderator: Karalee Browne, Sustainable Communities Program Manager, Institute for Local Government (ILG)
  - Nuin-Tara Key, Climate Resilience Program Director, Governor’s Office of Planning and Research (OPR)
  - Nichole Morgan, Manager, CA State Water Resources Control Board (WRCB)
  - Jessica Buendia, Deputy Director, Strategic Growth Council (SGC)
  - John Andrew, Assistant Deputy Director, Department of Water Resources (DWR)
- 12:00 PM – 12:15 PM** Questions from audience
- 12:15 PM – 1:00 PM** Break for lunch and networking - Sponsored by Harris & Associates
- 1:00 PM – 1:15 PM** Remarks by The Honorable Nancy Skinner, California State Senate
- 1:15 PM – 2:30 PM** Regional Partnership Panel
- Moderator: Aileen Theile, Fire Chief, East Bay Regional Park District (EBRPD)
  - Bruce Riordan, Director, Bay Area Climate Adaptation Network (BayCAN)
  - Allison Brooks, Executive Director, Bay Area Regional Collaborative (BARC)
  - Laura Tam, Sustainable Development Policy Director, San Francisco Bay Area Planning and Urban Research Association (SPUR)
  - Jessica Davenport, Deputy Program Manager, San Francisco Bay Area Program at the State Coastal Conservancy and staff for the San Francisco Bay Restoration Authority
- 2:30 PM – 2:45 PM** Questions from audience



Harris & Associates

