

AGENDA
1104th MEETING OF THE BOARD OF TRUSTEES
OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
AUGUST 10TH, 2022

TIME: 5:00 P.M.
PLACE: Hybrid Meeting of the Board of Trustees
Physically held at the Office of the District
23187 Connecticut Street, Hayward, CA 94545 and
Teleconferencing at <https://us02web.zoom.us/j/82043268457>
see below for additional details.
TRUSTEES: Subru Bhat, President, City of Union City
Victor Aguilar, Vice-President, City of San Leandro
Cathy Roache, Secretary, County-at-Large
Tyler Savage, City of Alameda
Preston Jordan, City of Albany
P. Robert Beatty, City of Berkeley
Shawn Kumagai, City of Dublin
Courtney Welch, City of Emeryville
George Young, City of Fremont
Elisa Márquez, City of Hayward
Steven Cox, City of Livermore
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Hope Salzer, City of Piedmont
Julie Testa, City of Pleasanton

1. Call to order.
2. Roll call.
3. President Bhat 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 1103rd Regular Meeting held July 13th, 2022 (**Board action required**).
5. Approval of Leica M165C microscope with boom stand to replace Olympus SZ800 (**Board action required**)
 - a. Staff report
 - b. Quote from JR Technologies
6. Presentation by Sky Mihaylo, MPP UC Berkeley, Goldman School of Public Policy: *Work Effort Distribution Analysis at Alameda County Mosquito Abatement District* (Information only)
7. Presentation by Regulatory & Public Affairs Director, Erika Castillo: *ACMAD Regulatory Update* (Information only).
8. Financial Reports as of July 31st, 2022: (Information only).

- a. Check Register
 - b. Income Statement
 - c. Investments, reserves, and cash report
 - d. Balance Sheet
9. Presentation of the Monthly Staff Report (Information only).
10. Presentation of the Manager's Report (Information only).
- a. CDPH Weekly Arbovirus report
 - b. Invasive aedes found in Contra Costa County
 - c. Training due: AB 1825: Kumagai
 - d. CalPERS 2021-22 investment return press release
 - e. OPEB fund update preference: October or November
11. Board President asks for reports on conferences and seminars attended by Trustees.
12. Board President asks for announcements from members of the Board.
13. Board President asks trustees for items to be added to the agenda for the next Board meeting.
14. Adjournment.

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

Please Note: Board Meetings are accessible to people with disabilities and others who need assistance. Individuals who need special assistance or a disability-related modification or accommodation (including auxiliary aids or services) to observe and/or participate in this meeting and access meeting-related materials should contact Ryan Clausnitzer at least 48 hours before the meeting at 510-783-7744 or acmad@mosquitoes.org.

IMPORANT NOTICE REGARDING MEETING PARTICIPATION:

All members of the public seeking to observe and/or to address the local legislative body may participate in the meeting by attending in person at the address listed above, telephonically, or otherwise electronically in the manner described below.

HOW TO OBSERVE THE MEETING:

In Person: Attend in person at the Office of the District located at 23187 Connecticut Street, Hayward, CA 94545.

Telephone: Listen to the meeting live by calling Zoom at **(669) 900-6833** Enter the **Meeting ID# 820 4326 8457** followed by the pound (#) key.

Computer: Watch the live streaming of the meeting from a computer by navigating to <https://us02web.zoom.us/j/82043268457>

Mobile: Log in through the Zoom mobile app on a smartphone and enter **Meeting ID# 820 4326 8457**

HOW TO SUBMIT PUBLIC COMMENTS:

Before the Meeting: Please email your comments to acmad@mosquitoes.org, write "Public Comment" in the subject line. In the body of the email, include the agenda item number and title, as well as your comments. If you would like your comment to be read aloud at the meeting (not to exceed three minutes at staff's cadence), prominently write "Read Aloud at Meeting" at the top of the email. All comments received before 12:00 PM the day of the meeting will be included as an agenda supplement on the District's website under the relevant meeting date and provided to the Trustees at the meeting. Comments received after this time will not be read aloud but will be added to the record after the meeting.

During the Meeting: The Board President or designee will announce the opportunity to make public comments. Speakers will be asked to provide their name and city of residence, although providing this is not required for participation. Each speaker will be afforded up to 3 minutes to speak unless another time is specified. Speakers should remain silent and/or will be muted until their opportunity to provide public comment.

In Person: Members of the public may raise their hand and wait to be recognized by the Board President or designee.

Telephone: Press star (*)9, which will alert staff that you have a comment to provide.

Computer or Mobile: Use the "raise hand" feature to alert staff that you have a comment to provide.

PUBLIC RECORDS:

Public records that relate to any item on the open session agenda for a meeting are available for public inspection. Those records that are distributed after the agenda posting deadline for the meeting are available for public inspection at the same time they are distributed to all or a majority of the members of the Board. The Board has designated the District's website located at <https://www.mosquitoes.org/board-of-trustees-regular-meetings> as the place for making those public records available for inspection. The documents may also be obtained by emailing acmad@mosquitoes.org.

MINUTES

1103rd MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

July 13th, 2022

TIME: 5:00 P.M.
PLACE: Hybrid Meeting of the Board of Trustees
Physically held at the Office of the District
23187 Connecticut Street, Hayward, CA 94545 and
Teleconferencing at <https://us02web.zoom.us/j/84465467124>
TRUSTEES: Subru Bhat, President, City of Union City
Victor Aguilar, Vice-President, City of San Leandro
Cathy Roache, Secretary, County-at-Large
Tyler Savage, City of Alameda
Preston Jordan, City of Albany
P. Robert Beatty, City of Berkeley
Shawn Kumagai, City of Dublin
Courtney Welch, City of Emeryville
George Young, City of Fremont
Elisa Márquez, City of Hayward
Steven Cox, City of Livermore
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Hope Salzer, City of Piedmont
Julie Testa, City of Pleasanton

1. Board President Bhat called the regularly scheduled board meeting to order at 5:00 P.M.
2. Trustees Bhat, Aguilar, Roache, Savage, Jordan, Beatty, Kumagai, Márquez, Cox, Hentschke, Washburn, Salzer, and Testa were present on the Zoom conference. Trustee Welch was absent. Trustee Young arrived at 5:11 P.M.
3. Board President Bhat invited members of the public to speak on any issue relevant to the district. Public Outreach Coordinator Judith Pierce, MPH, was present to give a presentation titled *Education and Outreach Update*. Lab Director Eric Haas-Stapleton, PhD, was present to give a presentation titled *Will AI Brick the Entomologist...or change their roles substantially*. Information Technology Director Robert Ferdan was present for technical support. Vector Biologist Jeremy Sette was present to record the minutes. No public comments were submitted.
4. Approval of the minutes of the 1102nd meeting held June 8th, 2022.
Motion: Trustee Kumagai moved to approve the minutes
Second: Trustee Beatty
Vote: motion carries: unanimous. Trustee Savage abstained.

5. Presentation by Public Outreach Coordinator, Judith Pierce, MPH: *Education and Outreach Update*.

Discussion:

The General Manager introduced Public Outreach Coordinator, Judith Pierce, MPH, who gave a presentation titled *Education and Outreach Update* and fielded the following questions. Trustees Jordan and Salzer asked which school grades the curriculum was prepared for (official curriculum currently is for 3rd graders with her eventual goal to develop a mosquito-related comic book for 7th graders). Vice-President Aguilar commended Pierce on her presentation and the district's booth at the Alameda County Fair. Trustee Salzer was impressed with the presentation and asked if specific mosquito data was taken into account when determining schools to visit along with equity concerns (yes, socioeconomic and high-risk mosquito factors are used), what the ten different marks on the map indicated (each icon was related to classroom presentations and events) and which schools gave resistance to visits (no outright resistance, there were more issues related to capacity and contemporary testing). President Bhat asked how many cities had been visited so far (currently eight cities). Trustee Savage commended Pierce, along with Mark Weiland's participation at the 4th of July Parade in Alameda and asked if there was an attempt to leverage YouTube for educational purposes (at this point, YouTube is not being utilized). The General Manager explained different methods other mosquito control districts have used in using social media for outreach and education, including YouTube and how ACMAD has promoted these efforts. Secretary Roache gave kudos to Pierce and staff for the Alameda County Fair ACMAD booth. Pierce requested Trustees reach out to her via email if they have any further questions or have any ideas for future events that the district could participate in.

6. Presentation by Lab Director, Eric Haas-Stapleton, PhD: *Will AI Brick the Entomologist...or change their roles substantially?*

Discussion:

Lab Director Eric Haas-Stapleton, PhD, gave a presentation titled, *Will AI Brick the Entomologist...or change their roles substantially?* and fielded the following discussion. Trustee Beatty asked if the cost for the commercially available AI unit includes a service contract and asked how much the machine cost (service contract is part of the subscription). President Bhat asked if the AI machine would be owned by ACMAD (no, but the benefit of not owning the equipment is the improvements including having free and continued data updates). Trustee Jordan thanked Haas-Stapleton for his presentation, expressed his amazement of ACMAD's innovation, and asked how the AI identification accuracy would compare to an expert human (experts would likely not misclassify mosquitoes, but rare species are difficult for humans to identify by human eye and could currently be missed). President Bhat thanked Haas-Stapleton for an excellent presentation. Trustee Beatty asked if adult mosquito samples needed to be separated and flattened for the machine learning to be more accurate (yes and there are still improvements to be made). Trustee Jordan expressed concerns that the machine learning may misidentify invasive *Aedes* species (agreed). President Bhat asked if the district had published a paper related to the presentation (not yet).

7. Financial Reports as of June 30th, 2022.

Discussion:

The General Manager presented the Financial Reports and fielded the following discussion. Trustee Salzer asked for clarification on the GMC check (a new truck approved last summer). Trustee Jordan asked for clarification on timing of Leading Edge purchases (IT Director Robert Ferdan answered that the charges are related to the pool project) and the

Verseris purchase (a pesticide company). Trustee Salzer asked how reserves are allocated (reserves are dispersed per fiscal policy which is implemented by budgetary spreadsheet formulas) and asked if the district is considering reducing the carbon footprint regarding the new truck purchase (yes, ACMAD is looking into electric vehicles when available for our uses).

8. Presentation of the Monthly Staff Report.

Discussion:

The General Manager and the Lab Director gave the Monthly Staff Report and fielded the following discussion. Trustee Jordan explained his experience in monitoring wells and asked if there were any efforts in altering catch basin design (explained the challenges relating to catch basins) and expressed his willingness to talk offline about possible changes to catch basin design. Haas-Stapleton thanked Trustee Jordan for the idea and will follow-up offline. Trustee Jordan expressed his entertainment by the district's published paper title "*Mr Mister: Rockin' the Aedes of the San Francisco Bay Salt Marshes*".
Group Chat: Trustee Salzer added at 6:19 P.M. "Might be worth an A/B test?"

9. Presentation of the Manager's Report.

Discussion:

The General Manager presented the Manager's Report and fielded the following discussion. The General Manager recognized Field Operations Supervisor Joseph Huston, Lab Director Eric Haas-Stapleton, General Manager Ryan Clausnitzer, Information Technology Director Robert Ferdan, and Public Outreach Coordinator Judith Pierce for their service anniversaries of 31, 7, 7, 7, and 2 years, respectively.

10. Board President Bhat asked for reports on conferences and seminars attended by Trustees. None.

11. Board President Bhat asked for announcements from the Board. The General Manager gave credit to Vector Biologist Tom McMahon for his many years of district service and brought up the subsequent opening of the field technician position. President Bhat announced that he completed his term in the Alameda County Civil Grand Jury and explained his experience. Trustee Jordan thanked President Bhat for his service.

12. Board President Bhat asked trustees for items to be added to the agenda for the next Board meeting. The General Manager announced that there will be a presentation at the next Board meeting on the latest district's health equity study related to operational data.

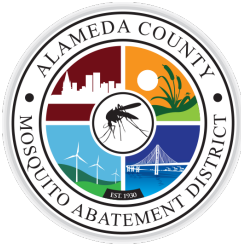
13. The meeting adjourned at 6:44 P.M.

Respectfully submitted,

Approved as written and/or corrected
at the 1104th meeting of the Board of
Trustees held August 10th, 2022

Subru Bhat, President
BOARD OF TRUSTEES

Cathy Roache, Secretary
BOARD OF TRUSTEES



23187 Connecticut Street
Hayward, CA 94545

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

acmad@mosquitoes.org

Staff report on laboratory microscope replacement

Board of Trustees

President

Subru Bhat

Union City

Vice-President

Victor Aguilar

San Leandro

Secretary

Cathy Roache

County at Large

Tyler Savage

Alameda

Preston Jordan

Albany

P. Robert Beatty

Berkeley

Shawn Kumagai

Dublin

George Young

Fremont

Courtney Welch

Emeryville

Elisa Márquez

Hayward

Steven Cox

Livermore

Jan O. Washburn

Oakland

Eric Hentschke

Newark

Hope Salzer

Piedmont

Julie Testa

Pleasanton

Ryan Clausnitzer

General Manager

Background: The ACMAD lab requests the purchase of a Leica M165C microscope with boom stand to replace an Olympus SZ800. The Olympus microscope has low resolution optical lenses and is unable to resolve features that allow for conclusive discrimination of *Aedes aegypti* larvae from those of *Aedes sierrensis* or *Aedes albopictus* and may be auctioned at a later date. After extensive investigation of alternate microscopes by the Laboratory Director and Field Operations Supervisor, the Leica M165C was identified as a suitable replacement.

Leica microscopes are made in Germany and distributed by several vendors in the United States. Each vendor offers nearly identical pricing on Leica microscopes. Per section 202.4(c) of district policy, bidding is not required when the item or service can only be obtained from one vendor. The vendor selected by ACMAD staff, JH Technologies, is located within Alameda County (Fremont, CA), while the others are located outside of the county or state.

JH Technologies is the largest Leica vendor in the United States, offering the largest showroom. The day the Laboratory Director and Field Operations Supervisor visited JH Technologies to examine the different microscopes that are available, they were setting up to train staff from Leica on the operation of their newest instruments. Because of their proximity to ACMAD and position of leadership in the industry, we are confident that they will provide ongoing support and guidance in the use and maintenance of the microscope.

Recommendation: Approve sole-source purchase of a Leica M165C microscope with boom stand for **\$23,438.94** budgeted for FY 2022-23 in the Repair and Replace fund.

Attachment: Quote from JH Technologies

JH Technologies
213 Hammond Ave
Fremont CA 94539
PH: 408-436-6336



Quote #: QU-0472622-D
Date 7/12/2022
Valid Until 8/9/2022

QUOTATION

Alameda County Mosquito Abatement

23187 Connecticut St
Hayward
California
USA
94545

Eric Haas-Stapleton
eric@mosquitoes.org
(510) 783-7744

Sales Contact

Mr. Andrew Stych
Phone: 408-483-3997
Fax: 408-640-6343
astych@jhtechnologies.com

Customer Service Contact

Orders Team
Phone: 408-436-6336
Fax: 408-436-6343
orders@jhtechnologies.com

Leica M165 C

Leica M165 C Stereomicroscope

- Features & Benefits:
 - 16.5:1 zoom ratio with 7.3x-120x magnification range (1x objective, 10x eyepieces)
 - Coded functions: zoom, iris diaphragm and objective nosepiece
 - Coding allows reproducibility and consistency in experimental procedures and permits calibrated measurement at all zoom levels
 - Click stop zoom settings - observation at specific magnification can be easily repeated
 - Fully apochromatic corrected optics allow high contrast, natural color images without color fringes or chromatic aberrations
 - The modular system offers complete flexibility and upgradability
- 110 V main power
- Power cable 2 m, USA, type B
- Ergo trinoc tube 5° - 45° for Camera use
- Standard eyepieces 10x/23 B, high eyepoint, adjustable
- Boom stand XL, column 560/57 mm



- Coarse/fine focus drive for swingarm
- Objective Planapo 0.63 x, WD 97 mm (thread M65, 66mm ext. dia.)
- Dust cover, for swing arm stands (W80xL50xH50 cm), antistatic

#	Items	Quantity	List Price	Net Price
10	Leica M165 C optics carrier 10450035	1	7,459.95	7,459.95
20	Eyepiece 10x/23B, adjustable, 3d gen 10450910	2	397.70	795.40
30	Trinocular ErgoTube 100% M-serie 10450044	1	4,330.62	4,330.62
40	Objective Planapo 0.63x, M-series 10447051	1	3,456.30	3,456.30
50	Column 800/57 mm 10447230	1	1,063.95	1,063.95
60	Universal base plate, XL 10450260	1	1,356.08	1,356.08
70	Horizontal arm, heavy Duty 10447099	1	1,600.02	1,600.02
80	Adapter, XL Base, various Columns 10450297	1	193.72	193.72
90	Focus drive c/f, inclinable 10450506	1	2,328.80	2,328.80
100	Dust cover (80 x 50 x 50 cm), antistatic 10450288	1	94.30	94.30
110	Installation and training of equipment and/or software Service-IT	2	175.00	350.00
Section Net Subtotal			USD 23,029.14	

Quotation Totals

Sub Total	USD 23,029.14
Ergo Promo - Exp 8/31/22	-2,165.31
Estimated Shipping (Actual will be charged at time of invoice)	300.00
Grand Total Excluding Taxes	USD 21,163.83
Hayward Sales Tax 10.75%	(10.75%) 2,275.11
Grand Total Including Taxes	USD 23,438.94

Terms and Conditions

Currency: USD

Payment Terms: Net 30 Days on Credit Approval

Shipping Terms: Prepay & Add

Valid Until: 8/9/2022

Sales Contact

Mr. Andrew Stych

Phone: 408-483-3997

Fax: 408-640-6343

astych@jhtechnologies.com

Customer Service Contact

Orders Team

Phone: 408-436-6336

Fax: 408-436-6343

orders@jhtechnologies.com

Please refer to the reference number upon placing order.

Lead time is 3-5 weeks ARO

We accept Purchase Orders, VISA, MasterCard, and American Express.

Please note that a 3.5% credit card fee will be added to the total order price.

If your order is tax exempt or for resale, you must provide certification at time of order.

Certificates will not be applied after order acceptance.

If you have questions, please feel free to contact JH Technologies, Inc. at your convenience.

To place an order:

Call (408) 436-6336

Fax to (408) 436-6343

or email to orders@jhtechnologies.com

JH Technologies terms and conditions apply. A copy is available upon request.

[JH Technologies, Inc.](#)

www.jhtechnologies.com

Maker of the worlds only eyepiece sanitizer - [JH Optic-Clean](#)

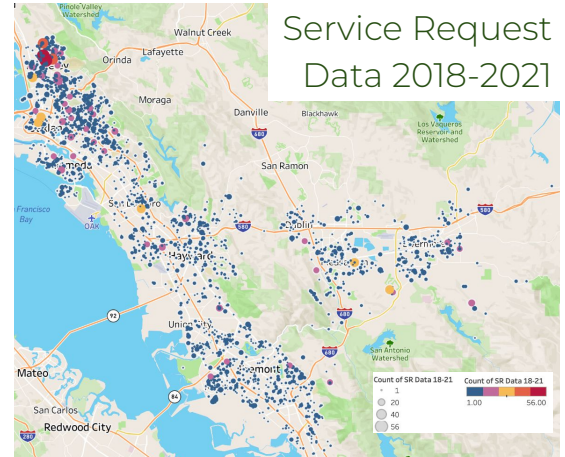
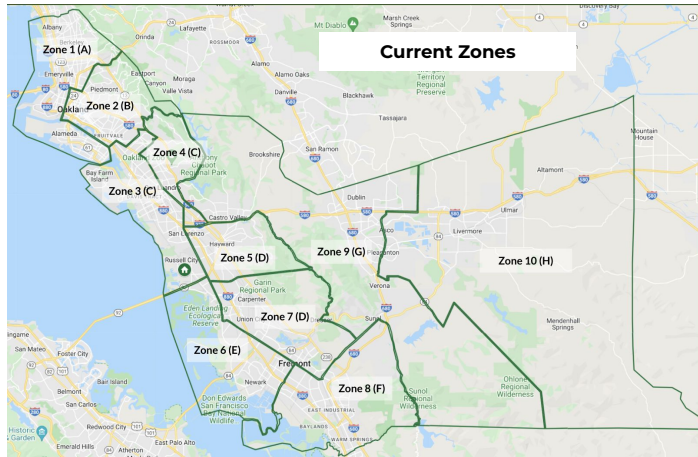
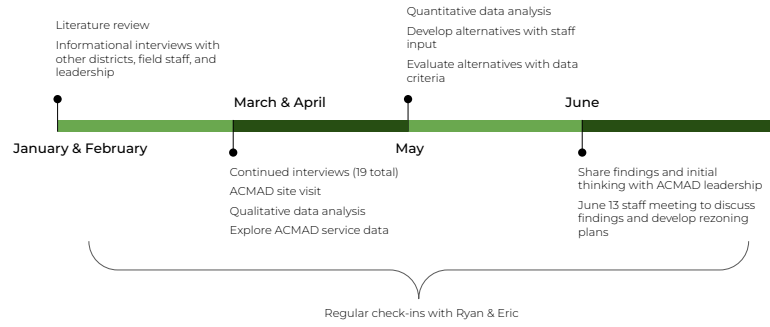




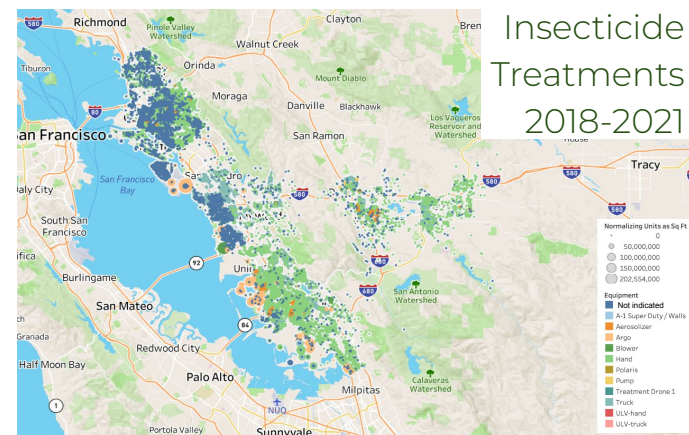
Work Effort Distribution Analysis at Alameda County Mosquito Abatement District

Sky Mihaylo, MPP — UC Berkeley, Goldman School of Public Policy

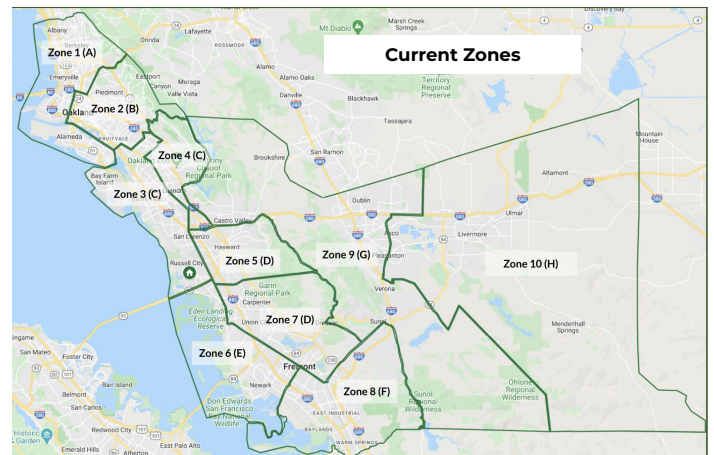
Analysis Timeline



Service Request Data 2018-2021



Insecticide Treatments 2018-2021

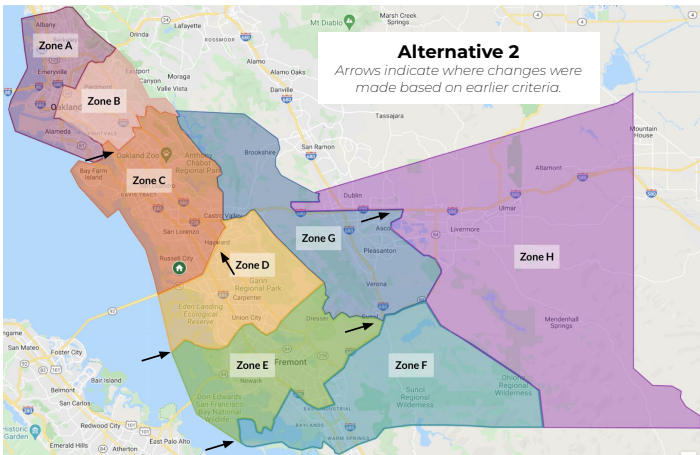


WORK DISTRIBUTION IN CURRENT ZONES

■ SERVICE REQUEST DATA ■ TREATMENTS (S Q FT) ■ SWIMMING POOL DATA

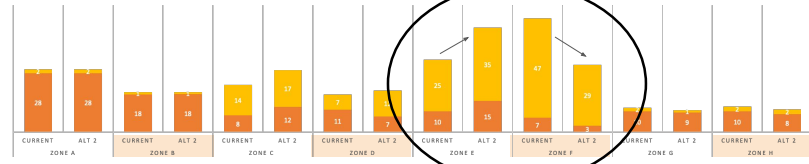


Final Criteria to Support Conversations	
Criteria	Factor
Equitable Workload Distribution	<ul style="list-style-type: none"> - Service Requests (SR) - Insecticide treatments by Surface Area - Swimming Pool SR Data - Staff and management perspectives
Task Diversity	<ul style="list-style-type: none"> - Mix of urban, rural, and suburban areas when possible - Seasonality of work tasks
Geographic Features	<ul style="list-style-type: none"> - Land features - City boundaries - Highways & major streets
Implementation Feasibility	<ul style="list-style-type: none"> - Commute time - Equipment needed - Best estimation of seasonality, impact of climate - Staff and management perspectives



WORK DISTRIBUTION ACROSS ALTERNATIVES

■ Service Requests (% of Total Avg SR) ■ Treatments (% of Avg Area Treated)



What's next?

- June meeting resulted in a draft map
- New zone map analysis
- Implementation of the updated zone map over the next year



Questions?

Regulatory Update

Erika Castillo, Regulatory & Public Affairs Director

ACMAD Board Meeting
August 10, 2022

1

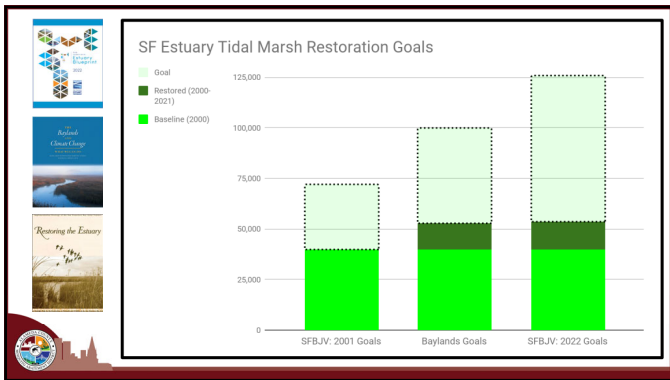
Since 1961
SAVE BAY

Historical - 1800'
Tidal Marsh

Restored Marshes
Restored Baylands
Planned Restoration and Enhancement

SFEI

2



3

South Bay Salt Pond Restoration Project
Restoring the Wild Heart of the South Bay

Key Phases for Restoration Projects

- Planning
- Funding
- Implementing
- Monitoring

4

Hayward Area Shoreline Planning Agency (HASPA)

- One-year extension of current JPA while working out the terms of the new JPA
- Participating in Board and Technical Advisory Committee meetings
 - Non-voting participant of the Board – Eric Hentschke
- Dues will be paid when the new JPA is formed

5

SF ESTUARY Wetlands Regional Monitoring Program

- Bay Area mosquito abatement district representative on the Steering Committee (vice-chair)
- People and Wetlands workgroup member

GUIDING QUESTION: How do policies, programs, and projects to protect and restore tidal wetlands benefits and/or impact public health, safety, and recreation?

PRIORITY RECOMMENDED ACTION: The broad range of interactions between people and wetlands should be monitored for the safety of people and health of the marshes. This process should better integrate flood control and mosquito and disease vector control into project planning and assessment and similarly integrate wetland restoration into flood control planning. Continue to grow the WRMP to assess the effects of climate adaptation on relationships between people and nature in the watershed or landscape context.

6

Positive Impacts

- Access to wetland restoration projects in the early stages of development
- Project designers have reached out to us
 - East Bay Regional Parks District
 - East Bay Dischargers Association
 - San Leandro Treatment Wetland Project
 - South Bay Salt Pond Restoration Project

The Horizontal Levee



7

Beyond Our Region



Regulatory Affairs Committee - Chair



Endangered Species and Pollinator Protection Subcommittees



MVCAC Legislative Day in Sacramento 2018

Symposium: Public Policy and Administration

Opportunities with the advancement of tidal marsh restoration in the San Francisco Bay Area
Erika Castillo, Ryan Chalmers

100



8

Questions?



9

Alameda County Mosquito Abatement Dist.
Check Register
 For the Period From Jul 1, 2022 to Jul 15, 2022

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Amount
3221	7/13/22	Airgas	1,187.94
3222	7/13/22	Argo Adventure	1,639.15
3223	7/13/22	Beck's Shoes	570.00
3224	7/13/22	California Department of Public Health	25.00
3225	7/13/22	CCCMA Occupational Clinic	125.00
3226	7/13/22	Cintas	695.28
3227	7/13/22	Clarke	3,015.73
3228	7/13/22	Coverall North America, Inc.	495.00
3229	7/13/22	Delta Dental	4,679.81
3230	7/13/22	Grainger	155.16
3231	7/13/22	Industrial Park Landscape Maintenance	243.00
3232	7/13/22	Mar-Len Supply, Inc.	287.83
3233	7/13/22	PG&E	69.84
3234	7/13/22	Port of Oakland	1.00
3235	7/13/22	VCJPA	176,982.00
3236	7/13/22	U.S Bank Corporate Payment System	16,976.82
3237	7/13/22	Visalia Times Delta	2,499.99
3238	7/13/22	Voya Institutional Trust Company	181.19
3239	7/13/22	Waste Management of Alameda County	297.04
ACH	7/13/22	Alameda County Mosquito Abatement Dist (Payroll)	91,782.26
ACH	7/13/22	CalPERS Health	38,744.41
ACH	7/13/22	CalPERS Retirement	16,110.33
ACH	7/13/22	CalPERS Retirement	299,872.00
ACH	7/13/22	CalPERS Retirement	3,373.00
ACH	7/13/22	CalPERS 457	2,997.72
Total Expenditures - July 15, 2022			663,006.50

Alameda County Mosquito Abatement Dist.
Check Register
For the Period From Jul 16, 2022 to Jul 31, 2022

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Amount
3240	7/27/22	Airgas	826.52
3241	7/27/22	AT&T	69.97
3242	7/27/22	Bay Alarm	801.71
3243	7/27/22	CarQuest	148.39
3244	7/27/22	Cintas	463.53
3245	7/27/22	City of Hayward FARP	16.00
3246	7/27/22	Delta Dental	4,679.81
3247	7/27/22	Grainger	221.89
3248	7/27/22	Hayward Water System	572.71
3249	7/27/22	Hentschke, Eric Armin	100.00
3250	7/27/22	KBA Docusys	691.25
3251	7/27/22	PC Professional	3,196.00
3252	7/27/22	PFM Asset Management LLC	3,166.65
3253	7/27/22	PG&E	26.28
3254	7/27/22	Testa, Julie	100.00
3255	7/27/22	The Hartford	214.38
3256	7/27/22	US Mobile	1,767.94
3257	7/27/22	Verizon	498.69
3258	7/27/22	Voya Institutional Trust Company	181.19
3259	7/27/22	VSP	693.24
3260	7/27/22	WEX Bank	7,541.27
3261	7/27/22	Young, George	100.00
ACH	7/27/22	Alameda County Mosquito Abatement Dist (Payroll)	93,536.90
ACH	7/27/22	Aguilar, Victor	100.00
ACH	7/27/22	Beatty, Robert .P	100.00
ACH	7/27/22	Bhat, Subrahmanya Y	100.00
ACH	7/27/22	CalPERS Health	38,775.33
ACH	7/27/22	CalPERS Retirement	16,110.33
ACH	7/27/22	CalPERS 457	2,997.72
ACH	7/27/22	Cox, Steven	100.00
ACH	7/27/22	Jordan, Preston	100.00
ACH	7/27/22	Kumagai, Shawn	100.00
ACH	7/27/22	Marquez, Elisa	100.00
ACH	7/27/22	Roache, Cathy J Pinkerton.	100.00
ACH	7/27/22	Salzer, Hope	100.00
ACH	7/27/22	Savage, Tyler	100.00
ACH	7/27/22	Washburn, Jan	100.00
Total Expenditures - July 31, 2022			178,597.70

Alameda County Mosquito Abatement District
Income Statement
July 31, 2022. (1 of 12 mth, 8%)

REVENUES	Actual 2020/21	Actual 2021/22	Current Month	Year to Date 2022/23	Budget 2022/23	Actual vs Budget
Total Revenue	\$ 5,150,753.15	\$ 5,386,808.18	\$ 4,241.36	\$ 4,241.36	\$ 4,900,658.00	0%

EXPENDITURES	Actual 2020/21	Actual 2021/22 ¹	Current Month ²	Year to Date 2022/23	Budget 2022/23	Actual vs Budget
Salaries	\$ 2,029,103.97	\$ 2,129,077.24	\$ 201,593.90	\$ 201,593.90	\$2,371,703	8%
CalPERS Retirement	\$ 423,110.21	\$ 471,085.19	\$ 322,125.20	\$ 322,125.20	\$534,559	60%
Medicare & Social Security	\$ 27,866.82	\$ 30,025.60	\$ 3,423.54	\$ 3,423.54	\$38,763	9%
Fringe Benefits	\$ 502,898.39	\$ 484,487.10	\$ 87,786.98	\$ 87,786.98	\$564,969	16%
Total Salaries, Retirement, & Benefits	\$ 2,982,979.39	\$ 3,114,675.13	\$614,930	\$614,930	\$3,509,994	18%
Clothing and personal supplies (purchased)	\$ 4,859.20	\$ 7,793.78	\$ 230.89	\$ 230.89	\$9,000	3%
Laundry service and supplies (rented)	\$ 9,124.98	\$ 10,417.41	\$ 463.53	\$ 463.53	\$13,000	4%
Utilities	\$ 15,421.56	\$ 18,134.35	\$ 598.99	\$ 598.99	\$21,700	3%
Communications-IT	\$ 71,771.02	\$ 74,950.03	\$ 2,266.63	\$ 2,266.63	\$107,400	2%
Maintenance: structures & improvements	\$ 20,261.51	\$ 26,671.36	\$ -	\$ -	\$30,000	0%
Maintenance of equipment	\$ 22,290.34	\$ 25,354.56	\$ 1,501.33	\$ 1,501.33	\$30,000	5%
Transportation, travel, training, & board	\$ 74,653.03	\$ 120,418.29	\$ 8,941.27	\$ 8,941.27	\$119,840	7%
Professional services	\$ 91,622.03	\$ 97,726.00	\$ -	\$ -	\$152,200	0%
Memberships, dues, & subscriptions	\$ 22,906.45	\$ 25,103.23	\$ -	\$ -	\$37,000	0%
Insurance - (VCJPA, UAS)	\$ 141,650.37	\$ 160,932.64	\$ 176,982.00	\$ 176,982.00	\$179,436	99%
Community education	\$ 26,317.23	\$ 26,225.45	\$ -	\$ -	\$55,000	0%
Operations	\$ 223,362.22	\$ 182,575.57	\$ 1.00	\$ 1.00	\$227,500	0%
Household expenses	\$ 15,882.05	\$ 25,388.02	\$ 1,312.71	\$ 1,312.71	\$19,950	7%
Office expenses	\$ 9,747.67	\$ 7,002.84	\$ 691.25	\$ 691.25	\$12,000	6%
Laboratory supplies	\$ 64,135.55	\$ 82,354.03	\$ 1,658.30	\$ 1,658.30	\$132,500	1%
Small tools and instruments	\$ 2,189.34	\$ 1,963.31	\$ -	\$ -	\$3,000	0%
Total Staff Budget	\$ 816,194.55	\$ 893,010.87	\$ 194,647.90	\$ 194,647.90	\$1,149,526	17%
Total Operating Expenditures	\$ 3,799,173.94	\$ 4,007,686.00	\$ 809,577.52	\$ 809,577.52	\$4,659,520	17%

1 - As of June 30, 2021. Unaudited.

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

**Alameda County Mosquito Abatement District
Investment, Reserves, and Cash Balance Report
July 31, 2022. (1 of 12 mth, 8%)**

Account #	Investment Accounts	Beginning Balance	Deposits	Withdrawals	Earnings ¹	Ending Balance
1004	LAIF ^{2 4}	\$ 4,986,678.92	\$ -	\$ (2,919,000.00)	\$ 6,727.50	\$ 2,074,406.42
1005	OPEB Fund	\$ 4,479,954.82	\$ -	\$ -	\$ 212,874.91	\$ 4,692,829.73
1006	VCJPA Member Contingency	\$ 356,439.00	\$ -	\$ -	\$ -	\$ 356,439.00
1008	CAMP: Repair and Replace ²	\$ 1,327,549.12	\$ 1,311,625.00	\$ -	\$ 2,679.64	\$ 2,641,853.76
1009	CAMP: Public Health Emergency Fund ³	\$ 527,592.74	\$ -	\$ (527,592.00)	\$ 423.95	\$ 424.69
1010	CAMP: Operating Reserve	\$ 1,949,399.81	\$ -	\$ -	\$ 2,715.19	\$ 1,952,115.00
1011	CAMP: Capital Reserve Fund ⁴	\$ 30,075.40	\$ 339,974.00	\$ -	\$ 164.54	\$ 370,213.94
1012	PARS: Pension Stabilization ⁵	\$ 1,694,316.03	\$ -	\$ -	\$ (65,912.73)	\$ 1,628,403.30
1013	California CLASS: Public Health Emergency Fund ³	\$ -	\$ 527,592.00	\$ -	\$ 186.03	\$ 527,778.03
Total		\$ 15,352,005.84	\$ 2,179,191.00	\$ (3,446,592.00)	\$ 159,859.03	\$ 13,716,685.84

Account #	Cash Accounts	Beginning Balance	Withdrawals	Activity	Ending Balance
1001	Bank of America (Payroll Account) *	\$ 159,825.95	-	-	\$ 64,904.33
1002	Bank of The West (Transfer Account) *	\$ 435,957.52	-	-	\$ 522,641.80
1003	County Account	\$ 377,420.90	\$ -	\$ -	\$ 377,420.90
1013	Petty Cash	\$ 387.16	\$ -	\$ -	\$ 387.16
Total		\$ 973,591.53	\$ -	\$ -	\$ 965,354.19

1 - Earnings are booked as unrealized gains/losses. These earnings would not be recognized as "realized" gains/losses until the accounts are liquidated.

2 - \$1,311,625.00 transferred from LAIF to CAMP: Repair and Replace.

3- \$527,592.00 transferred from CAMP: Public Health Emergency Fund to California CLASS: Public Health Emergency Fund.

4 - \$339,974.00 transferred from LAIF to CAMP: Capital Reserve Fund.

5 - PARS - Pension Stabilization balance is as of June 30, 2022.

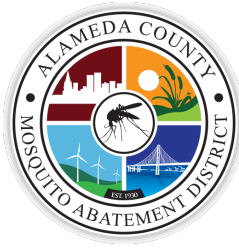
Alameda County Mosquito Abatement
Balance Sheet Comparison
July

ASSETS

	7/31/2022	7/31/2021	7/31/2020
Current Assets			
Bank of America payroll	\$ 157,249.82	\$ 102,463.71	\$ 106,214.79
Bank of the West	443,437.00	329,179.80	300,484.71
County	377,420.90	375,269.85	349,672.59
Cash with LAIF	2,074,406.42	3,504,540.40	2,124,170.85
VCJPA- Member Contingency	356,439.00	373,610.00	374,772.00
CAMP - Repair and Replace	2,641,853.76	1,041,029.95	1,046,226.63
CAMP - Public Health Emergency	424.69	526,243.32	525,573.46
CAMP - Operating Reserve	1,952,115.00	1,944,413.82	1,941,938.80
CAMP - Capital Reserve Fund	370,213.94	19,993.39	59,034.52
PARS	2,063,079.30	1,860,366.38	1,674,095.84
California CLASS: Public Health Emergency Fund	527,778.03	-	-
Accounts Receivable	-	9,921.88	-
Petty cash	387.16	386.14	491.15
	10,964,805.02	10,087,418.64	8,502,675.34
Property and Equipment			
Acc Dep - equipment	(1,594,225.00)	(1,594,225.00)	(1,479,068.00)
Acc Dep - stru & improv	(2,604,632.00)	(2,604,632.00)	(2,485,267.00)
Equipment	1,801,108.97	1,769,859.00	1,751,859.00
Structure/improvement	4,799,729.70	4,799,729.70	4,760,618.00
Land	61,406.00	61,406.00	61,406.00
	2,463,387.67	2,432,137.70	2,609,548.00
Other Assets			
Net OPEB Asset	2,561,824.00	2,522,763.00	1,823,556.00
	2,561,824.00	2,522,763.00	1,823,556.00
	\$ 15,990,016.69	\$ 15,042,319.34	\$ 12,935,779.34

LIABILITIES AND CAPITAL

Current Liabilities			
Accounts payable	\$ 99,846.27	\$ 285,068.99	\$ 133,688.78
Acc payroll/vacation	208,228.89	208,228.89	200,290.26
Def inflow - 75	1,254,695.00	1,254,695.00	931,786.00
Def inflow pen defer GASB 68	208,602.00	208,602.00	289,664.00
Defer outflow pen cont GASB 68	(936,411.00)	(936,411.00)	(1,056,534.00)
Net pension liability GASB 68	3,603,091.00	3,603,091.00	3,277,554.00
	4,438,052.16	4,623,274.88	3,776,449.04
	4,438,052.16	4,623,274.88	3,776,449.04
Capital			
Designated fund balances	4,490,818.25	4,451,757.25	4,440,610.19
Investment in general fixed as	7,849,728.81	6,677,881.96	5,296,151.61
Net Income	(788,582.53)	(710,594.75)	(577,431.50)
	11,551,964.53	10,419,044.46	9,159,330.30
	\$ 15,990,016.69	\$ 15,042,319.34	\$ 12,935,779.34



MONTHLY STAFF REPORT –1104

Board of Trustees

President

Subru Bhat

Union City

Vice-President

Victor Aguilar

San Leandro

Secretary

Cathy Roache

County at Large

Tyler Savage

Alameda

Preston Jordan

Albany

P. Robert Beatty

Berkeley

Shawn Kumagai

Dublin

George Young

Fremont

Courtney Welch

Emeryville

Elisa Márquez

Hayward

Steven Cox

Livermore

Jan O. Washburn

Oakland

Eric Hentschke

Newark

Hope Salzer

Piedmont

Julie Testa

Pleasanton

Ryan Clausnitzer

General Manager

A. OPERATIONS REPORT

In July, two events received significant focus from ACMAD operations staff. The first was a series of king tides, some of the highest tides this year to date. The second was a second detection of West Nile virus (WNV) positive mosquitoes in our neighboring county to the south, Santa Clara County.

The king tides inundated tidal marshes along our entire shoreline. In areas that do not fully drain, eggs of *Aedes dorsalis* were induced to hatch. To control these hatches, treatments of larvae were conducted in numerous tidal sources. Operations staff worked together in teams to conduct hand treatments and the ACMAD A-1 Super Duty mist blower was again also utilized to treat several hundred acres. Adult mosquito trapping data from the ACMAD lab indicated that the treatments were effective. This was corroborated by service request data, post-treatment inspections, and field observations.

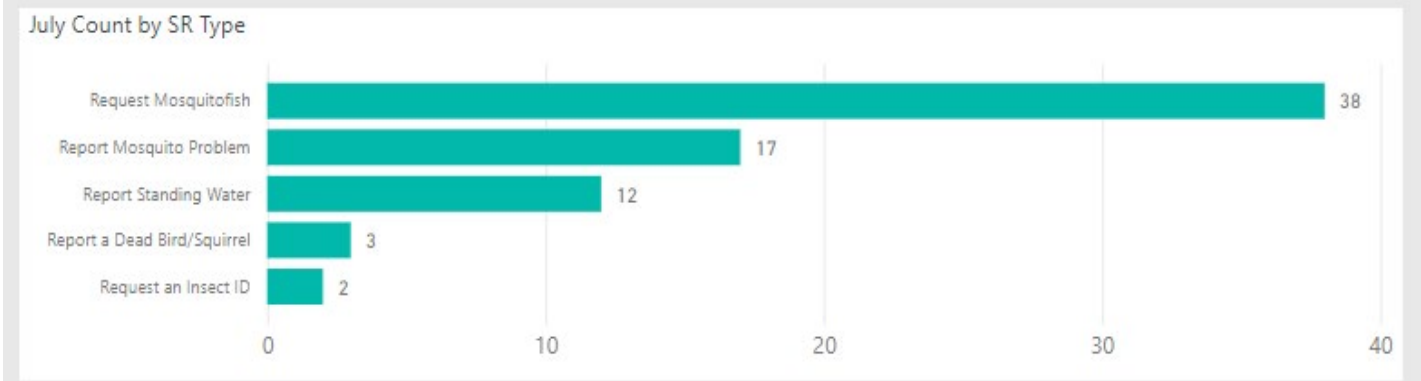
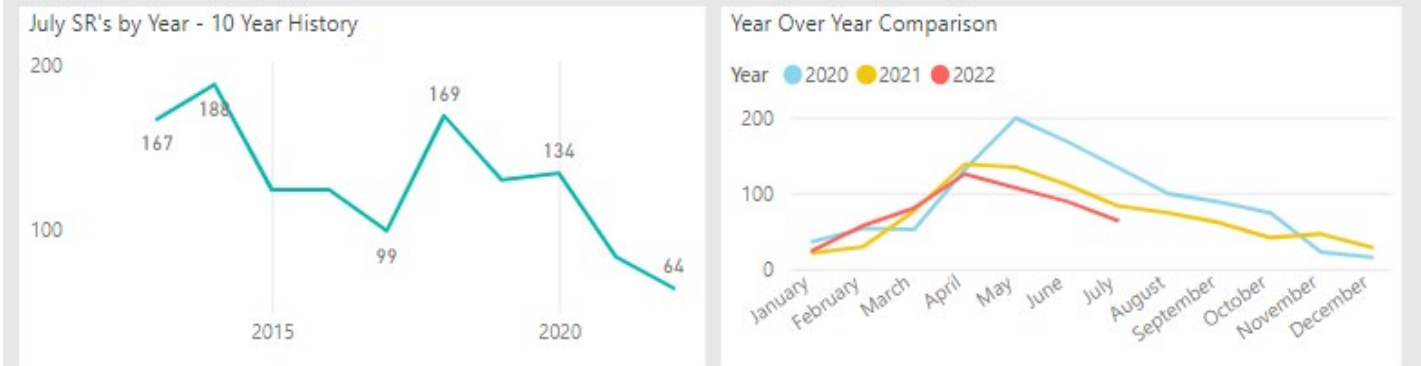
The second detection of WNV infected mosquitoes in Santa Clara County was right at our southern county border. Operations staff applied a great deal of pressure to sources that produce *Culex tarsalis*, *Culex pipiens*, and *Culex erythrothorax* in that region. ACMAD lab adult trap data over several weeks indicated two things. One, that none of the adult mosquitoes tested were positive for WNV, and two, that the overall numbers of *Cx. spp.* mosquitoes in the area were substantially reduced as a result of operational treatment efforts. These sources, and other sources for *Cx. spp.* continue to be monitored and treated as needed as well as sources for these species county-wide. This effort is focused on limiting the number of potential WNV vectoring adult mosquitoes in the environment. To date, no WNV has been detected in Alameda County this season. Operations pursue a county-wide approach but are always prepared to focus people and resources in areas close to a mosquito-borne disease detection.

ACMAD received 64 four requests for service from the public in July. This is the lowest count received in July for at least a decade. Over 50% of the requests received were requests for mosquito fish for ornamental ponds, livestock watering troughs, and unmaintained swimming pools. Of the 17 requests to “report a mosquito problem”, 14 were attributable to mosquitoes. These were closely split as being caused by either *Cx. pipiens* or *Culiseta incidens*. The calls caused by *Cs. incidens* were primarily attributable to standing water in containers, ponds, and street gutters either on or adjacent to the properties of the callers. The calls generated by *Cx. pipiens* were centered around catch basins near the callers, from a county parking structure drain, and a sanitation treatment facility. Twelve “reports of standing water” were received to report water in street gutters, construction sites, and on properties adjacent to the callers. Three requests to “report a dead bird” were received. All three birds were tested and were determined to be WNV negative via the ACMAD lab. The final two requests were “request for an insect id”. ACMAD staff often helps the public identify insects that they have concerns about or are interested in determining their identity and their potential to be problematic.

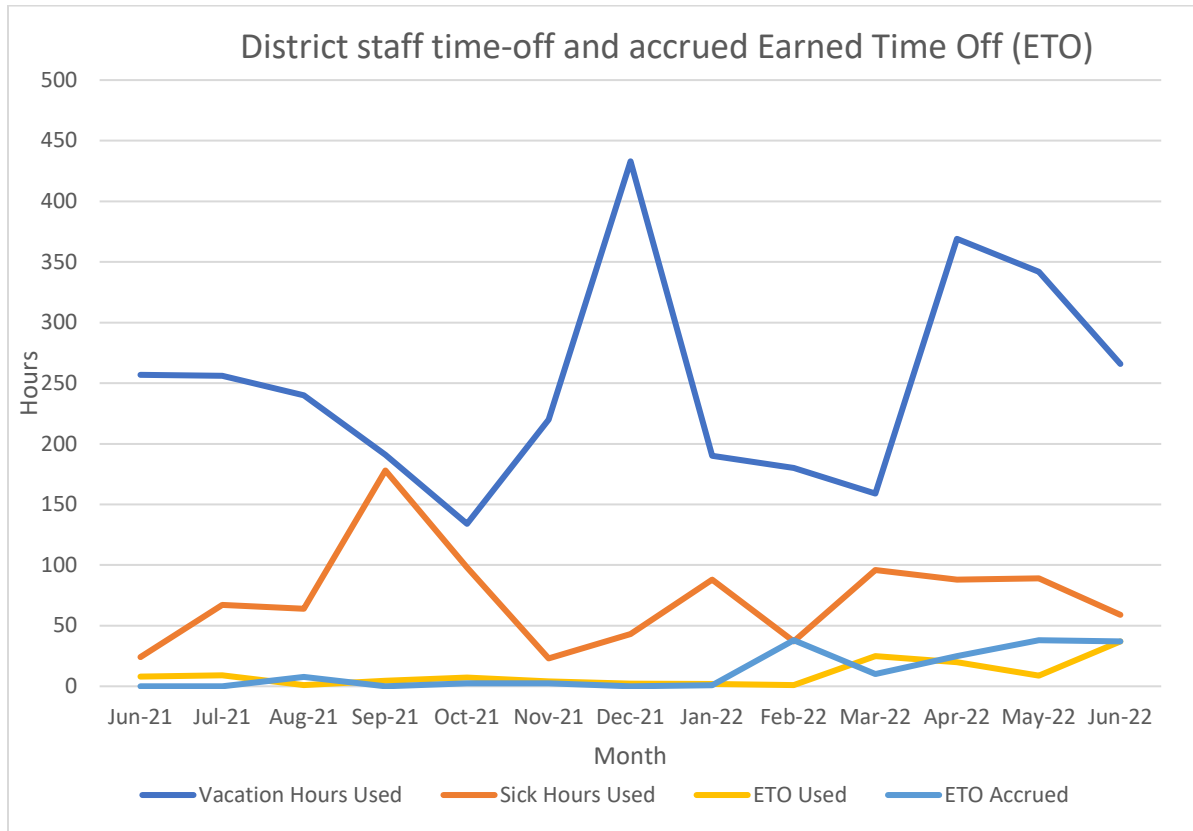
Field Operations Supervisor
Joseph Huston

Service Requests (July)

July SR Count	July 10 Year Min Count	July 10 Year Max Count	June 10 Year Average
64	64	188	128.20

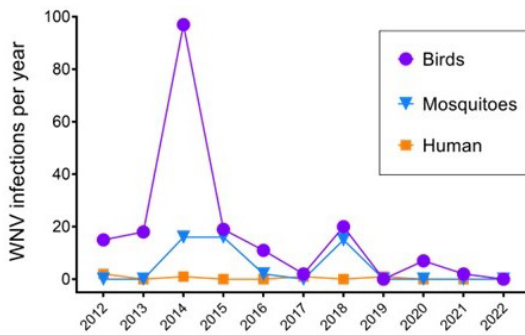


Activity Report

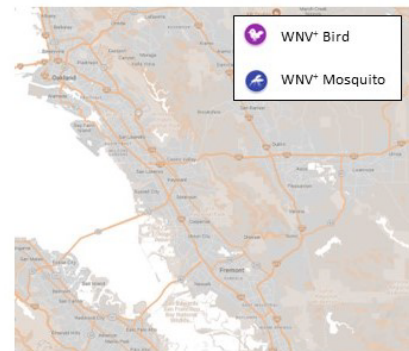


WNV Activity

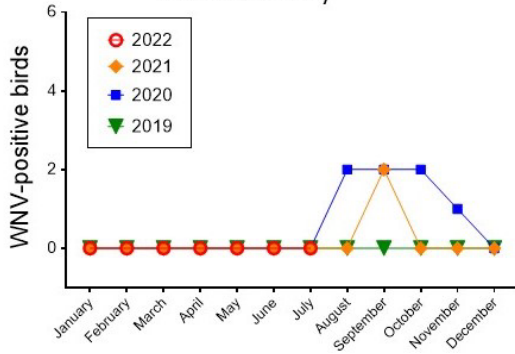
WNV infections detected in Alameda County 2012 – 2022



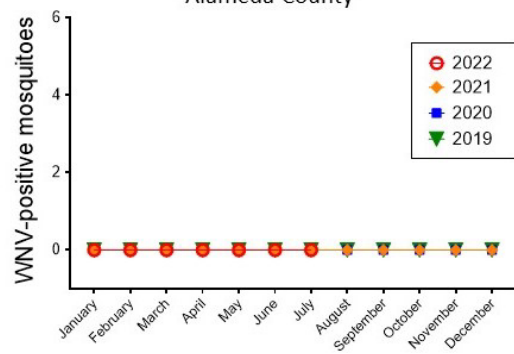
Locations of WNV-infected mosquitoes and birds in Alameda County during 2022



WNV-infected birds collected in Alameda County



WNV-infected mosquitoes collected in Alameda County



B. LAB

Summary

- A manuscript entitled “Quantitative reverse transcription PCR assay to detect a genetic marker of pyrethroid resistance in *Culex* mosquitoes” was accepted for publication in PLOS ONE, an open access peer-reviewed journal (Figure 1). This manuscript with co-authors from CZ Biohub and MPH students from UC Berkeley, describes our development and use of a quantitative RT-PCR assay that detects a genetic mutation in *Culex spp.* mosquitoes that is associated with resistance to pyrethroid insecticides (L1014 in the *kdr* loci of the gene that encodes the voltage gated sodium channel).
- All of the manuscripts have been accepted for the Special Issue on Mosquito Control in Wetlands in the peer-reviewed journal *Wetlands, Ecology and Management*, for which the Laboratory Director was the Lead Guest Editor and co-author of two articles (total of 14 articles in the special issue)
- *Arboviruses*. 184 collections of mosquitoes were tested for the presence of West Nile virus (WNV), Saint Louis encephalitis virus (SLEV) and Western equine encephalitis virus (WEEV) during July and none were found to be infected with those viruses. WNV was not detected in birds during July 2022. Saint Louis encephalitis virus (SLEV) and Western equine encephalitis virus (WEEV) were not detected in Alameda County during the prior 5 years.
- *Native mosquitoes*. A total of 579 CO₂-baited encephalitis virus survey (EVS) traps were placed during July, catching 12,218 adult female mosquitoes (21.1 mosquitos per trap night). Three New Jersey Light Traps (NJLT) captured 35 adult mosquitoes during the same period.
- Sentinel chicken flocks are in Livermore and Newark. None of the chickens show signs of WNV, SLEV, or WEEV infection.
- Invasive *Aedes* mosquitoes were not detected in Alameda County during 2022. However, *Ae. aegypti* was detected on August 3, 2022 by Contra Costa MVCD in Martinez, which is 17 miles by freeway from Albany and 24 miles from Dublin.

Arbovirus Monitoring

- WNV was not detected in birds or mosquitoes during July. WNV was last detected in birds collected in Alameda County during September 2021 (WNV Activity figure, above).
- This month, 184 collections of mosquitoes (*i.e.*, pools) were tested for the presence of WNV, SELV and WEEV using quantitative RT-PCR in the ACMAD lab. WNV was last detected in mosquitoes during 2018 (WNV Activity figure, above). SLEV and WEEV have not been detected in the County for over a decade.
- Sentinel chicken flocks in Livermore and Newark have not shown signs of infection with WNV, SLEV or WEEV (*i.e.*, they had not seroconverted).

Native Mosquito Abundance

- The following three species are the principal transmitters of WNV, SLEV and WEEV in California: *Culex pipiens* (occurs predominantly in urban settings), *Culex tarsalis* (associated with marsh and peri-urban areas), and *Culex erythrothorax* (occurs exclusively in marsh but adults can disperse into nearby communities).
- 579 CO₂-baited EVS traps were placed during June. A total of 12,218 adult female mosquitoes were collected, which was 1.4-fold more than the prior month (Figure 2). Adult mosquito abundance during 2022 was higher than prior years (Figure 2), predominantly due higher quantities *Cx. tarsalis* and *Cx. erythrothorax* (Figure 3 and Figure 4).
- Two WNV vector species (*Cx. tarsalis* and *Cx. erythrothorax*) were more abundant in the western bayside region of the county (Figure 5A). Mosquito abundance in the northern part of the county (Figure 5B) was low, as is typical for the region. Higher abundance of *Cx. tarsalis* and *Cx. erythrothorax* was observed in the midwestern region of the county where there is extensive marsh habitat that support the growth of those species (Figure 5C). The detection of WNV in the northernmost region of Santa Clara County (near our southernmost boarder) promoted enhanced mosquito trapping and control efforts. We found relatively low abundance of WNV vectors in the area (southernmost region of Figure 5C) and none of the mosquitoes that were collected were infected with WNV, WEEV, or SLEV. Twenty-five of the EVS traps did not collect any mosquitoes (Figure 5A, upper

right insert). The three NJ Light Trap sites captured a total of 35 adult female mosquitoes during the month (Figure 6).

Assessing insecticide resistance

- Strong resistance to methoprene, a larvicide that is widely used by ACMAD, was documented in *Aedes dorsalis* that were collected by Solano County Mosquito Abatement District (13 miles north of Alameda County). The mosquitoes from Solano County were more than 100-times more resistant to methoprene compared to mosquitoes that were collected elsewhere. To determine if methoprene resistance is present in *Ae. dorsalis* from Alameda County, we conducted benchtop cup assays to assess methoprene resistance in *Ae. dorsalis* larvae that were collected by Sarah Lawton in Operations from Mowry Slough (western Fremont). Briefly, multiple concentrations of methoprene were placed into styrofoam cups along with 10 third instar *Ae. dorsalis* larvae. Controls included cups without methoprene and cups that contained *Bti* larvicide (all treatments were assessed in triplicate (*i.e.* three cups per methoprene concentration or control)). Erick Gaona from Operations assisted with setting up the cup bioassays. The bioassay cups were monitored for 10 days and the proportion of adult mosquitoes that emerged from each cup was monitored. Since methoprene is an insect growth regulator, larvae that are susceptible to this larvicide remain in the immature stage (larva or pupa) and do not emerge as adults. The results showed that although the majority of the larvae in the cups without methoprene emerged as adults, none of the larvae that were exposed to methoprene emerged and all of the larvae that were exposed to the *Bti* larvicide died (Figure 7). Since the lowest concentrations of methoprene that were tested fall within the level that is applied in the field (1 – 5 parts per billion (ppb)), this study demonstrated that *Ae. dorsalis* from the collection site in Alameda County were highly susceptible to methoprene. Additional studies are planned to assess methoprene resistance in *Ae. dorsalis* from other sites in Alameda County.

LAB FIGURES

PONE-D-21-15990R3

Quantitative reverse transcription PCR assay to detect a genetic marker of pyrethroid resistance in *Culex* mosquitoes

Dear Dr. Haas-Stapleton:

I'm pleased to inform you that your manuscript has been deemed suitable for publication in PLOS ONE. Congratulations! Your manuscript is now with our production department.

If your institution or institutions have a press office, please let them know about your upcoming paper now to help maximize its impact. If they'll be preparing press materials, please inform our press team within the next 48 hours. Your manuscript will remain under strict press embargo until 2 pm Eastern Time on the date of publication. For more information please contact onepress@plos.org.

If we can help with anything else, please email us at plosone@plos.org.

Thank you for submitting your work to PLOS ONE and supporting open access.

Kind regards,
PLOS ONE Editorial Office Staff

Figure 1. Notice of manuscript entitled “Quantitative reverse transcription PCR assay to detect a genetic marker of pyrethroid resistance in *Culex* mosquitoes” that was accepted for publication in PLOS ONE, an open access peer-reviewed journal. This manuscript with co-authors from CZ Biohub and MPH students from UC Berkeley, describes our development and use of a quantitative RT-PCR assay that detects a genetic mutation

in *Culex spp.* mosquitoes that is associated with resistance to pyrethroid insecticides (L1014 in the *kdr* loci of the gene that encodes the voltage gated sodium channel). Notably, the *Culex RTkdr* assay uses the same method for extracting nucleic acid that is widely employed by vector control agencies to test mosquitoes for the presence of arboviruses. The *Culex RTkdr* assay showed 100% accuracy in detecting the resistance marker with this one assay (i.e., a single reaction tube) for several *Culex spp.*, including *Cx. pipiens*, *Cx. tarsalis*, *Cx. erythrothorax*, *Cx. quinquefasciatus*, *Cx. stigmatosoma*, and *Cx. apicalis*. The *Culex RTkdr* assay showed that *Cx. pipiens* mosquitoes were more likely to have the marker compared to *Cx. tarsalis* collected in the same region. None of the *Cx. erythrothorax* mosquitoes contained the resistance marker. Mosquitoes collected from the inland region (e.g. Dublin, Livermore and Pleasanton) were more likely to have the resistance marker compared to those collected in the cities that abut the San Francisco Bay.

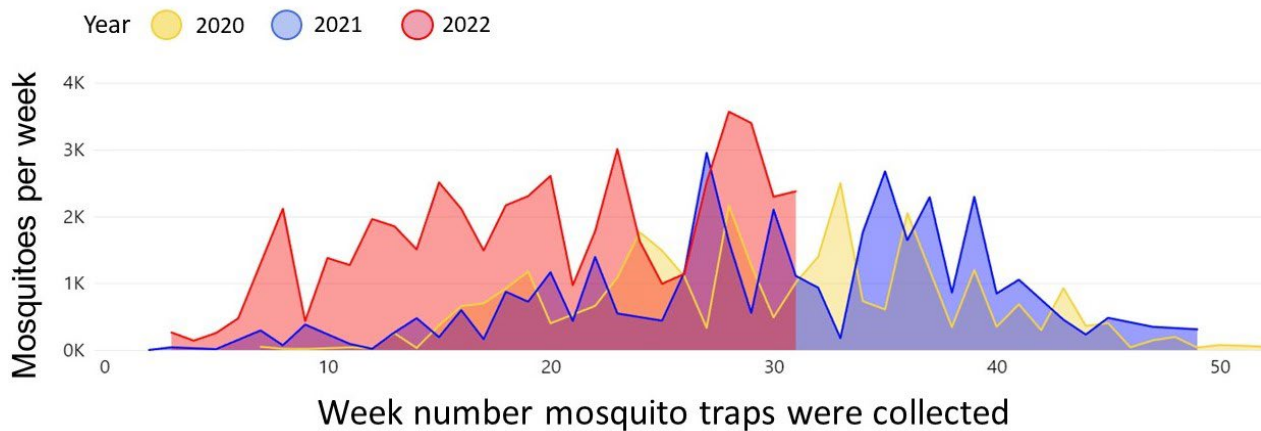


Figure 2. Mosquitoes captured in EVS CO₂ traps from 2020 – 2022. A total of 12,218 adult female mosquitoes were captured in EVS CO₂ traps during July of 2022 and identified to species. Week 24 was excluded from the graph because the high anomalous abundance during 2021 skewed the y-axis.

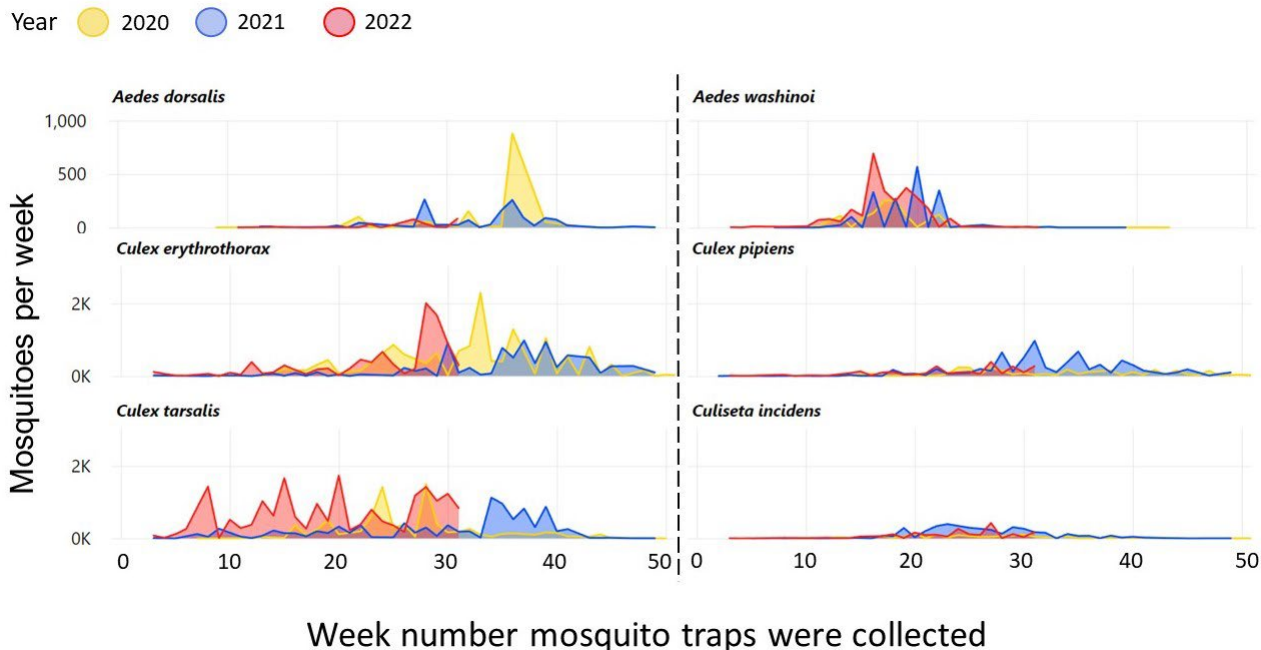


Figure 3. Weekly abundance of important mosquito species during 2020, 2021 and 2022.

July 2022 – EVS CO₂ Trap

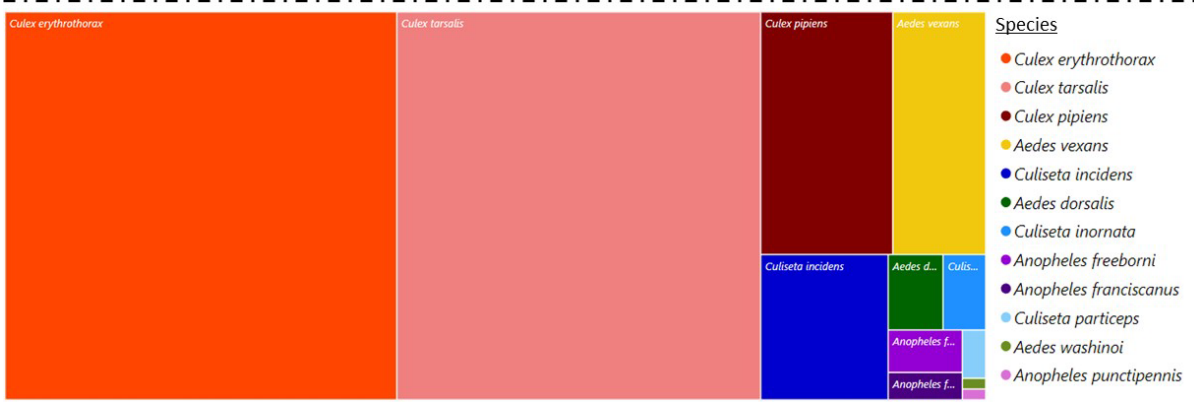
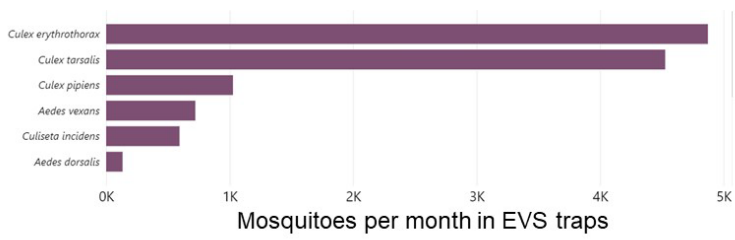
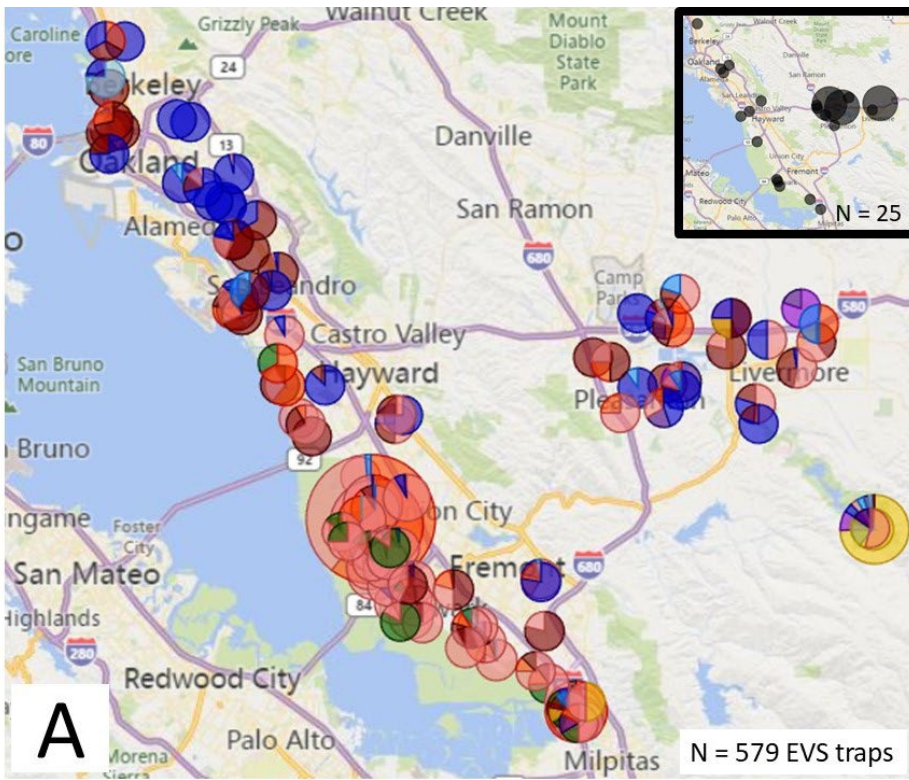


Figure 4. The most abundant species of mosquito captured using EVS CO₂ traps. Larger squares and rectangles indicate higher abundance of that species.



Species

- *Culex erythrothorax*
- *Culex tarsalis*
- *Culex pipiens*
- *Aedes vexans*
- *Culiseta incidens*
- *Aedes dorsalis*
- *Culiseta inornata*
- *Anopheles freeborni*
- *Anopheles franciscanus*
- *Culiseta particeps*
- *Aedes washinoi*
- *Anopheles punctipennis*
- No mosquitoes

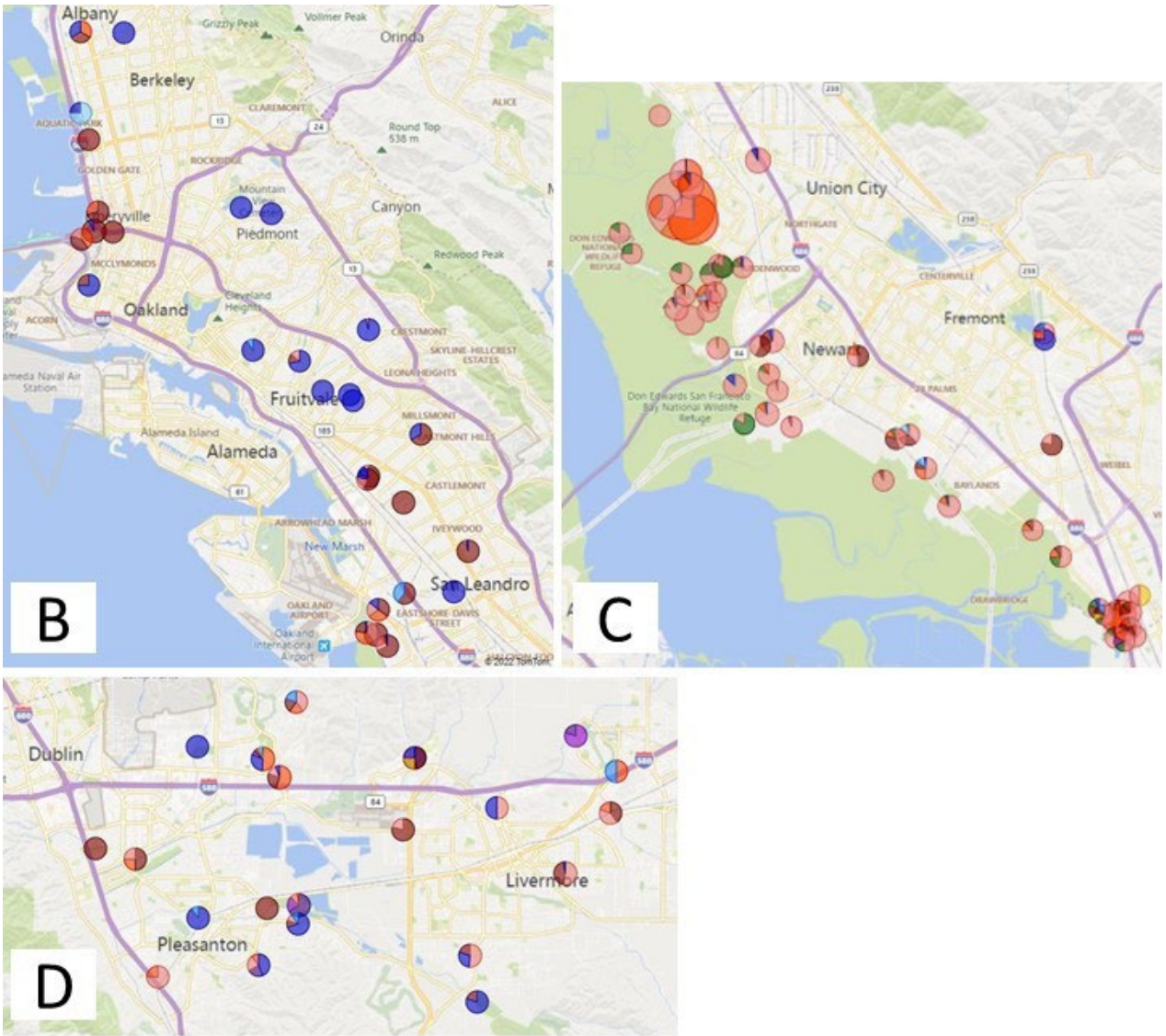


Figure 5. Mosquito abundance by trap site evaluated using EVS CO₂ traps. Pie charts over trap sites indicate the distribution of mosquito species collected at the trap site. The size of each pie chart indicates the relative number of mosquitoes at each site during July of 2022. (A) Alameda County (the insert shows traps that were placed but did not collect mosquitoes), (B) the northern region of the county, (C) the southern region, and (D) the eastern region.

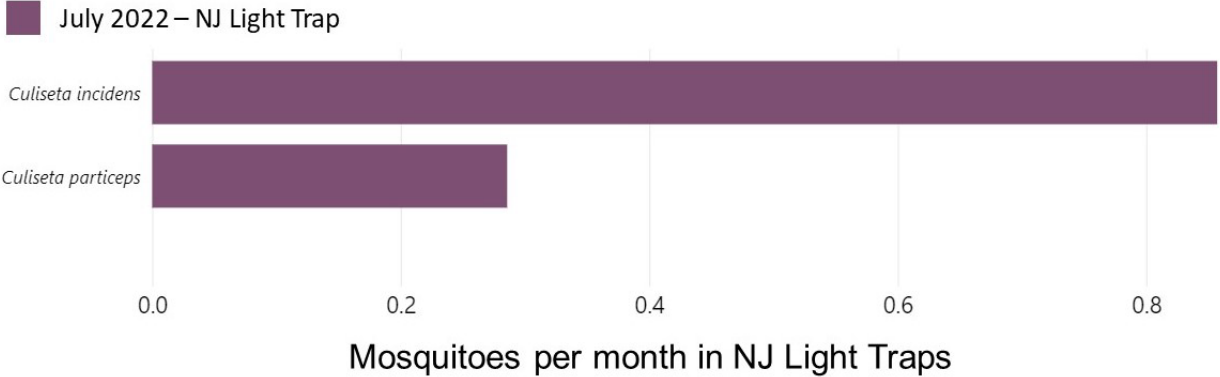


Figure 6. The most abundant species of mosquito captured in NJLT. A total of 35 mosquitoes were captured in NJ Light Traps.

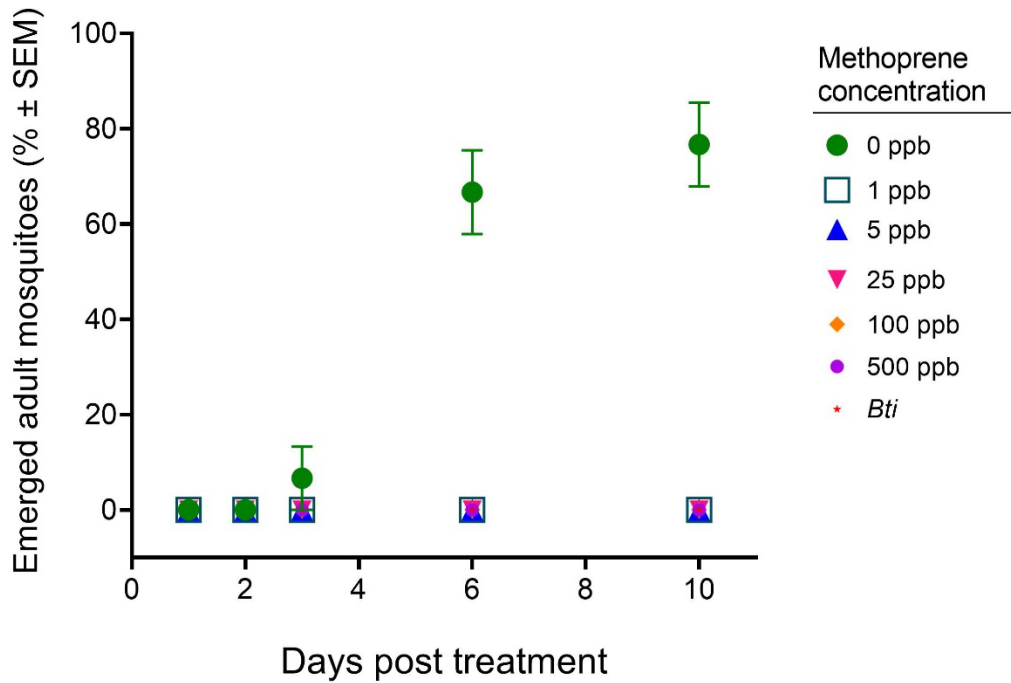


Figure 7. Assessing resistance to methoprene larvicide in *Ae. dorsalis* larvae that were collected from Mowry Slough, which is in the southwestern region of Fremont. None of the mosquitoes that were exposed to methoprene emerged as adults. Since the lowest methoprene concentrations that were tested fall within the range that is used in to control this species in the field (1 – 5 parts per billion (ppb)), we are confident that the methoprene that is being applied by Operations is effective for controlling this species at that location.

Analysis and report by Eric Haas-Stapleton, PhD, Laboratory Director

C. PUBLIC EDUCATION



July Events and Presentations



Event



Presentation

4th of July Parade in Alameda July 4
ACE Camp in Fruitvale, Oakland July 12 and 19
Alameda County Fair in Pleasanton June 17- July 10



Upcoming Events and Presentations

- Downtown Hayward 3rd Thursday Night Out
- Solano Stroll in Albany
- San Leandro Unified in classroom presentation

School Program

- Survey sent out to teachers, waiting for feedback

Google Analytics

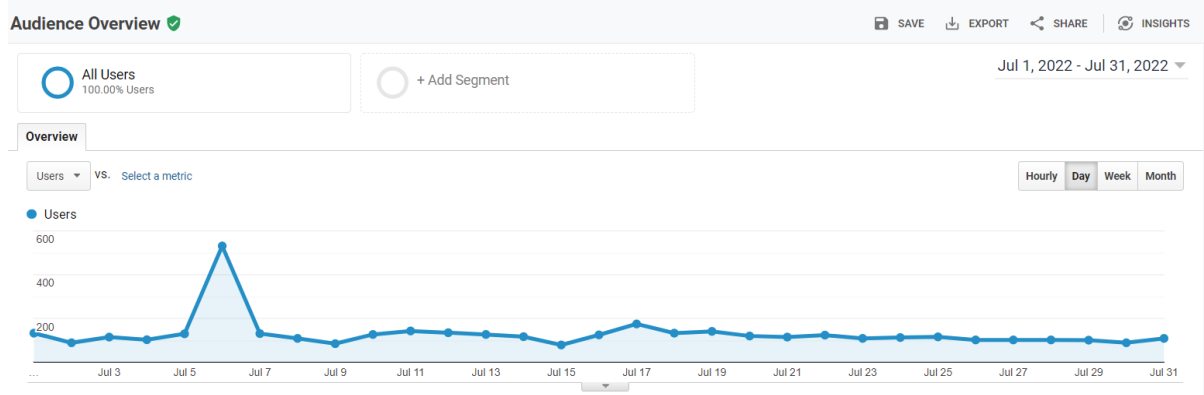


Figure 1: July website users 2022

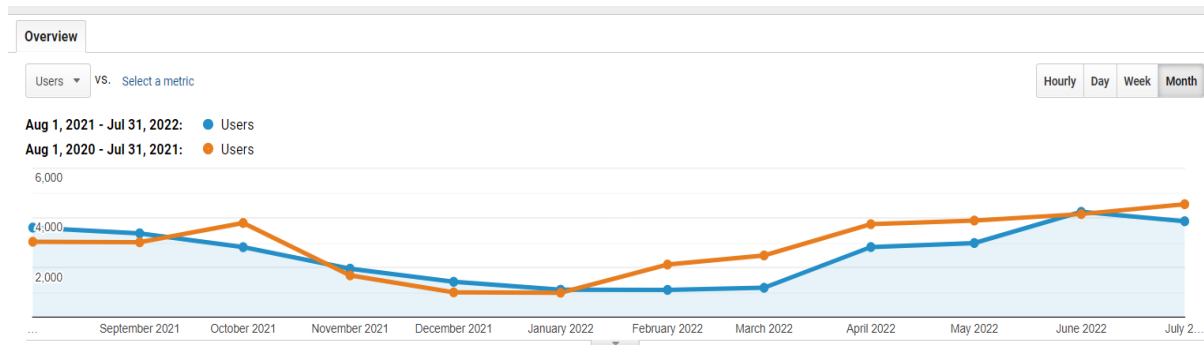
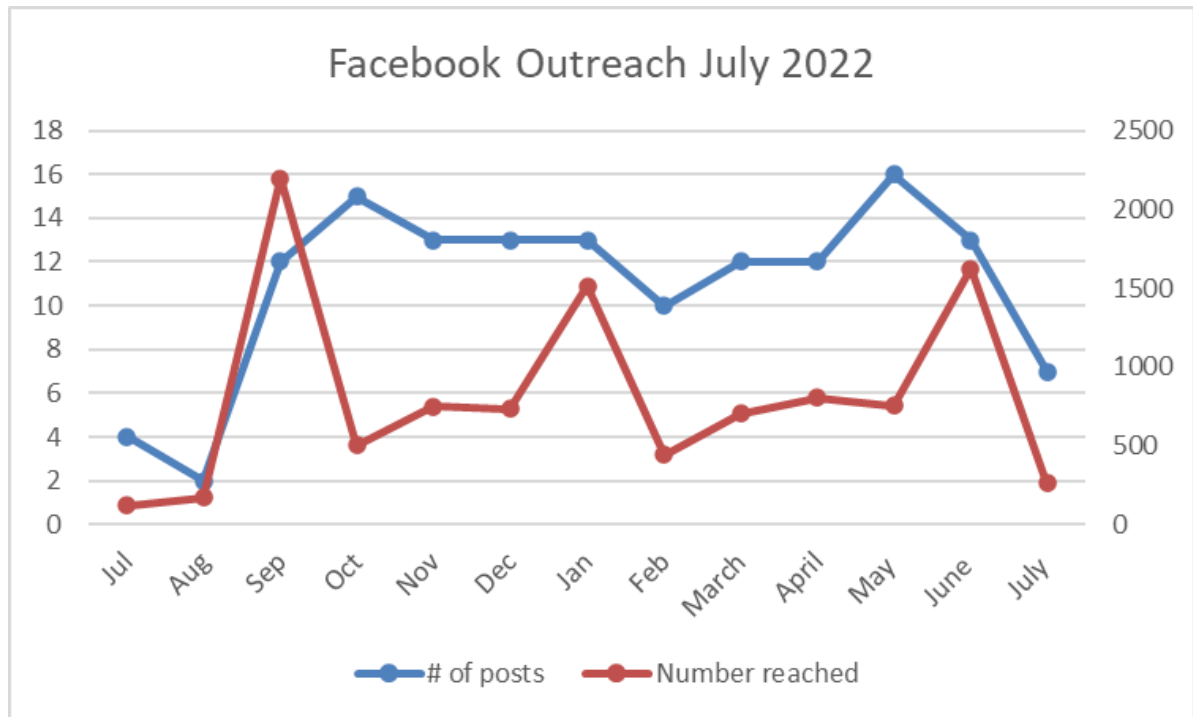


Figure 2: 2-year website comparison

Facebook



May data: Posts 7 Reach – 260 Followers – 355 (22 added)



ACE Camp at
Peralta
Hacienda Park



Top July Facebook Post: And that's a wrap. After four weeks our time with ACE Camp at the historic Peralta Hacienda Park in Fruitvale has come to an end. Kids learned about the life cycle, invasive species and how to dip for mosquitoes. See you next year! It's almost parade time! Stay golden by avoiding mosquitoes.

Alameda County Mosquito Abatement District
Published by RL Ads · May 31 ·

Alameda County Mosquito Abatement District works for you! We provide free services to prevent and address mosquito issues in Alameda County. Learn more at our website, www.mosquitoes.org

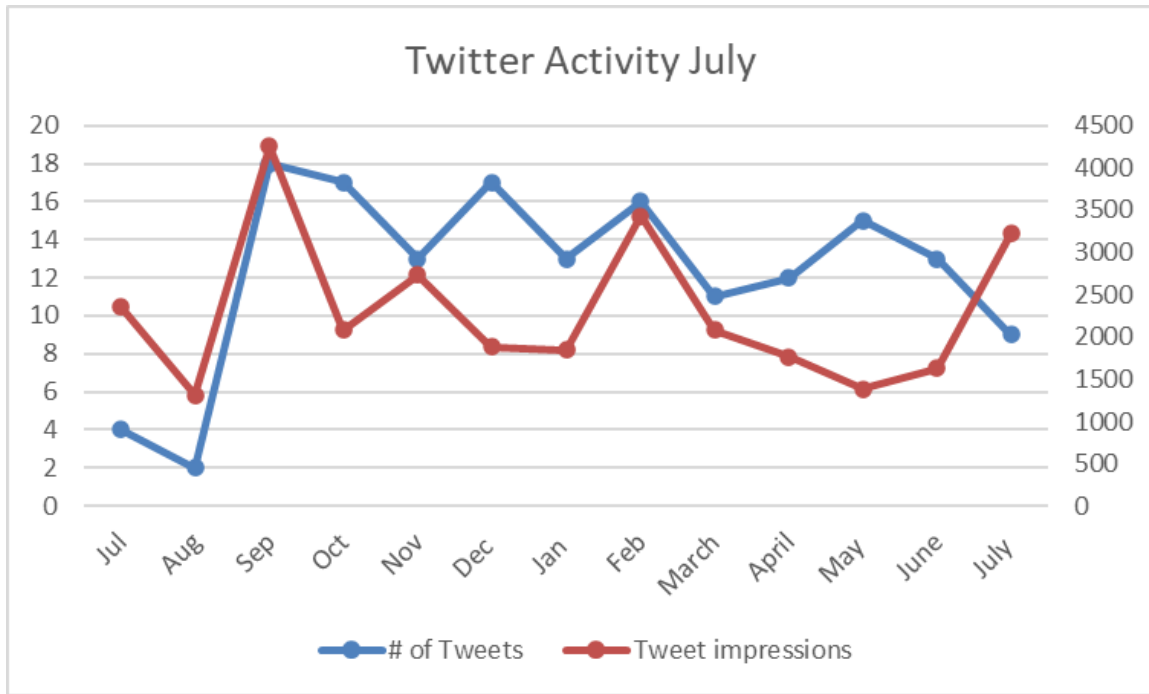
MOSQUITOES.ORG
Alameda County Mosquito Abatement District

Learn more

The Facebook ad features a circular logo for the Alameda County Mosquito Abatement District, which includes a mosquito and a sun. The main image is a close-up of a mosquito on human skin, with its abdomen filled with red blood. The ad includes a 'Learn more' button and the website URL 'MOSQUITOES.ORG'.

Facebook ad: In June we started a Facebook ad campaign through LocalIQ. To date the ad above has had 419,598 impressions.

Twitter



June data: Posts – 9 Impressions – 3,219 Followers – 782 (6 added)



JOB ANNOUNCEMENT

Mosquito Control Technician

Alameda County Mosquito Abatement District is seeking an exceptional entry or mid-career candidate who will be responsible for conducting a planned program of mosquito detection and control abatement, assist support staff, and perform related work as required.

SALARY RANGE
\$83,579.04 - \$117,834.00

BENEFITS
CalPERS pension retirement, medical, dental, vision, vacation, sick leave, and paid holidays.

MINIMUM REQUIREMENTS

- Equivalent to graduation from high school.
- Posses a valid California Driver's license.
- Possession or ability to maintain the following certifications:
 - Mosquito Control Technician Certificate
 - Vertebrate Vector Certificate
 - Invertebrate Certificate

DESIRED QUALIFICATIONS
The ideal candidate will have some college level courses related to biological sciences.

HOW TO APPLY:
Please [click here](#) or scan the QR code below for more information about the Mosquito Control Technician position.



ESSENTIAL JOB DUTIES

- Carries out a thorough inspection and control treatment program for mosquito control;
- Identifies both larval and adult stages of mosquito species;
- Follows District safety procedures and other regulatory requirements when using pesticides and District equipment;
- Participates in entomological research, mapping, public education, and public relations;
- Participates in the maintenance of equipment and facilities;
- Prepares daily work reports, and uploads field information into the District's database;
- Performs, occasionally, other tasks or functions not stated in this description, but within the scope of experience and capability.

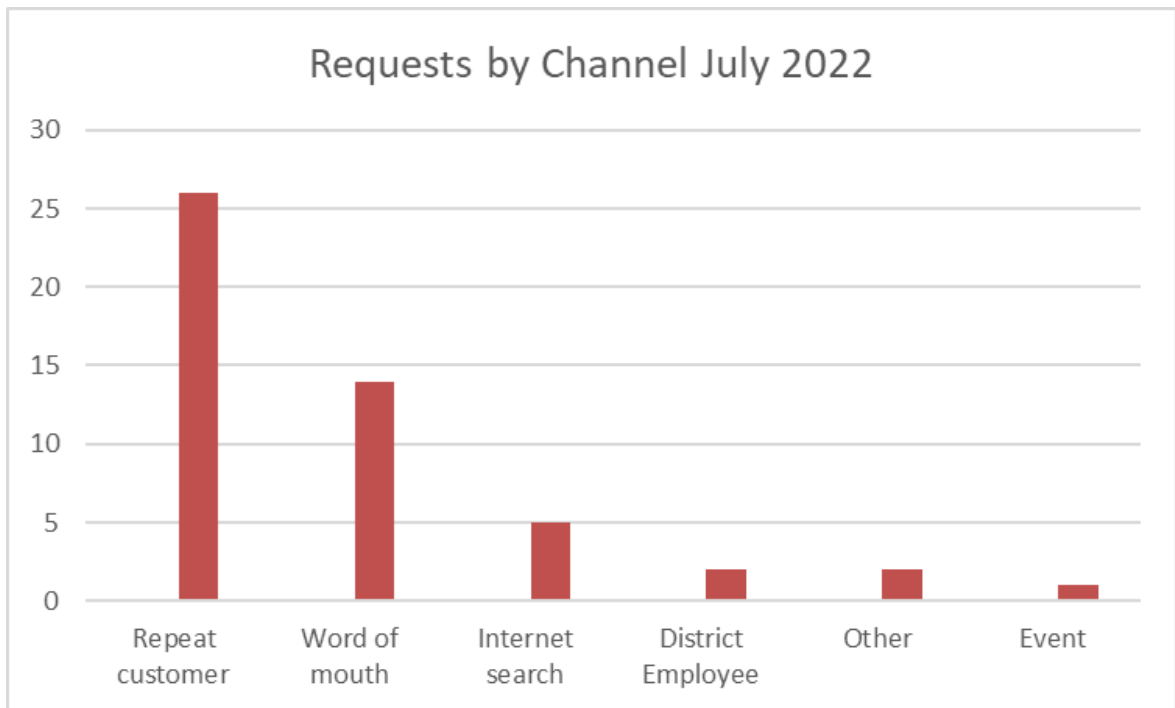
WORKING CONDITIONS

- The position is full-time, Monday - Friday;
- Employee's working hours are spent in the field and office setting;
- Must be sighted in both eyes with the ability to demonstrate depth perception; have a minimum of single-ear aided hearing; be without physical limitations that would prevent climbing ladders and performing customary and usual activities associated with field operational mosquito surveillance and control activities;
- Applicants must have the physical ability to bend, walk, and lift 50 lbs.

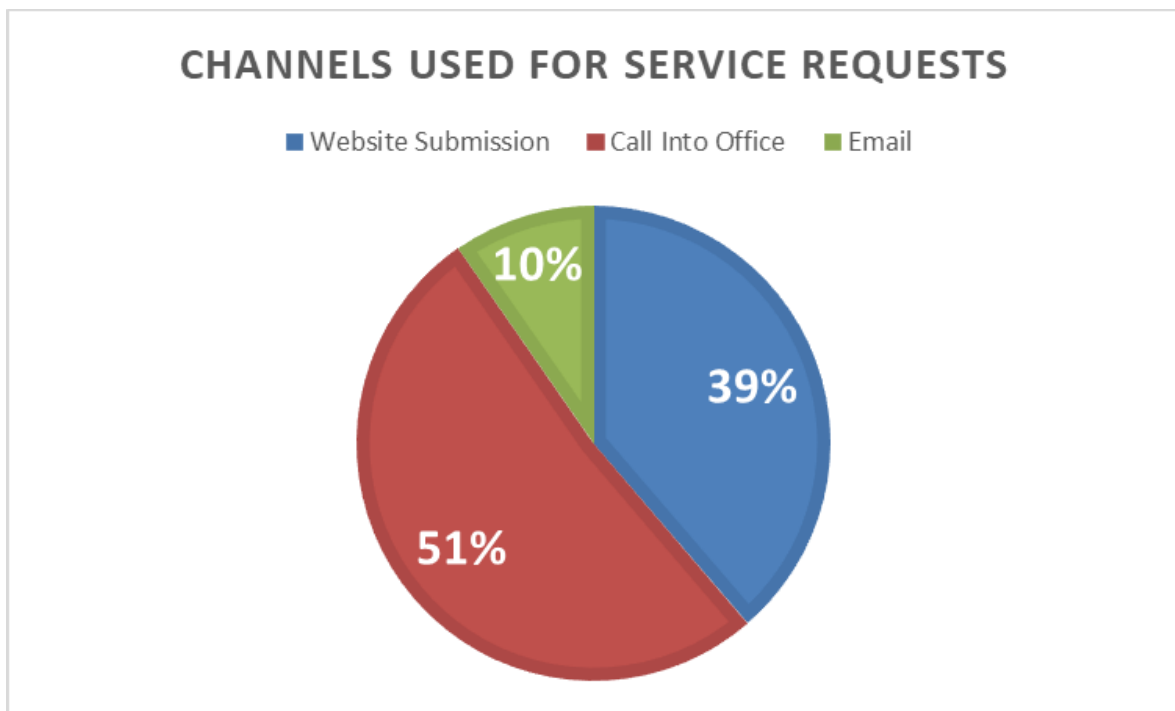
Email your completed application and resume to Michelle Robles;
michelle@mosquitoes.org

Top July Twitter Post: We are #hiring for a Mosquito Control Technician. Get your application in soon!

Service Request Referral Summary for July



Channels Used by Residents to Request Service in July



62 requests in total: 32 calls, 24 website requests, 6 emails

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022



WEEKLY UPDATE

Humans

West Nile virus

A total of 2 human cases of West Nile virus (WNV) illness were reported this week from Stanislaus County. In 2022, a total of 7 WNV human cases have been reported from 4 counties. Of the 7 cases, 5 (71%) had neuroinvasive illness. The median age of case patients was 56 years and 4 (57%) of the case patients were male. The dates of symptom onset ranged from May 8 to June 29. In addition to the 7 WNV cases, 2 asymptomatic WNV-positive blood donors have been reported from 2 counties: Fresno (1), and Kern (1). At this time last year, 4 WNV cases had been reported from 4 counties.

St. Louis encephalitis virus

A new human case (1) of St. Louis encephalitis virus (SLEV) was reported this week from Tulare County. **This is the first SLEV human case from Tulare County this year.** In 2022, 2 SLEV human cases have been reported from 2 counties: Stanislaus (1), and Tulare (1). At this time last year, 0 SLEV cases had been reported.

Dead Birds

A total of 13 WNV positive dead birds were reported this week from 7 counties: Butte (1), Los Angeles (3), Sacramento (4), Santa Clara (2), Solano (1), Sutter (1), and Tulare (1). **These are the first positive dead birds from Butte and Tulare counties this year.** In 2022, 49 WNV positive dead birds have been reported from 12 counties. At this time last year, 94 WNV positive dead birds had been reported from 9 counties.

Mosquito Pools

West Nile virus

A total of 222 WNV positive mosquito pools were reported this week from 19 counties: Butte (4), Contra Costa (1), Fresno (27), Kern (6), Los Angeles (14), Madera (3), Orange (3), Placer (5), Riverside (5), Sacramento (2), San Bernardino (4), San Joaquin (8), Santa Clara (1), Shasta (3), Stanislaus (1), Sutter (5), Tulare (123), Yolo (4), and Yuba (3) counties. **This is the first detection of a WNV positive mosquito pool from Contra Costa County this year.** In 2022, 702 WNV positive mosquito pools have been reported from 22 counties. At this time last year, 563 WNV positive mosquito pools had been reported from 20 counties.

St. Louis encephalitis virus

A total of 2 SLEV positive mosquito pools were reported this week from Riverside County. In 2022, 9 positive mosquito pools from Imperial (2), Kings (2), Riverside (4), and Tulare (1) counties have been reported. At this time last year, 3 SLEV positive mosquito pools had been reported from 1 county.

Sentinel Chickens

No new positives were reported this week. In 2022, 2 WNV positive chickens have been reported from 2 counties. At this time last year, 10 WNV positive chickens had been reported from 3 counties.

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022

2021 & 2022 YTD West Nile Virus Comparisons		
	2021	2022
Total No. Dead Bird Reports	3,414	2,906
No. Positive Counties	22	23
No. Human Cases	4	7
No. Positive Dead Birds / No. Tested	94 / 1,032	49 / 745
No. Positive Mosquito Pools / No. Tested	563 / 18,071	702 / 17,315
No. Seroconversions / No. Tested	10 / 3,093	2 / 2,523

YTD WNV Activity by Element and County, 2022					
County	Humans	Horses	Dead Birds	Mosquito Pools	Sentinel Chickens
Butte			1	6	
Contra Costa			1	1	
Fresno			2	139	
Kern	2	2		40	
Kings	1			30	
Los Angeles			12	57	
Madera				6	
Merced			1	1	1
Nevada			1		
Orange				14	
Placer				20	
Riverside				42	
Sacramento			19	8	
San Bernardino				17	
San Joaquin				53	
Santa Clara			4	9	
Shasta				9	
Solano			3	6	
Stanislaus	3			2	
Sutter			2	16	
Tulare			1	214	
Yolo	1		2	8	
Yuba				4	1
Totals	7	2	49	702	2

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022

TESTING SUMMARIES

		WNV	SLEV	WEEV
Human Cases	Week	2	1	0
	YTD	7	2	0

Positive / Total Tested					
WNV	SLEV	WEEV	CHIK	DENV	ZIKA

Dead Birds	Week	13 / 28
	YTD	49 / 745

Chicken Sera	Week	0 / 174	0 / 174	0 / 174
	YTD	2 / 2,523	0 / 2,523	0 / 2,523

Mosquito Pools	Week	222 / 1,700	2 / 1457	0 / 1455	0 / 0	0 / 0	0 / 0
	YTD	702 / 17,315	9 / 16,582	0 / 16,543	0 / 280	0 / 280	0 / 280

POSITIVES

Dead Birds

County	Agency	City	Zip Code	Species	Date Reported	Virus
Butte	Butte Co MVCD	Palermo	95968	Sparrow	7/19/2022	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91401	Cooper's Hawk	7/18/2022	WNV
Los Angeles	Greater Los Angeles Co VCD - Sylmar	Los Angeles	91423	Crow or Raven	7/18/2022	WNV
Los Angeles	San Gabriel Valley MVCD	South Pasadena	91030	American Crow	7/21/2022	WNV
Sacramento	Sacramento-Yolo MVCD	Carmichael	95608	Yellow-billed Magpie	7/26/2022	WNV
Sacramento	Sacramento-Yolo MVCD	Citrus Heights	95610	California Scrub-Jay	7/19/2022	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95821	White-breasted Nuthatch	7/25/2022	WNV
Sacramento	Sacramento-Yolo MVCD	Sacramento	95864	American Crow	7/21/2022	WNV
Santa Clara	Santa Clara Co VCD	Palo Alto	94303	American Goldfinch	7/20/2022	WNV
Santa Clara	Santa Clara Co VCD	Sunnyvale	94087	House Sparrow	7/20/2022	WNV
Solano	Solano Co MAD	Vacaville	95688	California Scrub-Jay	7/22/2022	WNV
Sutter	Sutter-Yuba MVCD	Pleasant Grove	95668	California Scrub-Jay	7/26/2022	WNV
Tulare	Delta MVCD	Visalia	93291	California Scrub-Jay	7/24/2022	WNV

Mosquito Pools

County	Site Code	Pool #	Species	City	# in Pool	Trap Type	Collected	Virus
Butte	BUCO 12	239	Culex tarsalis	Gridley	50	CO2	7/19/2022	WNV
Butte	BUCO 124	240	Culex tarsalis	Chico	50	CO2	7/18/2022	WNV
Butte	BUCO 49	251	Culex tarsalis	Biggs	50	CO2	7/20/2022	WNV
Butte	BUCO 9	244	Culex tarsalis	Chico	50	CO2	7/18/2022	WNV
Contra Costa	CNTR 7402	596	Culex tarsalis	Oakley	10	CO2	7/26/2022	WNV
Fresno	CNSL 2003	79	Culex quinquefasciatus	Sanger	50	GRVD	7/21/2022	WNV
Fresno	CNSL 2297	571	Culex quinquefasciatus	Sanger	50	GRVD	7/19/2022	WNV

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022

Fresno	CNSL 2516	78	Culex quinquefasciatus	Sanger	34	GRVD	7/19/2022	WNV
Fresno	CNSL 3202	581	Culex quinquefasciatus	Reedley	50	GRVD	7/22/2022	WNV
Fresno	CNSL 3429	579	Culex quinquefasciatus	Parlier	26	GRVD	7/21/2022	WNV
Fresno	CNSL 4232	80	Culex quinquefasciatus	Selma	50	GRVD	7/21/2022	WNV
Fresno	CNSL 8032	578	Culex quinquefasciatus	Fresno	50	GRVD	7/21/2022	WNV
Fresno	CNSL 8042	560	Culex quinquefasciatus	Fresno	50	GRVD	7/19/2022	WNV
Fresno	CNSL 8050	81	Culex quinquefasciatus	Fresno	24	GRVD	7/22/2022	WNV
Fresno	CNSL 8178	82	Culex quinquefasciatus	Clovis	50	GRVD	7/22/2022	WNV
Fresno	FRNO 10	574	Culex quinquefasciatus	Fresno	26	GRVD	7/27/2022	WNV
Fresno	FRNO 10	585	Culex tarsalis	Fresno	50	CO2	7/27/2022	WNV
Fresno	FRNO 116	564	Culex quinquefasciatus	Fresno	45	GRVD	7/27/2022	WNV
Fresno	FRNO 122	553	Culex quinquefasciatus	Fresno	10	GRVD	7/21/2022	WNV
Fresno	FRNO 15	575	Culex quinquefasciatus	Fresno	8	GRVD	7/27/2022	WNV
Fresno	FRNO 178	561	Culex quinquefasciatus	Fresno	44	GRVD	7/21/2022	WNV
Fresno	FRNO 197	587	Culex tarsalis	Fresno	50	CO2	7/27/2022	WNV
Fresno	FRNO 219	576	Culex quinquefasciatus	Fresno	50	GRVD	7/27/2022	WNV
Fresno	FRNO 254	581	Culex quinquefasciatus	Fresno	35	GRVD	7/27/2022	WNV
Fresno	FRNO 259	554	Culex quinquefasciatus	Fresno	25	GRVD	7/21/2022	WNV
Fresno	FRNO 28	558	Culex quinquefasciatus	Fresno	9	GRVD	7/21/2022	WNV
Fresno	FRNO 35	560	Culex quinquefasciatus	Fresno	50	GRVD	7/21/2022	WNV
Fresno	FRNO 36	567	Culex quinquefasciatus	Fresno	50	GRVD	7/27/2022	WNV
Fresno	FRNO 64	555	Culex quinquefasciatus	Fresno	50	GRVD	7/21/2022	WNV
Fresno	FRNO 81	565	Culex quinquefasciatus	Fresno	50	GRVD	7/27/2022	WNV
Fresno	FRWS 4102	200	Culex tarsalis	Kerman	50	CO2	7/26/2022	WNV
Fresno	FRWS 4102	201	Culex tarsalis	Kerman	25	CO2	7/26/2022	WNV
Kern	DLNO 161	98	Culex quinquefasciatus	Delano	50	GRVD	7/22/2022	WNV
Kern	KERN 111	363	Culex tarsalis	Arvin	40	CO2	7/12/2022	WNV
Kern	KERN 1137	364	Culex quinquefasciatus	Bakersfield	30	CO2	7/13/2022	WNV
Kern	KERN 121	365	Culex quinquefasciatus	Bakersfield	26	GRVD	7/13/2022	WNV
Kern	KERN 2040	359	Culex quinquefasciatus	Arvin	46	GRVD	7/12/2022	WNV
Kern	KERN 52	369	Culex quinquefasciatus	Bakersfield	25	GRVD	7/15/2022	WNV
Los Angeles	GRLA 2521	5588	Culex quinquefasciatus	Los Feliz	23	GRVD	7/15/2022	WNV
Los Angeles	GRLA 2592	5593	Culex quinquefasciatus	San Marino	50	GRVD	7/20/2022	WNV
Los Angeles	GRLA 2669	5617	Culex quinquefasciatus	Granada Hills	40	GRVD	7/22/2022	WNV
Los Angeles	GRLA 3046	548	Culex quinquefasciatus	Bellflower	50	GRVD	7/22/2022	WNV
Los Angeles	GRLA 3089	5597	Culex quinquefasciatus	Glendale	50	GRVD	7/20/2022	WNV
Los Angeles	SGVA 1071	683	Culex quinquefasciatus	Monterey Park	50	GRVD	7/26/2022	WNV
Los Angeles	SGVA 1074	687	Culex quinquefasciatus	Temple City	50	GRVD	7/26/2022	WNV
Los Angeles	SGVA 297	684	Culex quinquefasciatus	Monterey Park	50	GRVD	7/26/2022	WNV
Los Angeles	SGVA 396	685	Culex quinquefasciatus	Pasadena	50	GRVD	7/26/2022	WNV
Los Angeles	SGVA 474	688	Culex quinquefasciatus	San Gabriel	50	GRVD	7/26/2022	WNV
Los Angeles	SGVA 688	681	Culex quinquefasciatus	Alhambra	50	GRVD	7/26/2022	WNV
Los Angeles	SGVA 704	680	Culex quinquefasciatus	Sierra Madre	18	GRVD	7/26/2022	WNV
Los Angeles	SGVA 898	679	Culex quinquefasciatus	San Gabriel	50	GRVD	7/26/2022	WNV
Los Angeles	SGVA 961	682	Culex quinquefasciatus	Alhambra	50	GRVD	7/26/2022	WNV
Madera	MADR 227	318	Culex tarsalis	Madera	50	CO2	7/20/2022	WNV
Madera	MADR 299	309	Culex quinquefasciatus	Chowchilla	50	CO2	7/19/2022	WNV
Madera	MADR 688	354	Culex tarsalis	Madera	50	CO2	7/22/2022	WNV
Orange	ORCO 1011	2263	Culex quinquefasciatus	La Habra	33	GRVD	7/21/2022	WNV
Orange	ORCO 1011	2361	Culex quinquefasciatus	La Habra	42	GRVD	7/27/2022	WNV
Orange	ORCO 227	2360	Culex quinquefasciatus	Brea	28	GRVD	7/27/2022	WNV
Placer	PLCR 1114	1019	Culex tarsalis	Lincoln	50	CO2	7/26/2022	WNV
Placer	PLCR 1114	1020	Culex tarsalis	Lincoln	23	CO2	7/26/2022	WNV
Placer	PLCR 139	1056	Culex tarsalis	Roseville	50	CO2	7/26/2022	WNV
Placer	PLCR 191218	1011	Culex tarsalis	Roseville	26	CO2	7/26/2022	WNV
Placer	PLCR 993822	1041	Culex tarsalis	Roseville	17	CO2	7/26/2022	WNV
Riverside	COAV 0	4030	Culex tarsalis	Indio	50	CO2	7/28/2022	WNV
Riverside	COAV 0	4111	Culex tarsalis	Indio	46	CO2	7/28/2022	WNV
Riverside	COAV 0	4127	Culex tarsalis	Indio	50	CO2	7/28/2022	WNV
Riverside	COAV 55	3955	Culex tarsalis	Mecca	50	CO2	7/26/2022	WNV
Riverside	COAV 55	3957	Culex tarsalis	Mecca	29	CO2	7/26/2022	WNV
Riverside	COAV 58	3765	Culex tarsalis	North Shore	50	CO2	7/26/2022	SLEV
Riverside	COAV 58	4106	Culex tarsalis	North Shore	50	CO2	7/28/2022	SLEV
Sacramento	SAYO 213055	2720	Culex tarsalis	Sacramento	5	CO2	7/22/2022	WNV
Sacramento	SAYO 214013	2704	Culex tarsalis	Carmichael	6	CO2	7/22/2022	WNV
San Bernardino	WVAL 4721	1053	Culex quinquefasciatus	Chino	24	BGSENT	7/28/2022	WNV
San Bernardino	WVAL 5005	1043	Culex quinquefasciatus	Rancho Cucamonga	20	GRVD	7/27/2022	WNV
San Bernardino	WVAL 6015	1022	Culex quinquefasciatus	Ontario	38	GRVD	7/26/2022	WNV
San Bernardino	WVAL 9007	1016	Culex quinquefasciatus	Upland	17	GRVD	7/26/2022	WNV

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022

San Joaquin	SJCM 8011	1191	Culex tarsalis	Ripon	10	CO2	7/26/2022	WNV
San Joaquin	SJCM 8011	1192	Culex pipiens	Ripon	36	CO2	7/26/2022	WNV
San Joaquin	SJCM 8018	1184	Culex tarsalis	Stockton	100	CO2	7/26/2022	WNV
San Joaquin	SJCM 8018	1186	Culex tarsalis	Stockton	100	CO2	7/26/2022	WNV
San Joaquin	SJCM 8018	1190	Culex pipiens	Stockton	16	CO2	7/26/2022	WNV
San Joaquin	SJCM 8111	1157	Culex tarsalis	Stockton	50	CO2	7/26/2022	WNV
San Joaquin	SJCM 8205	1222	Culex pipiens	Farmington	33	CO2	7/28/2022	WNV
San Joaquin	SJCM 8206	1144	Culex tarsalis	Lodi	43	CO2	7/26/2022	WNV
Santa Clara	STCL 31726	2136	Culex pipiens	Sunnyvale	1	CO2	7/21/2022	WNV
Shasta	SHAS 20040	254	Culex tarsalis	Redding	50	CO2	7/26/2022	WNV
Shasta	SHAS 20040	255	Culex tarsalis	Redding	37	CO2	7/26/2022	WNV
Shasta	SHAS 247	259	Culex tarsalis	Redding	16	CO2	7/26/2022	WNV
Stanislaus	TRLK 1107	349	Culex pipiens	Denair	31	CO2	7/26/2022	WNV
Sutter	SUYA 24	305	Culex tarsalis	Yuba City	39	REST	7/25/2022	WNV
Sutter	SUYA 31	308	Culex tarsalis	Rio Oso	50	REST	7/26/2022	WNV
Sutter	SUYA 44	296	Culex tarsalis	Pleasant Grove	40	CO2	7/27/2022	WNV
Sutter	SUYA 5	310	Culex tarsalis	Live Oak	23	CO2	7/27/2022	WNV
Sutter	SUYA 63	303	Culex tarsalis	Live Oak	40	REST	7/25/2022	WNV
Tulare	DLTA 162326	1665	Culex tarsalis	Dinuba	15	BGSENT	7/13/2022	WNV
Tulare	DLTA 162326	1667	Culex quinquefasciatus	Dinuba	50	BGSENT	7/13/2022	WNV
Tulare	DLTA 184191	1785	Culex quinquefasciatus	Visalia	17	BGSENT	7/19/2022	WNV
Tulare	DLTA 6407	1670	Culex quinquefasciatus	Dinuba	21	BGSENT	7/13/2022	WNV
Tulare	DLTA 6408	1658	Culex quinquefasciatus	Dinuba	30	BGSENT	7/13/2022	WNV
Tulare	DLTA 64163	1694	Culex quinquefasciatus	Dinuba	11	BGSENT	7/14/2022	WNV
Tulare	DLTA 64163	1929	Culex quinquefasciatus	Dinuba	10	GRVD	7/21/2022	WNV
Tulare	DLTA 6417	1642	Culex quinquefasciatus	Dinuba	11	GRVD	7/13/2022	WNV
Tulare	DLTA 6417	1784	Culex quinquefasciatus	Dinuba	38	GRVD	7/19/2022	WNV
Tulare	DLTA 6420	1738	Culex quinquefasciatus	Dinuba	45	BGSENT	7/15/2022	WNV
Tulare	DLTA 65312	1762	Culex quinquefasciatus	Cutler	50	CO2	7/19/2022	WNV
Tulare	DLTA 65323	1753	Culex stigmatosoma	Yetterm	26	CO2	7/19/2022	WNV
Tulare	DLTA 65323	1754	Culex quinquefasciatus	Yetterm	41	CO2	7/19/2022	WNV
Tulare	DLTA 653232	1765	Culex stigmatosoma	Yetterm	10	CO2	7/19/2022	WNV
Tulare	DLTA 7502	1569	Culex quinquefasciatus	Seville	14	BGSENT	7/13/2022	WNV
Tulare	DLTA 752842	1597	Culex quinquefasciatus	Ivanhoe	50	CO2	7/13/2022	WNV
Tulare	DLTA 752842	1598	Culex quinquefasciatus	Ivanhoe	50	CO2	7/13/2022	WNV
Tulare	DLTA 752842	1602	Culex quinquefasciatus	Ivanhoe	50	CO2	7/13/2022	WNV
Tulare	DLTA 752842	1607	Culex quinquefasciatus	Ivanhoe	50	CO2	7/13/2022	WNV
Tulare	DLTA 752842	1631	Culex quinquefasciatus	Ivanhoe	50	CO2	7/13/2022	WNV
Tulare	DLTA 752842	1639	Culex quinquefasciatus	Ivanhoe	50	CO2	7/13/2022	WNV
Tulare	DLTA 8413	1587	Culex quinquefasciatus	Visalia	50	BGSENT	7/13/2022	WNV
Tulare	DLTA 8413	1650	Culex quinquefasciatus	Visalia	50	BGSENT	7/13/2022	WNV
Tulare	DLTA 8413	1651	Culex quinquefasciatus	Visalia	50	BGSENT	7/13/2022	WNV
Tulare	DLTA 841324	1829	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841324	1830	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841324	1836	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 8414	1748	Culex quinquefasciatus	Visalia	47	BGSENT	7/15/2022	WNV
Tulare	DLTA 841423	1803	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841423	1804	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841423	1807	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1839	Culex tarsalis	Visalia	49	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1840	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1841	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1842	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1843	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1844	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1845	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1846	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1847	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1848	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1849	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1850	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1851	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1852	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1853	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1854	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1855	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1856	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1857	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1858	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022

Tulare	DLTA 841431	1859	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1860	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1861	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1862	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1863	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1864	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1865	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1866	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1867	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1868	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1869	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1870	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1871	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1872	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1873	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1874	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1875	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1876	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1877	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1878	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1879	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1880	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1881	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1882	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1883	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1884	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1885	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1886	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1887	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1888	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1889	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1890	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1891	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1892	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1893	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1894	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1895	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1896	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1897	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1898	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1899	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1900	Culex quinquefasciatus	Visalia	50	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1901	Culex quinquefasciatus	Visalia	45	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1902	Culex tarsalis	Visalia	10	CO2	7/20/2022	WNV
Tulare	DLTA 841431	1903	Culex quinquefasciatus	Visalia	10	CO2	7/20/2022	WNV
Tulare	DLTA 84221	1773	Culex quinquefasciatus	Visalia	50	BGSENT	7/19/2022	WNV
Tulare	DLTA 84221	1774	Culex quinquefasciatus	Visalia	50	BGSENT	7/19/2022	WNV
Tulare	DLTA 84221	1775	Culex quinquefasciatus	Visalia	18	BGSENT	7/19/2022	WNV
Tulare	DLTA 8423	1661	Culex quinquefasciatus	Visalia	50	BGSENT	7/13/2022	WNV
Tulare	DLTA 8423	1663	Culex quinquefasciatus	Visalia	50	BGSENT	7/13/2022	WNV
Tulare	DLTA 8423	1704	Culex quinquefasciatus	Visalia	26	GRVD	7/14/2022	WNV
Tulare	DLTA 84242	1818	Culex quinquefasciatus	Visalia	20	BGSENT	7/20/2022	WNV
Tulare	DLTA 8425	1716	Culex quinquefasciatus	Visalia	25	BGSENT	7/14/2022	WNV
Tulare	DLTA 8508	1698	Culex quinquefasciatus	Visalia	50	BGSENT	7/14/2022	WNV
Tulare	DLTA 85192	1911	Culex quinquefasciatus	Visalia	11	GRVD	7/20/2022	WNV
Tulare	DLTA 8520	1733	Culex quinquefasciatus	Visalia	13	GRVD	7/15/2022	WNV
Tulare	DLTA 8521	1777	Culex quinquefasciatus	Visalia	27	BGSENT	7/19/2022	WNV
Tulare	DLTA 8527	1719	Culex quinquefasciatus	Visalia	10	BGSENT	7/14/2022	WNV
Tulare	DLTA 8527	1816	Culex quinquefasciatus	Visalia	21	GRVD	7/20/2022	WNV
Tulare	DLTA 85293	1727	Culex quinquefasciatus	Visalia	18	BGSENT	7/14/2022	WNV
Tulare	DLTA 8533	1910	Culex quinquefasciatus	Visalia	13	GRVD	7/20/2022	WNV
Tulare	DLTA 8631	1928	Culex quinquefasciatus	Farmersville	17	GRVD	7/21/2022	WNV
Tulare	DLTA 94122	1646	Culex quinquefasciatus	Visalia	18	GRVD	7/13/2022	WNV
Tulare	DLTA 9504	1655	Culex quinquefasciatus	Visalia	28	BGSENT	7/13/2022	WNV
Tulare	DLTA 9504	1781	Culex quinquefasciatus	Visalia	21	GRVD	7/19/2022	WNV
Tulare	DLTA 9505	1736	Culex quinquefasciatus	Visalia	12	BGSENT	7/15/2022	WNV
Tulare	DLTA 9604	1750	Culex quinquefasciatus	Exeter	10	BGSENT	7/15/2022	WNV
Tulare	DLTA 9607	1783	Culex quinquefasciatus	Farmersville	18	BGSENT	7/19/2022	WNV
Tulare	TLRE 192517	31	Culex quinquefasciatus	Trulare	42	GRVD	7/26/2022	WNV

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022

Tulare	TLRE 202412	28	Culex quinquefasciatus	Tulare	48	GRVD	7/15/2022	WNV
Tulare	TLRE 202413	27	Culex quinquefasciatus	Tulare	47	GRVD	7/15/2022	WNV
Tulare	TLRE 202518	26	Culex quinquefasciatus	Tulare	50	GRVD	7/13/2022	WNV
Yolo	SAYO 114001	2855	Culex tarsalis	Zamora	30	CO2	7/26/2022	WNV
Yolo	SAYO 115008	2845	Culex tarsalis	Woodland	50	CO2	7/26/2022	WNV
Yolo	SAYO 125004	2722	Culex tarsalis	Woodland	7	CO2	7/22/2022	WNV
Yolo	SAYO 125004	2723	Culex pipiens	Woodland	4	GRVD	7/22/2022	WNV
Yuba	SUYA 37	290	Culex tarsalis	Marysville	50	CO2	7/26/2022	WNV
Yuba	SUYA 37	292	Culex tarsalis	Marysville	50	CO2	7/26/2022	WNV
Yuba	SUYA 39	284	Culex tarsalis	Marysville	33	CO2	7/26/2022	WNV

California Arbovirus Surveillance Bulletin #17

Week 30 Friday, July 29, 2022

TEST PROTOCOLS

Humans:

Specimens are tested by local laboratories with an IgM or IgG immunofluorescent assay (IFA) and/or an IgM enzyme immunoassay (EIA). Specimens with inconclusive results are forwarded to the California Department of Public Health Viral and Rickettsial Disease Laboratory (VRDL) for further testing with a plaque reduction neutralization test (PRNT).

Dead Birds

Oral swab samples collected from bird carcasses are tested at the UC Davis Arbovirus Research and Training laboratory (DART) or at a local agency for West Nile virus by RT-qPCR.

Sentinel Chickens:

Dried blood spot samples from sentinel chickens are tested at the California Department of Public Health Vector-Borne Disease Laboratory for IgG antibodies to West Nile, St. Louis encephalitis, and western equine encephalomyelitis viruses by an EIA. Positive samples are confirmed by IFA, western-blot, or PRNT.

Mosquito Pools:

Mosquito pools are tested at DART or at a local agency for West Nile, western equine encephalomyelitis, and St. Louis encephalitis viral RNA using a multiplex RT-qPCR. Invasive *Aedes* mosquitoes (*Ae. aegypti* and *Ae. albopictus*) are also tested at DART for chikungunya, dengue, and Zika viral RNA by a separate RT-qPCR.

Website Information: For updated information on WNV in California, please visit the California WNV website, <https://westnile.ca.gov>, or the California Vector-Borne Disease Surveillance System website, <https://maps.vectorsurv.org>.

Prepared by the Vector-Borne Disease Section (Infectious Diseases Branch), California Department of Public Health, 850 Marina Bay Parkway, Richmond, CA 94804. Questions concerning this bulletin should be addressed to Hannah Romo: Hannah.romo@cdph.ca.gov



News Release

For Immediate Release — Friday, August 5, 2022

Contact: Nola Woods, Public Affairs Director

Direct: 925-771-6158

Cell: 925-250-6502

Email: nwoods@contracostamosquito.com

FIRST INVASIVE AEDES MOSQUITOES FOUND IN CONTRA COSTA COUNTY

The District asks residents to report any day-biting mosquitoes

CONCORD, CALIFORNIA - The Contra Costa Mosquito & Vector Control District (District) has identified the invasive mosquito species *Aedes aegypti* in Contra Costa County. The mosquitoes were found in Martinez. This is the first group of invasive mosquitoes reported in Contra Costa County.

The District is conducting surveillance and treatment in the area where these mosquitoes were identified with the goal of eliminating them before they become widespread in Contra Costa County; however, they are known to be very difficult to eradicate.

"These mosquitoes are very aggressive day-biters that can transmit the causative agents of Zika, Dengue, chikungunya, and yellow fever. They can hide among vegetation and debris which makes them very challenging to find and eliminate. As we take our responsibility of protecting public health very seriously, we are setting additional traps, and going door-to-door in an effort to find and control these invasive mosquitoes and prevent them from becoming established in the County," said Paula Macedo, General Manager.

Aedes aegypti are not native to California but can be found around the world in tropical and subtropical areas. They are common in the Southeastern United States and Arizona. More than 10 years ago, they were first discovered in Southern California, and over the years, they have been found in communities from San Diego County north to Shasta County. In 2019, *Aedes aegypti* were discovered in San Joaquin, Sacramento, and Yolo Counties.

These invasive mosquitoes are very small (about 1/4 inch), with black bodies and white stripes. Females can lay individual eggs that can remain dormant for up to six months before being exposed to water in which they can develop from egg to adult in a week or less. They are often introduced through travel, particularly as people move from area to area and may unknowingly transport these mosquitoes in potted plants or other outdoor items.

The District asks Contra Costa County residents to tip, toss and take action to reduce the risk of these new mosquitoes.

- Toss out any amount of standing water.
- These mosquitoes' eggs can stick to surfaces, so after dumping out the water, scrub bird baths, containers, outdoor pet dishes, garden pots for plants, and anything else that can hold water outdoors.
- And report any day-biting mosquitoes by calling (925) 685-9301 or [online](#).

Contra Costa Mosquito & Vector Control District, an independent special district and public health agency, is located at [155 Mason Circle in Concord](#).



CalPERS Announces Preliminary Net Investment Return of -6.1% for the 2021-22 Fiscal Year

July 20, 2022

Communications & Stakeholder Relations

Contact: Megan White, Information Officer

(916) 795-3991 - newsroom@calpers.ca.gov

Challenging global public markets, strong private market returns lead to varied performance

SACRAMENTO, Calif. – Tumultuous global markets played a role in CalPERS' first loss since the global financial crisis of 2009, as the System today announced a preliminary -6.1% net return on investments for the 12-month period that ended June 30, 2022. Assets stood at \$440 billion at the end of the fiscal year.

"We've done a lot of work in recent years to plan and prepare for difficult conditions," said CalPERS Chief Executive Officer Marcie Frost. "Despite the market conditions and their impact on our returns, we're focused on long-term performance and our members can be confident that their retirement is safe and secure."

Volatile global financial markets, geopolitical instability, domestic interest rate hikes, and inflation all have had an impact on public market returns. CalPERS' investments in global public stocks returned -13.1%, while fixed income investments returned -14.5%. Public market investments make up roughly 79% of the CalPERS' total fund. CalPERS' private market investments fared much better, with private equity and real assets sectors returning 21.3% and 24.1%, respectively.

"This is a unique moment in the financial markets, and we've seen a deviation from some investing fundamentals," said CalPERS Chief Investment Officer Nicole Musicco. "For instance, our traditional diversification strategies were less effective than expected, as we

saw both public equity and fixed income assets fall in tandem. But despite a challenging year, we were able to outperform our total fund benchmark by 90 basis points and provide strong returns from our private market asset classes. These are bright spots that we can build on as we implement our new strategic asset allocation and increase our exposure to private market assets.”

Total fund annualized returns for the 5-year period ending June 30, 2022 stood at 6.7%, the 10-year period at 7.7%, the 20-year period at 6.9%, and 30-year period at 7.7%.

Asset Class	Net Rate of Return	Policy Benchmark
Total Fund	-6.1%	-7.0%
Public Equity	-13.1%	-13.2%
Fixed Income	-14.5%	-14.5%
Private Equity*	21.3%	8.3%
Real Assets*	24.1%	27.1%
Liquidity	0.3%	0.1%

* Private market asset valuations lag one quarter and are as of March 31, 2022.

With CalPERS’ discount rate of 6.8% and this year’s preliminary return of -6.1%, the estimated overall funded status stands at 72%.

The official total fund performance numbers go through multiple layers of review and oversight. View the [Total Fund and Benchmark Performance Calculation – Wilshire Associates \(PDF\)](#) for more information.

CalPERS' 2021-22 final fiscal year investment performance will be calculated based on audited figures and will be reflected in contribution levels for the State of California and school districts in fiscal year 2023-24, and for contracting cities, counties, and special districts in fiscal year 2024-25.

The ending value of the fund is based on several factors and not investment performance alone. Contributions made to CalPERS from employers and employees, monthly payments made to retirees, investment fees, and the performance of its investments, among other

factors, all influence the ending total value of the PERF.

###

MEDIA ADVISORY

What: Media availability to discuss fiscal year investment returns

Who: CalPERS CEO, CIO, senior investment office staff

When: Wednesday, July 20, at 10 a.m. PT.

Format: Credentialed media only; call 800-369-3154. Password: CalPERS

About CalPERS

For more than eight decades, CalPERS has built retirement and health security for state, school, and public agency members who invest their lifework in public service. Our pension fund serves more than 2 million members in the CalPERS retirement system and administers benefits for more than 1.5 million members and their families in our health program, making us the largest defined-benefit public pension in the U.S. CalPERS' total fund market value currently stands at approximately \$442 billion. For more information, visit www.calpers.ca.gov.