

AGENDA
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>
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 1102nd Regular Meeting held June 8th, 2022 (**Board action required**).
5. Presentation by Public Outreach Coordinator, Judith Pierce, MPH: *Education and Outreach Update* (Information only).
6. Presentation by Lab Director, Eric Haas-Stapleton, PhD: *Will AI Brick the Entomologist.....or change their roles substantially?* (Information only).
7. Financial Reports as of June 30th, 2022: (Information only).
 - a. Check Register
 - b. Income Statement
 - c. Investments, reserves, and cash report
 - d. Balance Sheet
8. Presentation of the Monthly Staff Report (Information only).
9. Presentation of the Manager's Report (Information only).

- a. Staff Anniversary Recognition
- b. Joint Meeting of Alameda and Contra Costa CSDA Chapters: Monday, July 11th
- c. CDPH Weekly Arbovirus report
- d. The General Manager selected by the CSDA of Directors to represent special districts on the California CLASS JPA Board of Directors for a 4-year term
<https://californiaclass.com/>
- e. Training due: AB 1825: Trustee Kumagai

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.

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# 844 6546 7124** followed by the pound (#) key.

Computer: Watch the live streaming of the meeting from a computer by navigating to <https://us02web.zoom.us/j/84465467124>

Mobile: Log in through the Zoom mobile app on a smartphone and enter **Meeting ID# 844 6546 7124**

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

1102nd MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

June 8th, 2022

TIME: 5:00 P.M.
PLACE: *Zoom Teleconference Only*
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, Jordan, Beatty, Kumagai, Márquez, Cox, Hentschke, Washburn, and Salzer were present on the Zoom conference. Trustees Welch and Young arrived at 5:08 P.M. Trustees Savage and Testa were absent.
3. Board President Bhat invited members of the public to speak on any issue relevant to the district. Information Technology Director Robert Ferdan was remote for technical support. Vector Biologist Jeremy Sette was present to record the minutes. No public comments were submitted. President Bhat congratulated Trustee Kumagai on his primary election results.
4. Resolution 1102-1 Authorizing Remote Teleconference Meetings of the Legislative Bodies of the Alameda County Mosquito Abatement District Pursuant to Brown Act Provisions.
Discussion:
The General Manager explained the Resolution and the updates involved.
Motion: Secretary Roache moved to approve Resolution 1102-1
Second: Trustee Beatty
Vote: motion carries: unanimous.
5. Approval of the minutes of the 1101st meeting held May 11th, 2022.
Motion: Trustee Kumagai moved to approve the minutes
Second: Trustee Jordan

Vote: motion carries: unanimous.

6. Public Hearing on the proposed tax rate.

Discussion:

The General Manager gave a background of the public hearing and noted that he did not receive any public comments and no members of the public were present to give comment.

7. Resolution 1102-2, a resolution ordering the levy of assessments for fiscal year 2022-23 for the Alameda County Mosquito Abatement District Mosquito and Disease Control Assessment.

Discussion:

The General Manager discussed Resolution 1102-2 and fielded the following discussion. Trustee Salzer asked for clarification on language concerning the public hearing announcement (the General Manager clarified) and asked for a confirmation that the assessment amount had not changed since last year (confirmed). Trustee Salzer also asked what the vote on the Resolution signified exactly (to continue the assessment). Trustee Salzer noted her disappointment with the engineering report and asked for guidance on how to vote (President Bhat provided the methods to vote: aye, nay, or abstention).

Motion: Trustee Hentschke moved to approve Resolution 1102-2

Second: Trustee Washburn

Vote: motion carries: 12-1 (Salzer: nay)

8. Closed session to discuss the General Manager's twelve-month evaluation pursuant to Government Code Section 54957.6.

9. Compensation recommendation of General Manager Ryan Clausnitzer based on a recommendation from the Manager Evaluation Committee and according to the employee contract.

Discussion:

The Board returned from closed session. President Bhat gave praise to the General Manager in his management of the district and its national reputation. The Board recommended the following compensation proposal: health insurance reimbursement comparable to staff (from 100/90 to 100/100), and a 5% increase in base salary compensation for each of the next two years and a 4% increase, along with a 1% performance compensation in the third year.

Motion: Trustee Beatty moved to approve the recommendation of a health insurance reimbursement of 100% dependent care at the plan rate used by most employees (currently, Kaiser) and a 5% increase in base salary compensation in July 2022 and July 2023, and a 4% increase in base salary compensation, along with a 1% performance compensation bonus in July of 2024.

Second: Secretary Washburn

Vote: motion carries: unanimous.

10. Report from the National Association of City & County Health Officers: Vector Surveillance and Control at the Local Level: Findings from the 2020 Vector Control Assessment.

Discussion:

The General Manager presented the report from the National Association of City & County Health Officers and fielded the following discussion. Trustee Salzer asked the General Manager his opinion on bringing forth legislation requiring resistance testing for mosquito control districts (the General Manager sympathized with the sentiment and will report back in August more on the regulatory landscape of mosquito control with Regulatory & Public

Affairs Director Erika Castillo). President Bhat suggested that the district has no authority to campaign for additional regulations in other states. Trustee Washburn noted the remarkable contributions from ACMAD's lab including published studies on resistance testing.

11. Financial Reports as of May 31st, 2022.

Discussion:

The General Manager presented the Financial Reports.

12. Presentation of the Monthly Staff Report.

Discussion:

The General Manager gave the Monthly Staff Report.

13. Presentation of the Manager's Report.

Discussion:

The General Manager presented the Manager's Report. The General Manager commended Vector Scientist Dereje Alemayehu for his 23-year anniversary of District service.

14. Board President Bhat asked for reports on conferences and seminars attended by Trustees.

The General Manager announced a joint special district chapter meeting on July 11th in Dublin. President Bhat expressed his interest.

15. Board President Bhat asked for announcements from the Board. None.

16. Board President Bhat asked trustees for items to be added to the agenda for the next Board meeting. The General Manager announced that Laboratory Director, Eric Haas-Stapleton, and Public Outreach Coordinator, Judi Pierce, will present on projects they are working on. Trustee Salzer asked if the graduate student would also present (the project is still underway, but most likely in July or August).

17. The meeting adjourned at 6:37 P.M.

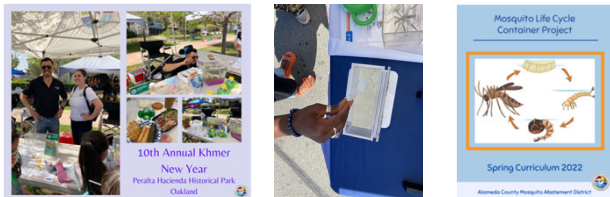
Respectfully submitted,

Approved as written and/or corrected
at the 1103rd meeting of the Board of
Trustees held July 13th, 2022

Subru Bhat, President
BOARD OF TRUSTEES

Cathy Roache, Secretary
BOARD OF TRUSTEES

Education and Outreach Update Summer 2022



Presented by Judith Pierce MPH, Public Outreach Coordinator

Public Outreach: Schools, Events and beyond

Judith's background

- health educator for decades
- former teacher in Oakland
- former Community Health Outreach Worker for Alameda County Public Health (Injury Prevention and Perinatal Health)
- Earned MPH from University of Washington
- Manager of Wellness at Mills College

OUR GOALS FOR 2020-2021

- Obtain Government Finance Officers Association award in financial reporting
- Improve facilities energy efficiency, plumbing fixtures, heating, ventilation, and air conditioning
- Use drone to estimate breeding intensity of mosquitoes larvae in water
- Develop and evaluate color powered New Jersey Light Trap to improve trap safety and efficacy
- Develop and implement models for assessing mosquito resistance to adulticide and larvicide
- Evaluate correlations between larval and adult mosquito abundance data
- Create a Crisis Communications Plan
- Update District Control Program document
- Develop an education program for Alameda County students
- Increase outreach to local school districts to promote education program

ACMAD GOALS: 2021-2023

- ENSURE ACMAD HAS THE TRAINING, EQUIPMENT, PERSONNEL, PARTNERSHIPS, AND FINANCIAL SUPPORT TO LIMIT THE INTRODUCTION OF INVASIVE ARDEID MOSQUITOES
- 2021**
 - Finalize a summary Pest Inspection Plan to maximize inspection efforts
 - Create a Community Emergency Response Team (CERT) for our county offices to respond to larval and larval Ardeid Response Plan
 - Ensure all field staff can accurately identify invasive Ardeid mosquitoes
 - 2022**
 - Provide school age children with mosquito prevention messaging
 - Develop a model for portable Respiration by Water Area Larvicide System mosquito treatment technology
 - 2023**
 - Improve adult mosquito identification processes
 - Develop a larval and pupal stage that discriminates Ardeid species mosquitoes

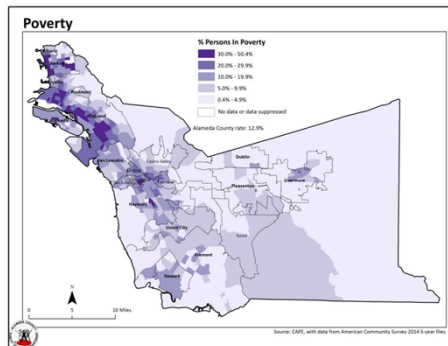
In-class education partners



Limited outreach, allowed to hone messaging



Oakland Garden School



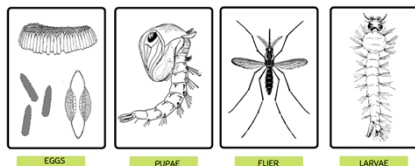
Spring 2022 in limited classrooms- the first!



LIFECYCLE OF A MOSQUITO

- Instructions:**
- Cut around the cards below
 - Paste onto the sheet, in the correct order
 - Label each image
 - Use arrows to show the direction of change

Question: If you want to get rid of mosquitoes, which stage is the easiest to intervene?



Summer 2022: Camp education and public events



ACMAD 2022 Outreach Events and Presentations



Questions? Comments?



Thank you for your time!

Judith Pierce, MPH



Will AI brick the entomologist?

.....or change their roles substantially



Eric Haas-Stapleton, PhD



Pranathi Vemuri

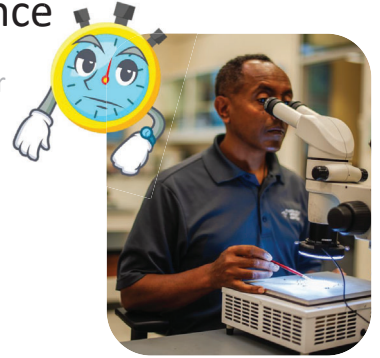
Lucy Li, PhD

Mark Zhang

ACMAD Regular Board Meeting
July 13, 2022

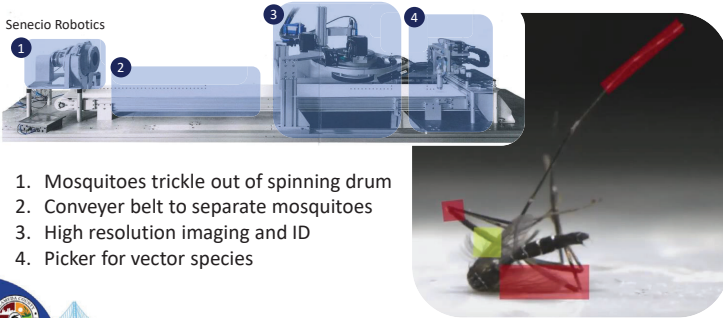
Artificial Intelligence

- AI is capacity of computer to mimic cognitive functions
- Machine learning is an application of AI
- ¿ Speed mosquito ID ?



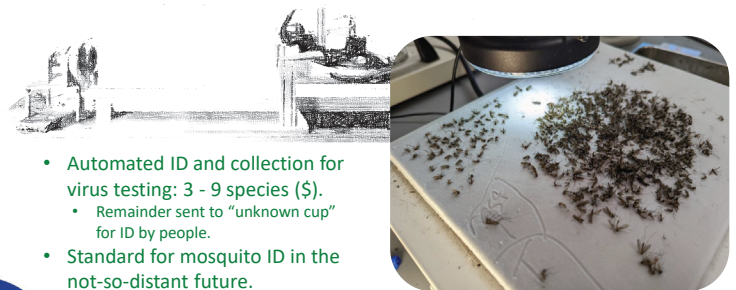
AI-enabled product on market

Senecio Robotics



1. Mosquitoes trickle out of spinning drum
2. Conveyor belt to separate mosquitoes
3. High resolution imaging and ID
4. Picker for vector species

AI-enabled product on market



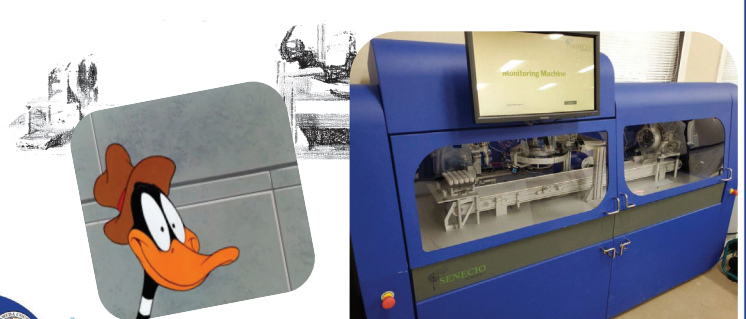
- Automated ID and collection for virus testing: 3 - 9 species (\$).
 - Remainder sent to "unknown cup" for ID by people.
- Standard for mosquito ID in the not-so-distant future.

AI-enabled product on market



- Manually load trap contents into spinning drum.
- 1000's of images for new species.
- Large footprint.
- Time savings unknown.

AI-enabled product on market



Installed at Sacramento-Yolo MVCD

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

Filter Criteria includes: Report order is by Date.

| Check # | Date | Payee | Amount |
|---|-------------|--|-------------------|
| 3167 | 6/14/22 | Alameda County Mosquito Abatement Dist (Payroll) | 153,576.16 |
| 3168 | 6/14/22 | Airgas | 1,003.84 |
| 3169 | 6/14/22 | Alco Sheet Metal and Heating, Inc. | 225.00 |
| 3170 | 6/14/22 | Alemayehu, Dereje | 101.80 |
| 3171 | 6/14/22 | All Bay Electric | 2,200.00 |
| 3172 | 6/14/22 | AMCA | 3,176.23 |
| 3173 | 6/14/22 | AT&T | 69.97 |
| 3174 | 6/14/22 | BARTKIEWICZ, KRONICK & SHANAHAN | 1,120.00 |
| 3175 | 6/14/22 | Beck's Shoes | 190.00 |
| 3176 | 6/14/22 | Cintas | 1,001.37 |
| 3177 | 6/14/22 | Coverall North America, Inc. | 495.00 |
| 3178 | 6/14/22 | Delta Dental | 4,679.81 |
| 3179 | 6/14/22 | Dublin GMC | 31,249.97 |
| 3180 | 6/14/22 | Grainger | 85.41 |
| 3181 | 6/14/22 | Hayward Water System | 625.83 |
| 3182 | 6/14/22 | Hentschke, Eric Armin | 100.00 |
| 3183 | 6/14/22 | Industrial Park Landscape Maintenance | 243.00 |
| 3184 | 6/14/22 | Leading Edge Associate, Inc. | 6,500.00 |
| 3185 | 6/14/22 | Life Technologies Corporation | 107.39 |
| 3186 | 6/14/22 | Long, Rick | 40.88 |
| 3187 | 6/14/22 | Visalia Times Delta | 2,499.99 |
| 3188 | 6/14/22 | NBC Supply Corp | 438.57 |
| 3189 | 6/14/22 | NRAAA Janitorial Services | 675.00 |
| 3190 | 6/14/22 | PFM Asset Management LLC | 1,743.54 |
| 3191 | 6/14/22 | PG&E | 194.51 |
| 3192 | 6/14/22 | Schaeffer MFG.Co. | 222.49 |
| 3193 | 6/14/22 | U.S Bank Corporate Payment System | 11,005.03 |
| 3194 | 6/14/22 | Voya Institutional Trust Company | 179.93 |
| 3195 | 6/14/22 | Waste Management of Alameda County | 297.04 |
| 3196 | 6/14/22 | Young, George | 100.00 |
| ACH | 6/14/22 | Aguilar, Victor | 100.00 |
| ACH | 6/14/22 | Beatty, Robert .P | 100.00 |
| ACH | 6/14/22 | Bhat, Subrahmanya Y | 100.00 |
| ACH | 6/14/22 | CalPERS Retirement | 15,390.33 |
| ACH | 6/14/22 | CalPERS 457 | 2,980.17 |
| ACH | 6/14/22 | Cox, Steven | 100.00 |
| ACH | 6/14/22 | Jordan, Preston | 100.00 |
| ACH | 6/14/22 | Kumagai, Shawn | 100.00 |
| ACH | 6/14/22 | Marquez, Elisa | 100.00 |
| ACH | 6/14/22 | Roache, Cathy J Pinkerton. | 100.00 |
| ACH | 6/14/22 | Salzer, Hope | 100.00 |
| ACH | 6/14/22 | Washburn, Jan | 100.00 |
| ACH | 6/14/22 | Welch, Courtney | 100.00 |
| Total Expenditures - June 15, 2022 | | | 243,618.26 |

Alameda County Mosquito Abatement Dist.
Check Register
For the Period From Jun 16, 2022 to Jun 30, 2022

Filter Criteria includes: Report order is by Date.

| Check # | Date | Payee | Amount |
|---|-------------|--|-------------------|
| 3197 | 6/28/22 | Adapco | 25,412.70 |
| 3198 | 6/28/22 | Airgas | 1,223.50 |
| 3199 | 6/28/22 | Bay Alarm | 4,401.71 |
| 3200 | 6/28/22 | Bay Central Printing | 637.92 |
| 3201 | 6/28/22 | Beck's Shoes | 364.61 |
| 3202 | 6/28/22 | CCCMA Occupational Clinic | 250.00 |
| 3203 | 6/28/22 | Cintas | 231.88 |
| 3204 | 6/28/22 | Clausnitzer, Ryan | 573.30 |
| 3205 | 6/28/22 | Leading Edge Associate, Inc. | 21,300.00 |
| 3206 | 6/28/22 | Lemonlight Media, Inc. | 6,300.00 |
| 3207 | 6/28/22 | LifeSaver CPR | 900.00 |
| 3208 | 6/28/22 | Lowe, Carol | 40.88 |
| 3209 | 6/28/22 | NBC Supply Corp | 797.40 |
| 3210 | 6/28/22 | PG&E | 48.46 |
| 3211 | 6/28/22 | Pitney Bowes | 95.69 |
| 3212 | 6/28/22 | Regional Government | 168.48 |
| 3213 | 6/28/22 | Techniclean | 122.82 |
| 3214 | 6/28/22 | The Hartford | 107.19 |
| 3215 | 6/28/22 | VCJPA | 245.16 |
| 3216 | 6/28/22 | Verizon | 515.20 |
| 3217 | 6/28/22 | Veseris | 15,777.06 |
| 3218 | 6/28/22 | Voya Institutional Trust Company | 179.93 |
| 3219 | 6/28/22 | VSP | 693.24 |
| 3220 | 6/28/22 | WEX Bank | 6,720.21 |
| ACH | 6/28/22 | Alameda County Mosquito Abatement Dist (Payroll) | 87,891.19 |
| ACH | 6/28/22 | CalPERS Retirement | 15,366.40 |
| ACH | 6/28/22 | CalPERS 457 | 2,979.37 |
| Total Expenditures - June 30, 2022 | | | 193,344.30 |

Alameda County Mosquito Abatement District
Income Statement
June 30, 2022. (12 of 12 mth, 100%)

| REVENUES | Actual 2019/20 | Actual 2020/21 | Current Month | Year to Date 2021/22 | Budget 2021/22 | Actual vs Budget |
|----------------------|-----------------|-----------------|---------------|-------------------------|-----------------|---------------------|
| Total Revenue | \$ 4,986,220.87 | \$ 5,150,753.15 | \$ 8,335.03 | \$ 5,387,940.16 | \$ 4,765,864.00 | 113% |

| EXPENDITURES | Actual 2019/20 | Actual 2020/21 ¹ | Current Month ² | Year to Date 2021/22 | Budget 2021/22 | Actual vs Budget |
|---|------------------------|-----------------------------|----------------------------|-------------------------|--------------------|---------------------|
| Salaries | \$ 1,970,928.74 | \$ 2,029,103.97 | \$ 187,555.07 | \$ 2,129,077.24 | \$2,236,282 | 95% |
| CalPERS Retirement | \$ 378,832.61 | \$ 423,110.21 | \$ 18,008.89 | \$ 471,085.19 | \$473,950 | 99% |
| Medicare & Social Security | \$ 29,651.04 | \$ 27,866.82 | \$ 2,979.52 | \$ 30,025.60 | \$33,062 | 91% |
| Fringe Benefits | \$ 465,466.14 | \$ 502,898.39 | \$ 5,480.24 | \$ 484,487.10 | \$579,596 | 84% |
| Total Salaries, Retirement, & Benefits | \$ 2,844,878.53 | \$ 2,982,979.39 | \$214,024 | \$3,114,675 | \$3,322,890 | 94% |
| Clothing and personal supplies (purchased) | \$ 6,213.94 | \$ 4,859.20 | \$ 1,069.40 | \$ 6,319.07 | \$10,000 | 63% |
| Laundry service and supplies (rented) | \$ 10,648.44 | \$ 9,124.98 | \$ 1,233.25 | \$ 9,953.02 | \$15,000 | 66% |
| Utilities | \$ 25,962.21 | \$ 15,421.56 | \$ 1,165.84 | \$ 17,767.47 | \$17,000 | 105% |
| Communications-IT | \$ 80,735.47 | \$ 71,771.02 | \$ 10,003.05 | \$ 66,882.41 | \$112,400 | 60% |
| Maintenance: structures & improvements | \$ 16,678.86 | \$ 20,261.51 | \$ 3,385.07 | \$ 25,410.86 | \$35,000 | 73% |
| Maintenance of equipment | \$ 20,599.88 | \$ 22,290.34 | \$ 736.65 | \$ 23,351.76 | \$35,000 | 67% |
| Transportation, travel, training, & board | \$ 95,813.55 | \$ 74,653.03 | \$ 10,218.81 | \$ 118,923.97 | \$127,630 | 93% |
| Professional services | \$ 111,224.89 | \$ 91,622.03 | \$ 3,282.02 | \$ 92,363.85 | \$203,450 | 45% |
| Memberships, dues, & subscriptions | \$ 26,316.50 | \$ 22,906.45 | \$ 3,176.23 | \$ 25,078.23 | \$24,000 | 104% |
| Insurance - (VCJPA, UAS) | \$ 134,833.60 | \$ 141,650.37 | \$ 245.16 | \$ 160,932.64 | \$150,611 | 107% |
| Community education | \$ 23,283.51 | \$ 26,317.23 | \$ 8,846.92 | \$ 21,744.30 | \$39,500 | 55% |
| Operations | \$ 179,304.00 | \$ 223,362.22 | \$ 64,795.24 | \$ 182,404.83 | \$239,000 | 76% |
| Household expenses | \$ 14,817.21 | \$ 15,882.05 | \$ 5,104.94 | \$ 25,346.07 | \$17,350 | 146% |
| Office expenses | \$ 13,760.57 | \$ 9,747.67 | \$ 2,104.55 | \$ 6,895.79 | \$12,000 | 57% |
| Laboratory supplies | \$ 100,794.23 | \$ 64,135.55 | \$ 6,137.61 | \$ 73,910.93 | \$144,000 | 51% |
| Small tools and instruments | \$ 2,055.54 | \$ 2,189.34 | \$ 65.91 | \$ 1,628.49 | \$3,000 | 54% |
| Total Staff Budget | \$ 863,042.40 | \$ 816,194.55 | \$ 121,570.65 | \$ 858,913.69 | \$1,184,941 | 72% |
| Total Operating Expenditures | \$ 3,707,920.93 | \$ 3,799,173.94 | \$ 335,594.37 | \$ 3,973,588.82 | \$4,507,831 | 88% |

1 - As of June 30, 2021.

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
June 30, 2022. (12 of 12 mth, 100%)**

| Account # | Investment Accounts | Beginning Balance | Deposits | Withdrawals | Earnings ¹ | Ending Balance |
|--------------|--|-------------------------|------------------------|-----------------------|------------------------|-------------------------|
| 1004 | LAIF ² | \$ 3,321,678.92 | \$ 1,665,000.00 | \$ - | \$ - | \$ 4,986,678.92 |
| 1005 | OPEB Fund | \$ 4,725,263.09 | \$ - | \$ - | \$ (245,308.27) | \$ 4,479,954.82 |
| 1006 | VCJPA Member Contingency ³ | \$ 356,439.00 | \$ - | \$ - | \$ - | \$ 356,439.00 |
| 1008 | CAMP: Repair and Replace | \$ 1,357,529.20 | \$ - | \$ (31,249.97) | \$ 1,269.89 | \$ 1,327,549.12 |
| 1009 | CAMP: Public Health Emergency | \$ 527,099.18 | \$ - | \$ - | \$ 493.56 | \$ 527,592.74 |
| 1010 | CAMP: Operating Reserve | \$ 1,947,576.17 | \$ - | \$ - | \$ 1,823.64 | \$ 1,949,399.81 |
| 1011 | CAMP: Capital Reserve Fund | \$ 30,047.26 | \$ - | \$ - | \$ 28.14 | \$ 30,075.40 |
| 1012 | PARS: Pension Stabilization ⁴ | \$ 1,689,933.80 | \$ - | \$ - | \$ 4,382.23 | \$ 1,694,316.03 |
| Total | | \$ 13,955,566.62 | \$ 1,665,000.00 | \$ (31,249.97) | \$ (237,310.81) | \$ 15,352,005.84 |

| Account # | Cash Accounts | Beginning Balance | Withdrawals | Activity | Ending Balance |
|--------------|---------------------------------------|------------------------|--------------------------|--------------------|----------------------|
| 1001 | Bank of America (Payroll Account) * | \$ 5,803.13 | - | - | \$ 159,825.95 |
| 1002 | Bank of The West (Transfer Account) * | \$ 492,585.97 | - | - | \$ 435,957.52 |
| 1003 | County Account ² | \$ 2,441,544.02 | \$ (2,071,326.17) | \$ 7,811.30 | \$ 378,029.15 |
| 1013 | Petty Cash | \$ 401.13 | \$ - | \$ (13.97) | \$ 387.16 |
| Total | | \$ 2,940,334.25 | \$ (2,071,326.17) | \$ 7,797.33 | \$ 974,199.78 |

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

2 - \$2,071,326.17 transferred from County Fund to Bank of the West. \$1,665,000.00 transferred from Bank of the West to LAIF.

3 - VCJPA Member Contingency balance is as of March 31, 2022.

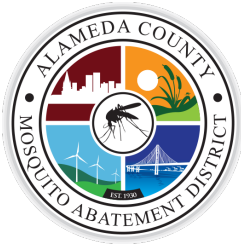
4 - PARS - Pension Stabilization balance is as of May 31, 2022.

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

Alameda County Mosquito Abatement
Balance Sheet Comparison
June

ASSETS

| | 6/30/2022 | 6/30/2021 | 6/30/2020 |
|--|-------------------------|-------------------------|-------------------------|
| Current Assets | | | |
| Bank of America payroll | \$ 157,965.11 | \$ 103,223.95 | \$ 106,914.43 |
| Bank of the West | 448,182.58 | 330,296.82 | 301,318.89 |
| County | 378,029.15 | 374,744.30 | 349,672.59 |
| Cash with LAIF | 4,986,678.92 | 4,128,033.93 | 2,765,188.85 |
| VCJPA- Member Contingency | 356,439.00 | 373,610.00 | 374,772.00 |
| CAMP - Repair and Replace | 1,327,549.12 | 1,040,985.20 | 976,511.62 |
| CAMP - Public Health Emergency | 527,592.74 | 526,220.70 | 525,408.23 |
| CAMP - Operating Reserve | 1,949,399.81 | 1,944,330.24 | 1,941,328.27 |
| CAMP - Capital Reserve Fund | 30,075.40 | 19,992.53 | 128,402.05 |
| PARS | 1,694,316.03 | 1,849,337.44 | 1,631,978.20 |
| Accounts Receivable | - | 8,546.00 | - |
| Petty cash | 387.16 | 388.18 | 499.69 |
| | <hr/> | <hr/> | <hr/> |
| Total Current Assets | 11,856,615.02 | 10,699,709.29 | 9,101,994.82 |
| Property and Equipment | | | |
| Acc Dep - equipment | (1,479,068.00) | (1,479,068.00) | (1,479,068.00) |
| Acc Dep - stru & improv | (2,485,267.00) | (2,485,267.00) | (2,485,267.00) |
| Equipment | 1,783,108.97 | 1,751,859.00 | 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 |
| | <hr/> | <hr/> | <hr/> |
| Total Property and Equipment | 2,679,909.67 | 2,648,659.70 | 2,609,548.00 |
| Other Assets | | | |
| Net OPEB Asset | 2,522,763.00 | 2,522,763.00 | 1,823,556.00 |
| | <hr/> | <hr/> | <hr/> |
| Total Other Assets | 2,522,763.00 | 2,522,763.00 | 1,823,556.00 |
| | <hr/> | <hr/> | <hr/> |
| Total Assets | \$ 17,059,287.69 | \$ 15,871,131.99 | \$ 13,535,098.82 |
| <hr/> | | | |
| LIABILITIES AND CAPITAL | | | |
| Current Liabilities | | | |
| Accounts payable | \$ 104,526.08 | \$ 186,764.89 | \$ 155,576.76 |
| 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 | 289,664.00 | 289,664.00 | 289,664.00 |
| Defer outflow pen cont GASB 68 | (1,056,534.00) | (1,056,534.00) | (1,056,534.00) |
| Net pension liability GASB 68 | 3,277,554.00 | 3,277,554.00 | 3,277,554.00 |
| | <hr/> | <hr/> | <hr/> |
| Total Current Liabilities | \$ 4,078,133.97 | \$ 4,160,372.78 | \$ 3,798,337.02 |
| | <hr/> | <hr/> | <hr/> |
| Total Liabilities | 4,078,133.97 | 4,160,372.78 | 3,798,337.02 |
| Capital | | | |
| Designated fund balances | 4,816,355.25 | 4,816,355.25 | 4,440,610.19 |
| Investment in general fixed as | 6,894,403.96 | 5,296,151.61 | 4,637,374.11 |
| Net Income | 1,270,394.51 | 1,598,252.35 | 658,777.50 |
| | <hr/> | <hr/> | <hr/> |
| Total Capital | 12,981,153.72 | 11,710,759.21 | 9,736,761.80 |
| | <hr/> | <hr/> | <hr/> |
| Total Liabilities & Capital | \$ 17,059,287.69 | \$ 15,871,131.99 | \$ 13,535,098.82 |



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MONTHLY STAFF REPORT –1103

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A. OPERATIONS REPORT

In June, operations staff continued to focus on our district's three main potential West Nile virus (WNV) vectoring mosquitoes: *Culex pipiens*, *Culex tarsalis*, and *Culex erythrothorax*. Over 4,000 treatments were conducted in June, most of those treatments are for those three species. Operations added our second seasonal employee in June and both seasonal employees spend much of their time on catch basin treatments. Many catch basins throughout Alameda County hold water throughout summer and well into fall even in drought years. Often heavily laden with leaves and other organic matter, these basins provide an ideal habitat for *Cx. pipiens*. This species will often enter homes and residences and seek bloodmeals from the inhabitants during the night. Well over 11,000 catch basins have been treated to date this season. Treatments for *Cx. tarsalis* were conducted in freshwater marshes, concrete lined canals, creeks, and unmaintained swimming pools. As for *Cx. erythrothorax*, this species is almost exclusively associated with freshwater marshes that have tule and/or bullrush growing in and along their margins. Treatments for this species were conducted by hand, backpack blower, Argo, and two treatments were conducted with ACMAD operation's UAS (drone).

All three *Cx. spp.* will readily feed on both avian and mammalian blood. This is a significant ecological trait that makes them important in potential WNV transmission. To date, no WNV positive birds or adult mosquitoes have been detected by the ACMAD lab in our county, however, WNV positive mosquitoes were collected in our neighbor to the south, Santa Clara County, in late June. Operations staff will continue to focus extensively on larval inspections and treatments of the *Cx. spp.* in the months to come to lessen the number of adult mosquitoes entering the environment.

Another significant high tide event in June triggered the hatching of *Aedes dorsalis* eggs in several tidal salt-marsh habitats. Operations staff conducted numerous treatments to prevent the emergence of adults of this aggressive day-biting mosquito. These treatments of over 200 acres were conducted both by hand and by utilizing the ACMAD A-1 Super Duty mist blower. Post-treatment inspections, lab adult trapping data, and service request data all indicated that these treatments were effective. High tides will continue to be closely monitored for this species until at least October.

Service requests received from the public were the lowest for June in the last decade. Of the eighty-nine requests received, fifty were requests for mosquito fish for ornamental ponds, unmaintained swimming pools, and animal watering troughs. Fish placed in these types of sources are an effective long-term biological control method for larval mosquitoes. This is our preferred method for unmaintained swimming pools that will not be repaired in the near future. Unmaintained swimming pools can produce tens of thousands of mosquitoes in any given season if left untreated. Mosquito fish can consistently control larvae in this type of environment for many years. These pools are often a source for *Cx. tarsalis* and all our other treatment options have a limit of three months or less. An update on ACMAD's 2022 unmaintained swimming pool aerial survey program will be presented in an upcoming board report.

Field Operations Supervisor
Joseph Huston

Service Requests (June)

June SR Count

89

June 10 Year Min Count

89

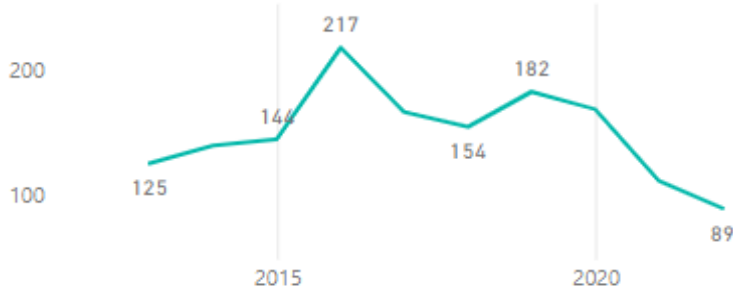
June 10 Year Max Count

217

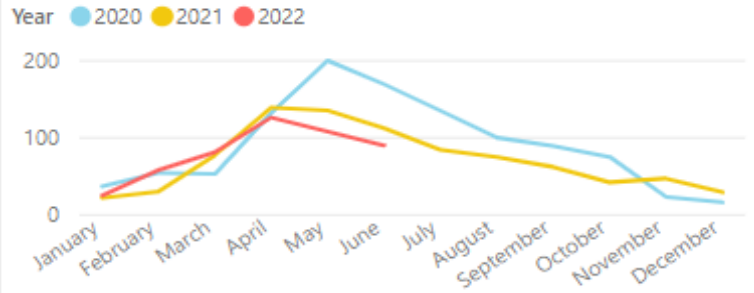
June 10 Year Average

149.50

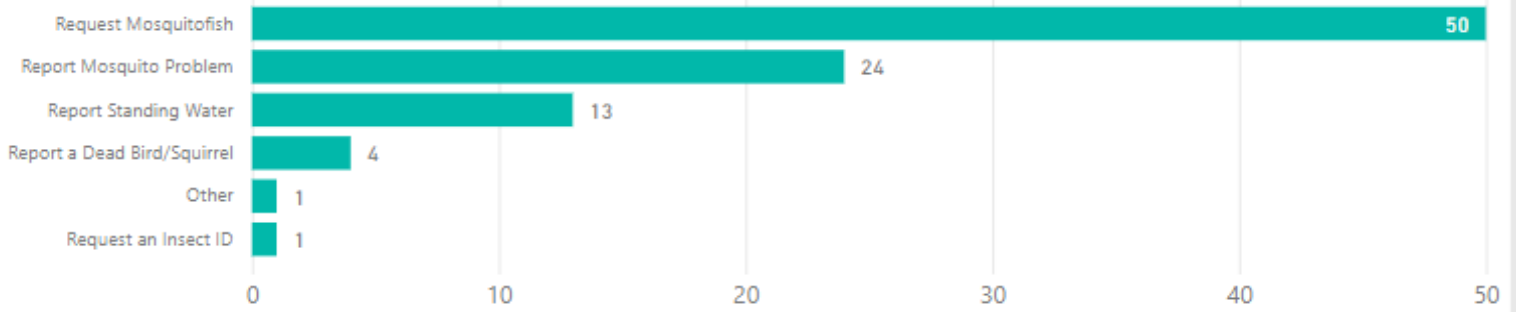
June SR's by Year - 10 Year History



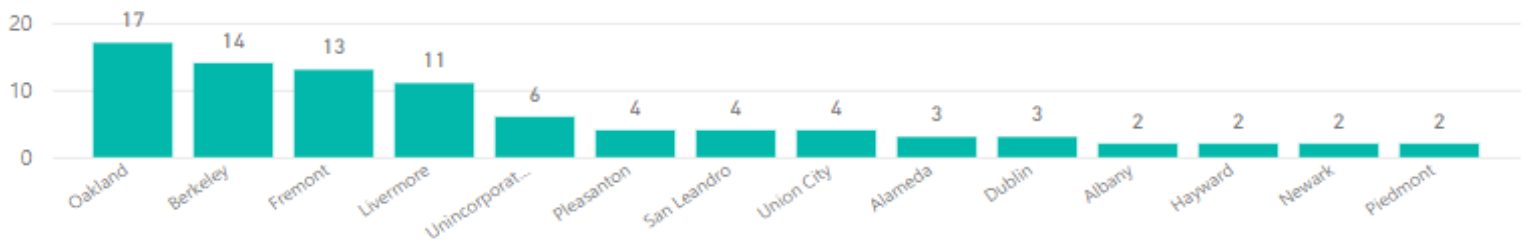
Year Over Year Comparison



June Count by SR Type

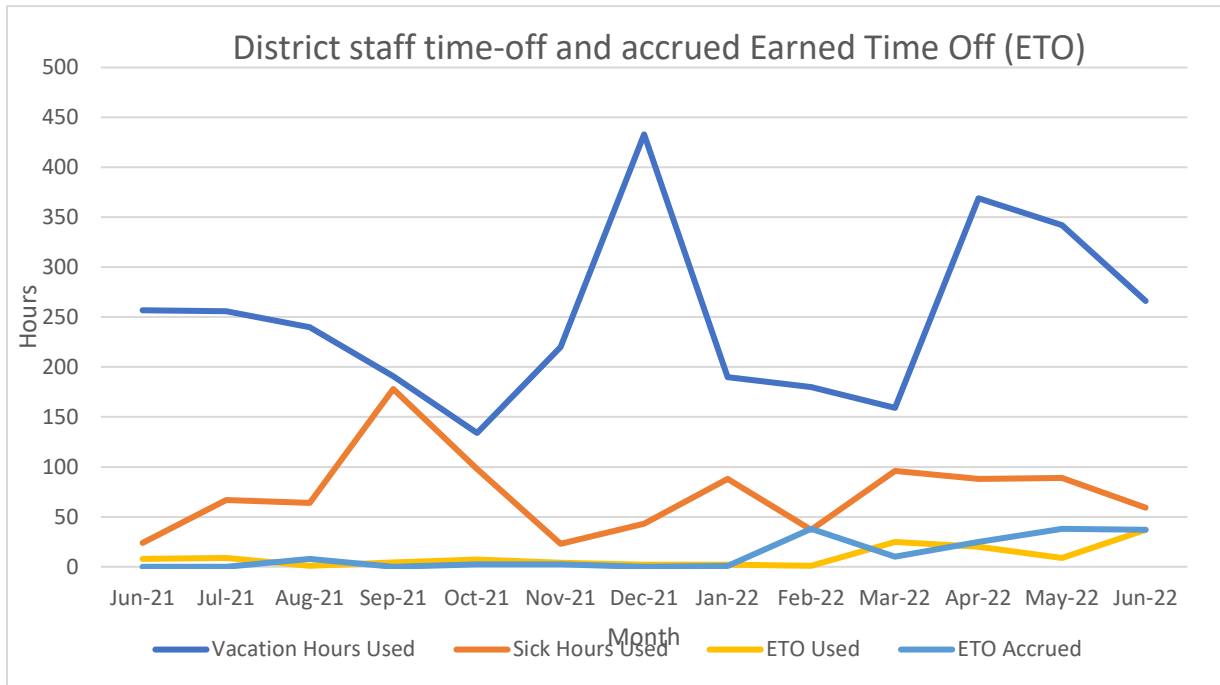


June SR's by City



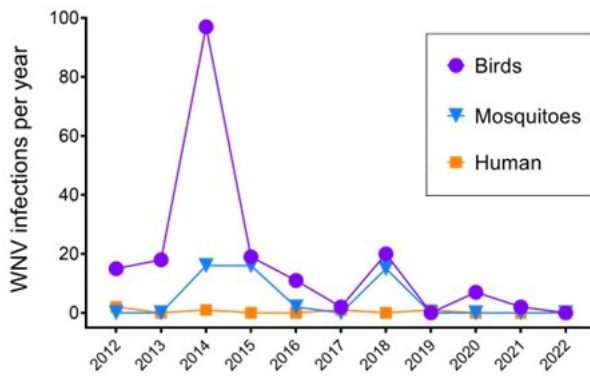
Report by Robert Ferdan, IT Director

Activity Report

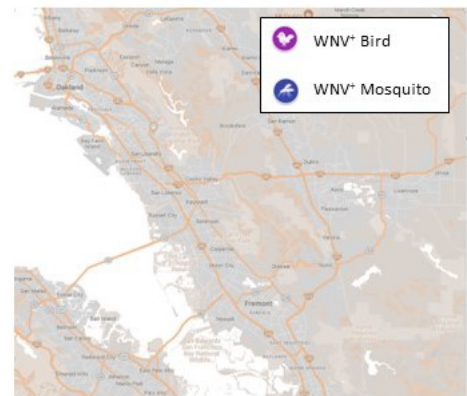


WNV Activity

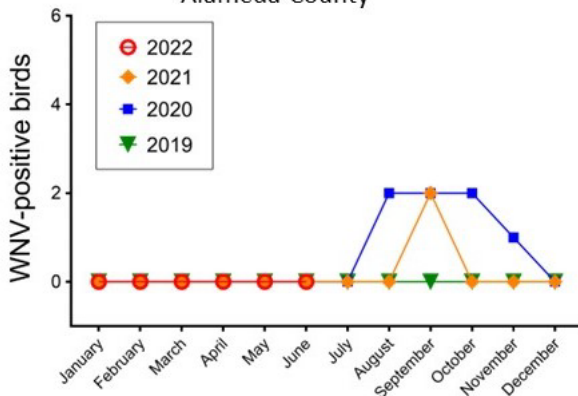
WNV infections detected in Alameda County 2012 – 2022



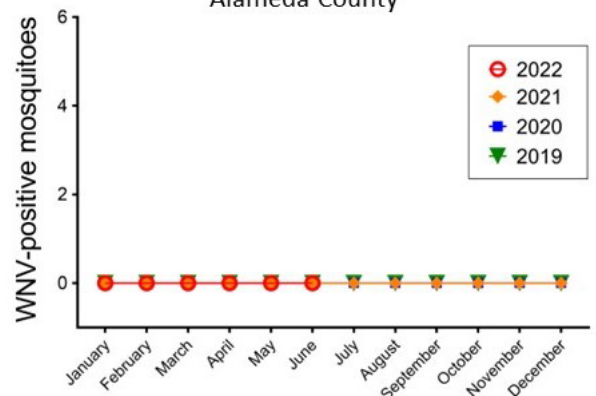
Locations of WNV-infected mosquitoes and birds in Alameda County during 2022



WNV-infected birds collected in Alameda County



WNV-infected mosquitoes collected in Alameda County



B. LAB

Summary

- *Arboviruses*. West Nile virus (WNV) was not detected in birds during June 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 632 CO₂-baited encephalitis virus survey (EVS) traps were placed during June, catching 9,280 adult female mosquitoes (14.7 mosquitoes per trap night). Three New Jersey Light Traps (NJLT) captured 161 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.
- A manuscript that describes the use of our A1 Mister for controlling salt marsh mosquitoes was accepted in the peer-reviewed open-access journal, Journal of the American Mosquito Control Association (title: Mr. Mister: Rockin' the Aedes of the San Francisco Bay Salt Marshes). Of note, our Mechanical Specialist (Mark Wieland) is the first author with Joseph Huston (Operations Supervisor) and Ryan Clausnitzer (General Manager) as co-authors (Figure 1).

Arbovirus Monitoring

- WNV was not detected in birds or mosquitoes during June. WNV was last detected in birds collected in Alameda County during September 2021 (WNV Activity figure, above).
- This month, 86 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).
- Enhanced mosquito trapping in response to the WNV-positive mosquitoes that were detected at the northern boarder of Santa Clara County (which abuts our southern boarder), collected mosquitoes that had the potential to transmit WNV. However, our quantitative RT-PCR tests of those mosquitoes showed none were infected with WNV, WEEV or SLEV.

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).
- 632 CO₂-baited EVS traps were placed during June. A total of 9,280 adult female mosquitoes were collected, which was 19 % more than the prior month (Figure 2). However, increased trapping efforts during June in regions with low mosquito abundance resulted in 5% fewer mosquitoes per trap relative to the prior month (14.7 and 15.5 mosquitoes per trap night, respectively). Adult mosquito abundance during 2022 was higher than prior years (Figure 2), predominantly due higher quantities *Cx. tarsalis* (Figure 3) and *Aedes vexans* (Figure 4). *Culex erythrothorax* abundance was lower this month relative to the same period of prior years (Figure 3), likely due to the intensified control efforts using the treatment drone. Similarly, the abundance of *Aedes dorsalis* was low (Figure 3, 4, 5A), likely also the result of enhanced control efforts using the A1 Mister. *Aedes washinoi* abundance was very low during June (N = 85), and historical data suggest that few of this species will be detected for the remainder of the year (Figure 3). The abundance of *Culex pipiens* may be increasing (Figure 3), but the addition of a second seasonal staff in Operations may limit the reproduction of that species.
- The three WNV vector species were most abundant in the western bayside region of the county, with *Culiseta incidens* becoming more dominant at inland trap sites that are often associated with riparian corridors (Figure 5A). Mosquito abundance in the northern part of the county (Figure 5B) was markedly lower than what was observed in the southern bayside region where *Cx. tarsalis* and *Cx. erythrothorax* were more common (Figure 5C). The eastern region of the county had relatively low mosquito abundance, but the diversity of species that were detected was high (Figure 5D). Del Valle Regional Park (south of Livermore) had high mosquito abundance and diversity (Figure 5A), likely due to the convergence of multiple habitat types and high daytime temperatures.
- Forty-six of the EVS traps did not collect any mosquitoes (Figure 5A, upper right insert). The three NJ Light Trap sites captured a total of 161 adult female mosquitoes during the month (Figure 6).

LAB FIGURES

Journal of the American Mosquito Control Association, 38(3):000–000, 2022
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OPERATIONAL NOTE

MR. MISTER: ROCKIN' THE *Aedes* OF THE SAN FRANCISCO BAY SALT MARSHES

MARK WIELAND, JOSEPH HUSTON, RYAN CLAUSNITZER AND ERIC J. HAAS-STAPLETON¹

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

ABSTRACT. Mist sprayers (MS) are being rapidly adopted nationwide for applying larvicides to control peridomestic *Aedes aegypti*. Because MS can loft large quantities of larvicide over relatively long distances, we examined its efficacy in a tidal marsh habitat for controlling *Ae. dorsalis*. Liquid Vectobac 12AS larvicide, containing *Bacillus thuringiensis israelensis*, was applied at 1.16 liter/ha using a MS. Cards that change color when exposed to liquid were placed perpendicular to the path of the MS showed that the larvicide mist traveled up to 60 m from the MS and did not extend to 90 m. Use of the MS enabled a 4-fold increase in total hectares treated during 2020–21 relative to the prior 2 years without an increase in staff time. Notably, there was 83% reduction in the quantity of *Ae. dorsalis* larvae at 5 days posttreatment. Similarly, there was 63% reduction in adult female *Ae. dorsalis* that were collected in encephalitis virus surveillance traps from nearby communities relative to the prior 2 years. There were 2.3-fold fewer requests for service to address a mosquito problem from residents of cities that abut the tidal marshes, suggesting the applications had a positive impact on these communities. The MS offer an attractive alternative to hand treatments in tidal marshes where the use of unmanned aircraft or all-terrain vehicles is prohibited by national wildlife refuge managers.

Figure 1. Title page and abstract of proofs for manuscript that was recently accepted in the *Journal of the American Mosquito Control Association*

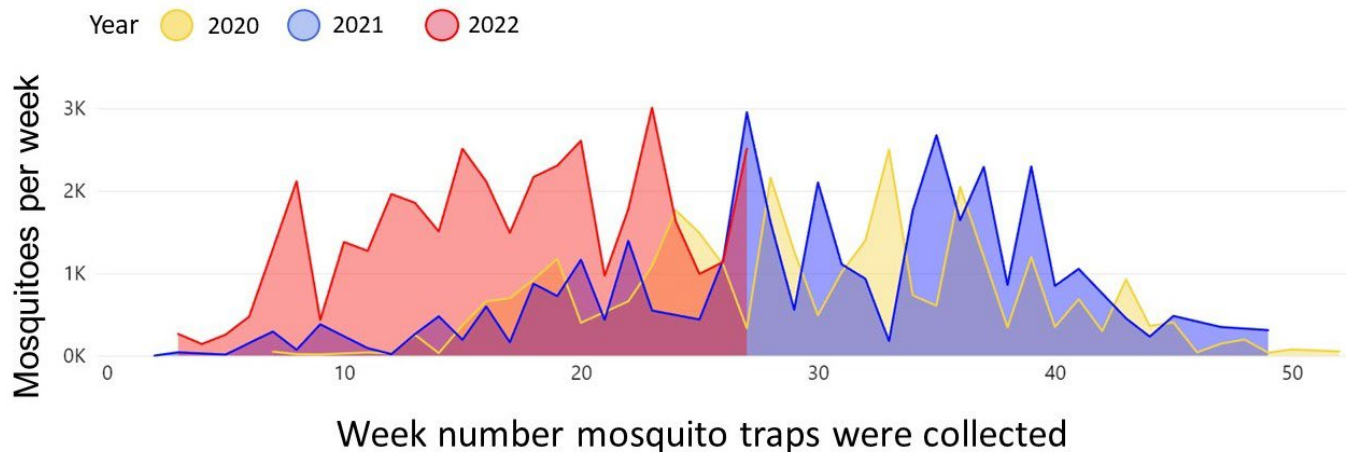


Figure 2. Mosquitoes captured in EVS CO₂ traps from 2020 – 2022. A total of 9,280 adult female mosquitoes were captured in EVS CO₂ traps during June of 2022 and identified to species. Week 24 was excluded from the graph because the high anomalous abundance during 2021 skewed the y-axis.

Year ● 2020 ● 2021 ● 2022

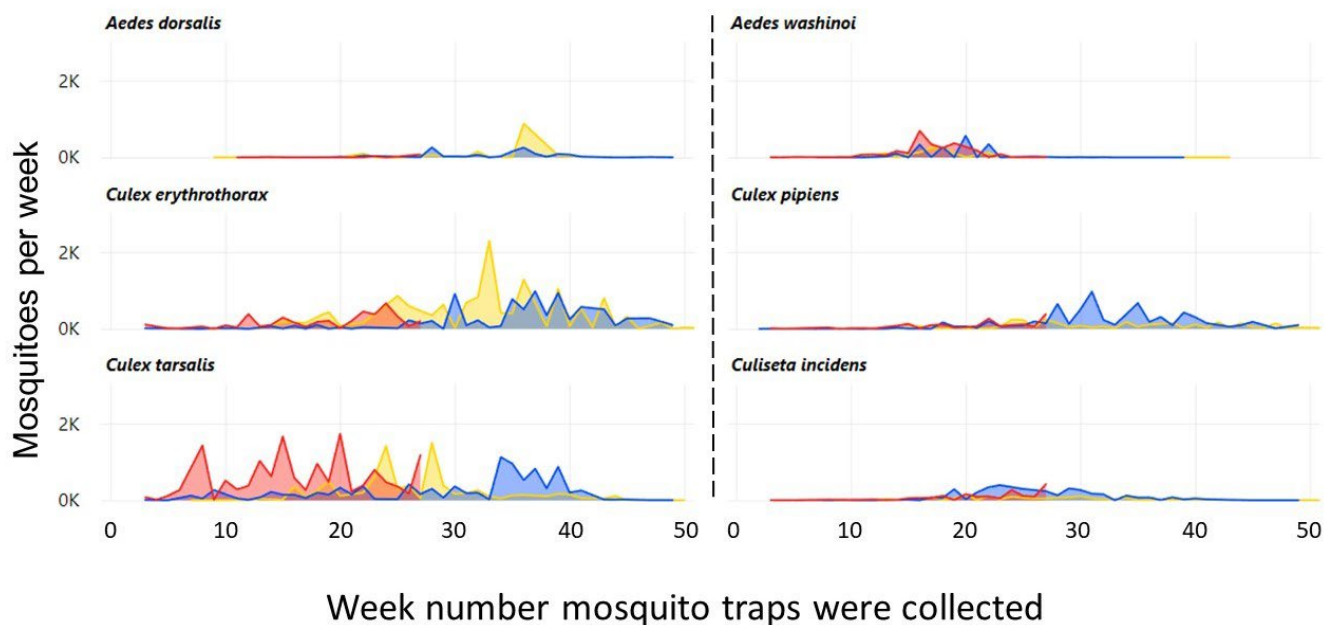


Figure 3. Weekly abundance of important mosquito species during 2020, 2021 and 2022.

June 2022 – EVS CO₂ Trap

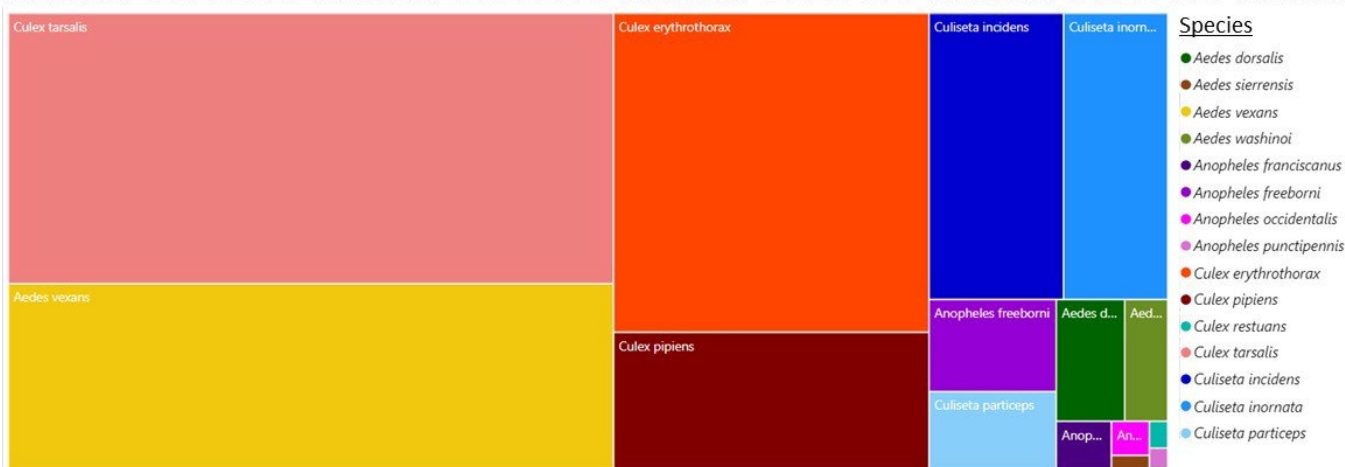
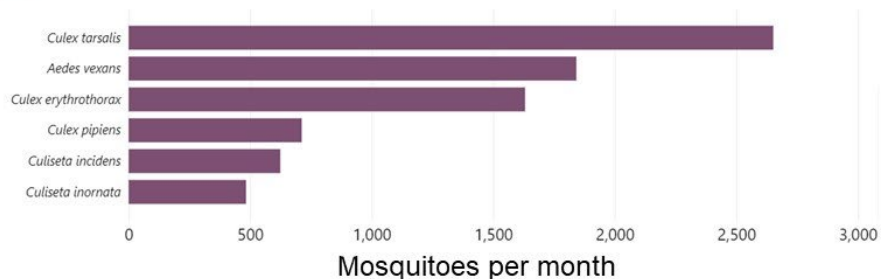
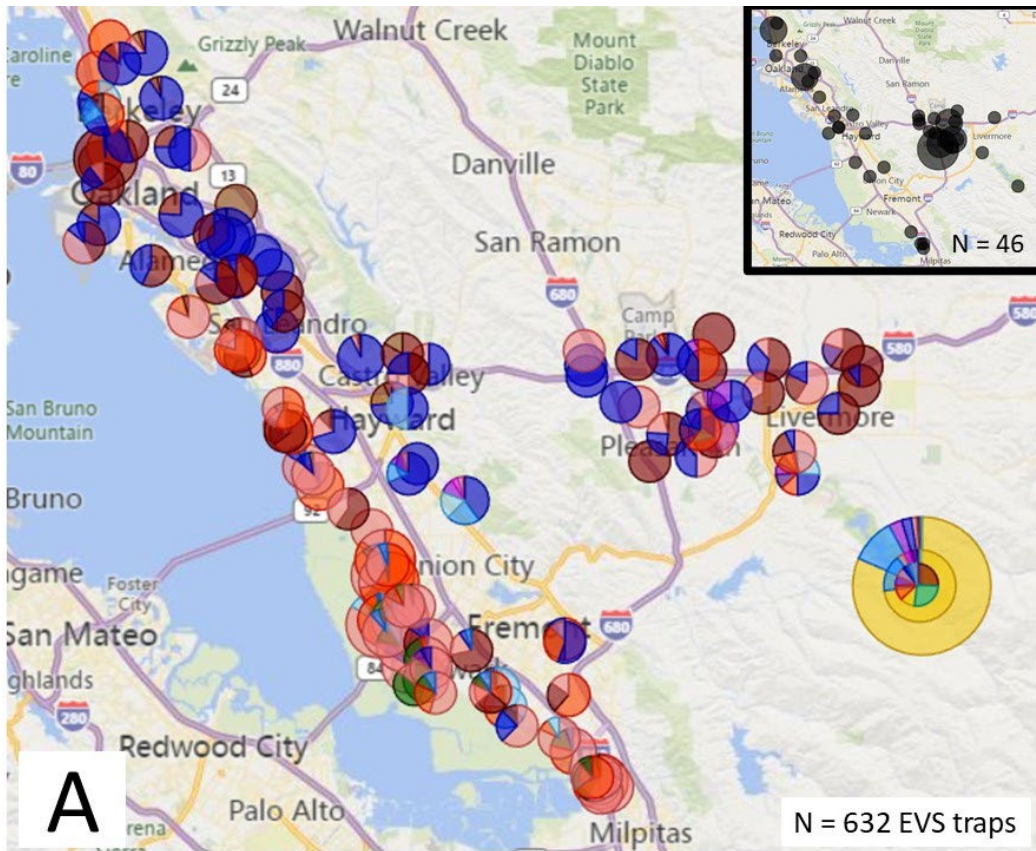


Figure 4. The most abundant species of mosquito captured using EVS CO₂ traps. Larger squares and rectangles indicate higher abundance of that species.



Species

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

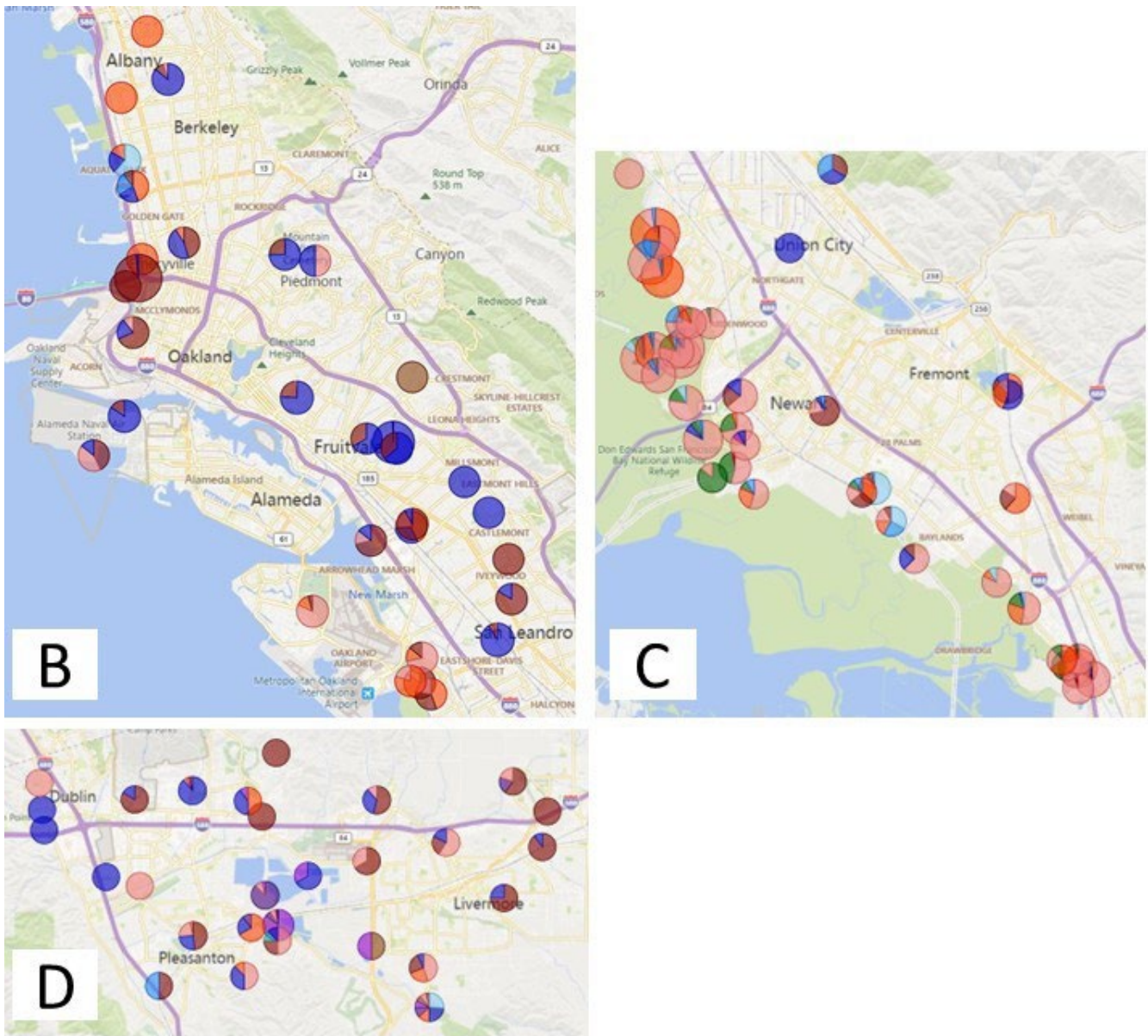


Figure 5. Mosquito abundance by trap site evaluated using EVS CO₂ traps. Pie charts over trap sites indicate the distribution of mosquito species collected at the trap site. The size of each pie chart indicates the relative number of mosquitoes at each site during May of 2022. (A) Alameda County (the 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.

June 2022 – NJ Light Trap

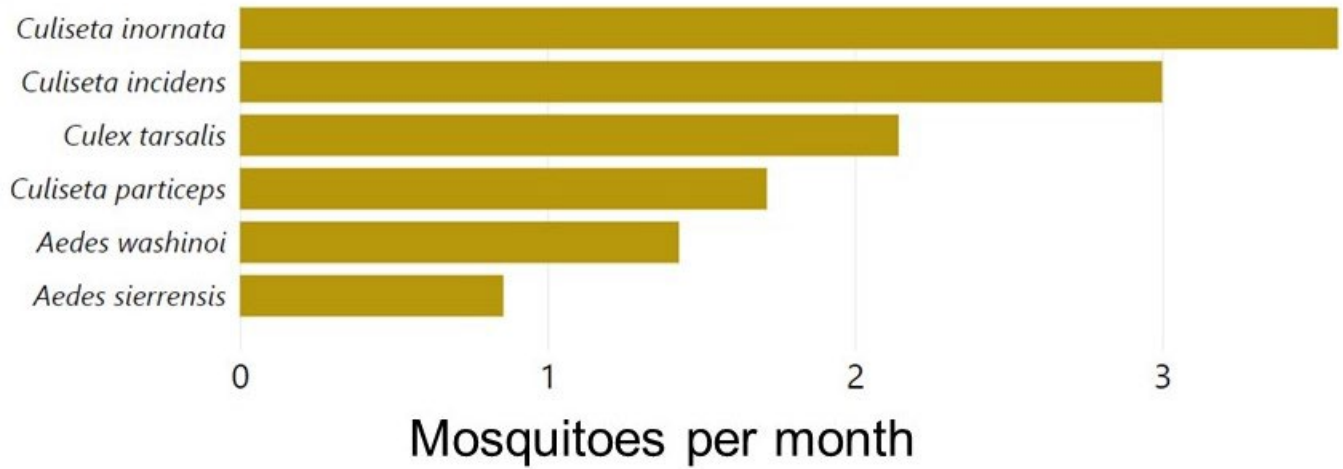


Figure 6. The most abundant species of mosquito captured in NJLT. A total of 161 mosquitoes were captured in NJLT.

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

C. PUBLIC EDUCATION



June Events and Presentations

Cherry Parade in San Leandro June 4
ACE Camp in Fruitvale, Oakland June 14 and 21
Adventure Time in Castro Valley June 30
Alameda County Fair in Pleasanton June 17- July 10
Juneteenth Festival in South Berkeley June 19th

The graphic features a map of the Alameda County area with icons for events and presentations. A legend indicates that a purple triangle with a star represents an 'Event' and a purple house icon represents a 'Presentation'. Below the map, a list of events is provided with their dates and locations. At the bottom, four small images show various activities: a fair booth, a person at a presentation, a child with a train, and a person at a festival.

Upcoming Events and Presentations

- July 4th Parade in Alameda
- Peralta Hacienda ACE Camp Presentations
- Alameda County Fair Display June 17- July 10

School Program

- Survey sent out to teachers, waiting for feedback

Google Analytics

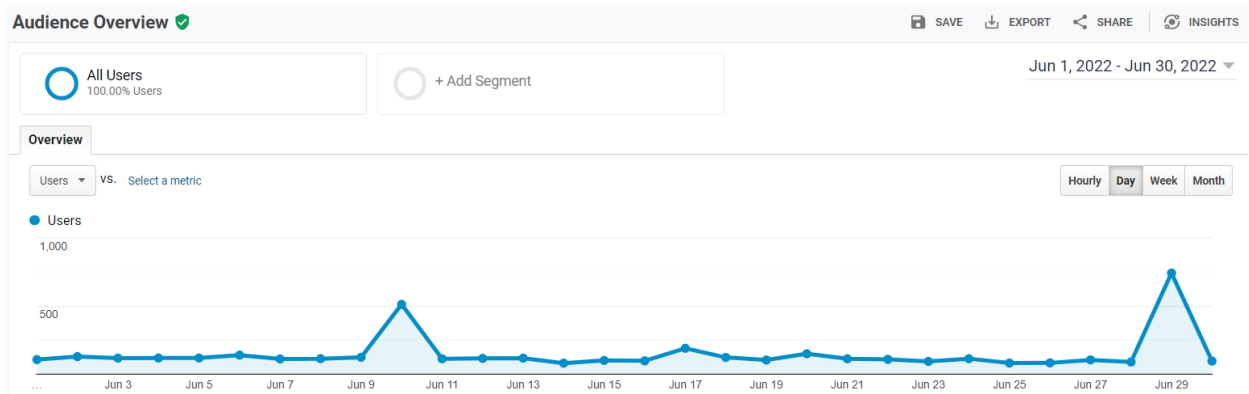


Figure 1: June website users 2022

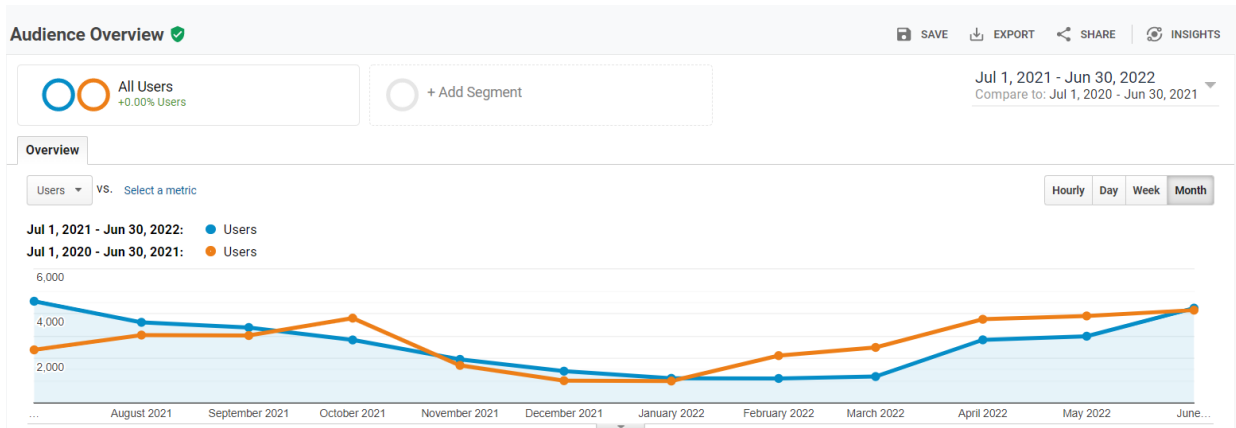
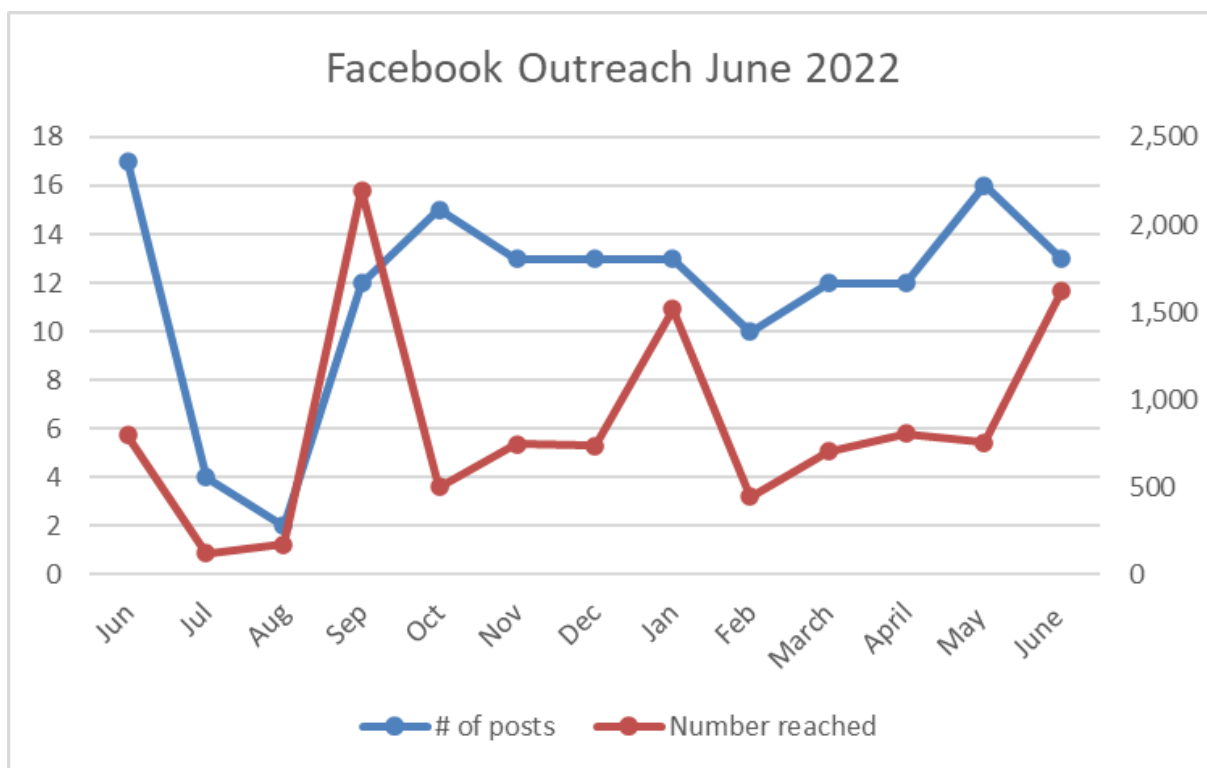


Figure 2: 2-year website comparison

Facebook



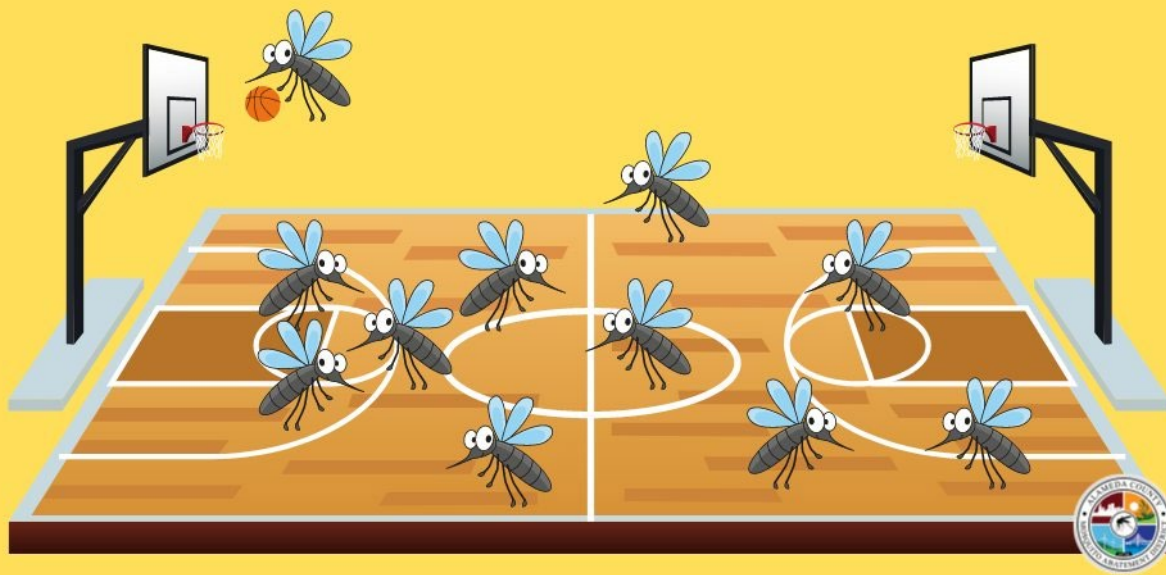
May data: Posts 10 Reach – 785 Followers – 333 (one added)



Happy Mosquito Control Awareness Week, DUB Nation!

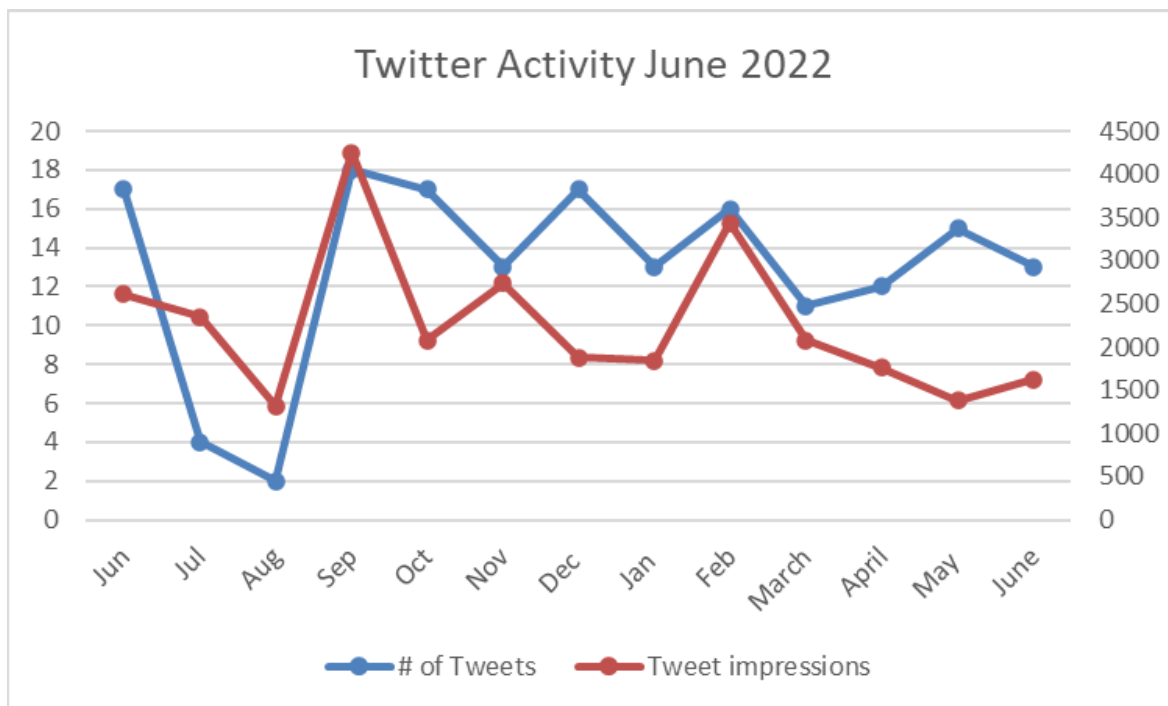


Pro tip: Toss away standing water after four days water just like Steph tosses the ball into the hoop, and you'll stay golden!



Top June Facebook Post: It's almost parade time! Stay golden by avoiding mosquitoes.

Twitter

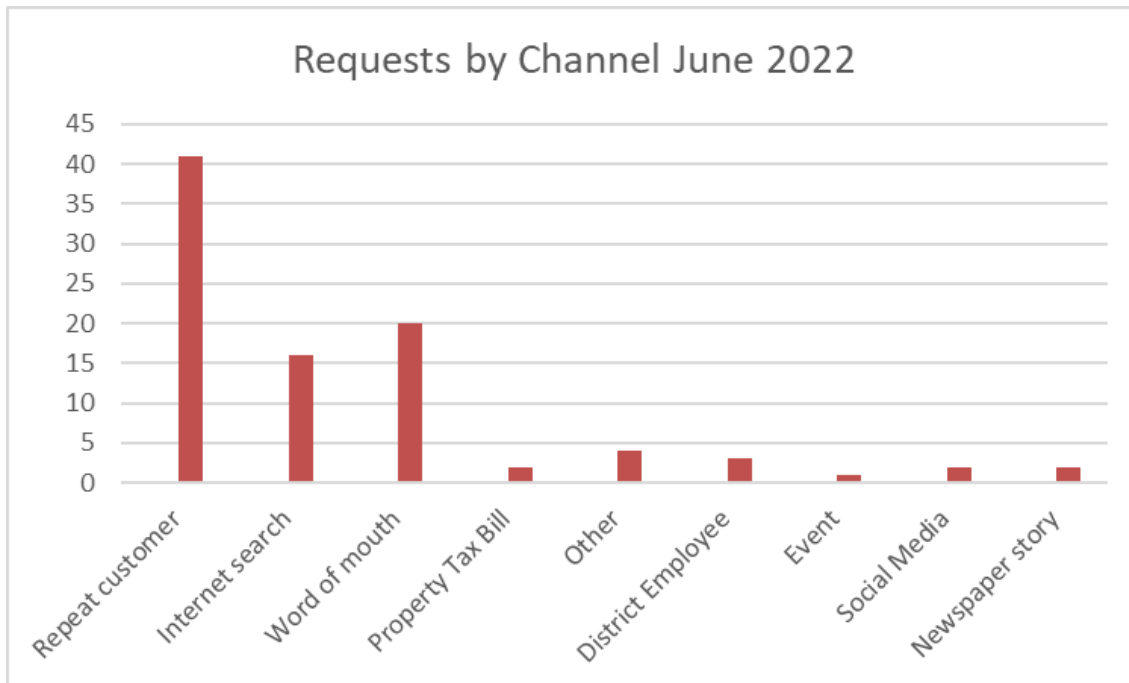


June data: Posts – 13 Impressions – 1625 Followers – 776 (1 added)



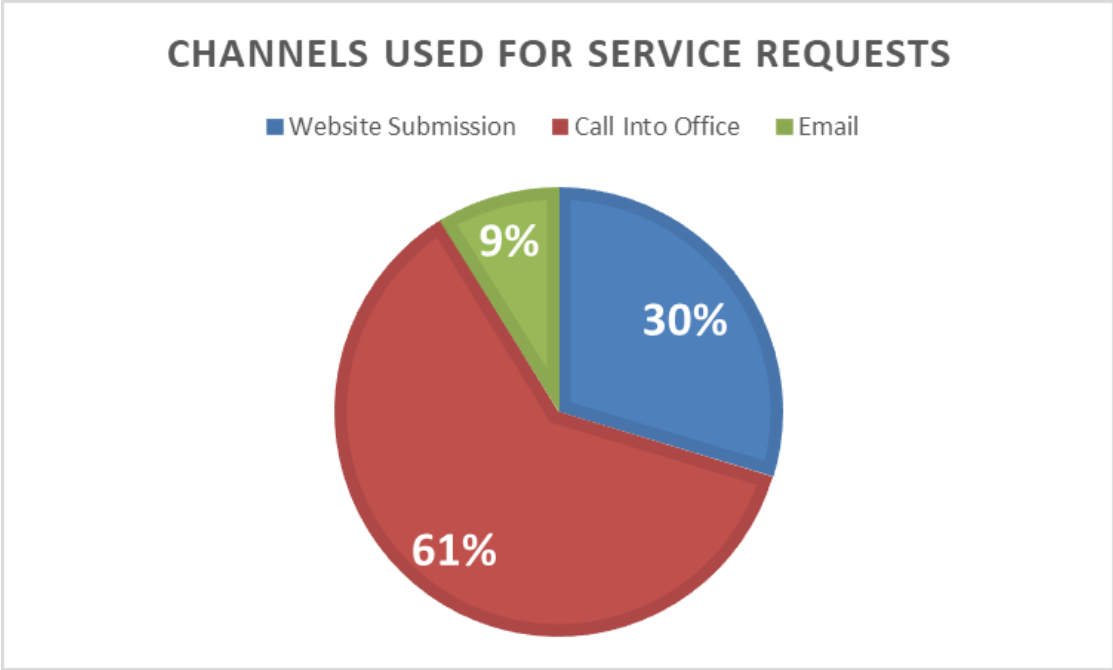
Top June Twitter Post: Stop by our display in the Ag building at the Alameda County Fair over the next few weekends. What other time of the year do you get to look like a hitchhiking mosquito?

Service Request Referral Summary for June

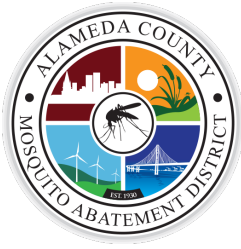


Channels Used by Residents to Request Service in June

91 requests in total: 56 calls, 27 website requests, 8 emails



Report by Judith Pierce MPH, Public Health Coordinator



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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:

ACMAD is pleased to recognize and thank the following employees on their anniversary in July.

| Employee | Job Title | Years of Service | Anniversary Date |
|---------------------|-----------------------------|------------------|-----------------------|
| Joseph Huston | Field Operations Supervisor | 31 | July 1 st |
| Eric Haas-Stapleton | Lab Director | 7 | July 1 st |
| Ryan Clausnitzer | General Manager | 7 | July 2 nd |
| Robert Ferdan | IT Director | 7 | July 16 th |
| Judith Pierce | Public Outreach Coordinator | 2 | July 20 th |

California Arbovirus Surveillance Bulletin #13

Week 26 Friday, July 1, 2022



Weekly Update

Humans

No human infections have been reported in 2022.

Dead Birds

A total of 2 West Nile virus (WNV) positive dead birds were reported this week from 2 counties: Sacramento (1) and Merced (1). To date this year, 14 WNV positive dead birds have been reported from 6 counties. At this time last year, 35 WNV positive dead birds had been reported from 5 counties.

Mosquito Pools

West Nile virus

A total of 51 WNV positive mosquito pools were reported this week from 13 counties: Fresno (13), Kern (3), Kings (8), Los Angeles (7), Madera (1), Orange (1), Placer (1), Riverside (2), Sacramento (2), San Joaquin (4), Santa Clara (1), Solano (1), and Tulare (7). **This is the first detection of WNV activity in Kings, Madera, Santa Clara, and Solano counties this year.** In 2022, 138 WNV positive mosquito pools have been reported from 15 counties. At this time last year, 115 WNV positive mosquito pools from 13 counties had been reported.

St. Louis encephalitis virus

Two St. Louis encephalitis virus (SLEV) positive mosquito pools were reported this week from Imperial (1) and Kings (1) counties. **This is the first detection of SLEV activity in California this year.** At this time last year, no SLEV positive mosquito pools had been reported.

Sentinel Chickens

No seroconversions have been reported in 2022.

| 2021 & 2022 YTD West Nile Virus Comparisons | | |
|---|--------------|--------------|
| | 2021 | 2022 |
| Total No. Dead Bird Reports | 2,826 | 2,390 |
| No. Positive Counties | 14 | 18 |
| No. Human Cases | 0 | 0 |
| No. Positive Dead Birds / No. Tested | 35 / 814 | 14 / 567 |
| No. Positive Mosquito Pools / No. Tested | 115 / 11,905 | 138 / 11,535 |
| No. Seroconversions / No. Tested | 0 / 2,154 | 0 / 1,585 |

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| YTD WNV Activity by Element and County, 2022 | | | | | |
|--|----------|----------|------------|----------------|-------------------|
| County | Humans | Horses | Dead Birds | Mosquito Pools | Sentinel Chickens |
| Contra Costa | | | 1 | | |
| Fresno | | | | 48 | |
| Kern | | | | 27 | |
| Kings | | | | 8 | |
| Los Angeles | | | 5 | 10 | |
| Madera | | | | 1 | |
| Merced | | | 1 | 1 | |
| Nevada | | | 1 | | |
| Orange | | | | 3 | |
| Placer | | | | 3 | |
| Riverside | | | | 6 | |
| Sacramento | | | 5 | 3 | |
| San Joaquin | | | | 10 | |
| Santa Clara | | | | 1 | |
| Solano | | | | 1 | |
| Sutter | | | | 1 | |
| Tulare | | | | 15 | |
| Yolo | | | 1 | | |
| Totals | 0 | 0 | 14 | 138 | 0 |

TESTING SUMMARIES

Humans

| | | WNV | SLEV | WEEV |
|-------------|------|-----|------|------|
| Human Cases | Week | 0 | 0 | 0 |
| | YTD | 0 | 0 | 0 |

Dead Birds

| | | Number Tested | WNV Positive |
|------------|------|---------------|--------------|
| Dead Birds | Week | 35 | 2 |
| | YTD | 567 | 14 |

Sentinel Chickens

| | | Number Tested | WNV Positive | SLEV Positive | WEEV Positive |
|--------------|------|---------------|--------------|---------------|---------------|
| Chicken Sera | Week | 162 | 0 | 0 | 0 |
| | YTD | 1,585 | 0 | 0 | 0 |

Mosquito Pools

| | | Positive / Total Tested | | | | | |
|----------------|------|-------------------------|------------|------------|---------|---------|---------|
| | | WNV | SLEV | WEEV | CHIK | DENV | ZIKA |
| Mosquito Pools | Week | 51 / 1,373 | 2 / 1,234 | 0 / 1,233 | 0 / 0 | 0 / 0 | 0 / 0 |
| | YTD | 138 / 11,535 | 2 / 11,291 | 0 / 11,256 | 0 / 212 | 0 / 212 | 0 / 212 |

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POSITIVES

Dead Birds

| County | Agency | City | Zip Code | Species | Date Reported | Virus |
|------------|------------------------|------------|----------|---------------|---------------|-------|
| Merced | Merced Co MAD | Merced | 95340 | Hawk | 6/26/2022 | WNV |
| Sacramento | Sacramento - Yolo MVCD | Sacramento | 95821 | American Crow | 6/28/2022 | WNV |

Mosquito Pools

| County | Site Code | Pool # | Species | City | # in Pool | Trap Type | Collected | Virus |
|-------------|-----------|--------|------------------------|--------------|-----------|-----------|-----------|-------|
| Fresno | CNSL1072 | 532 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/24/2022 | WNV |
| Fresno | CNSL1119 | 534 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/24/2022 | WNV |
| Fresno | FRNO10 | 423 | Culex tarsalis | Fresno | 50 | CO2 | 6/28/2022 | WNV |
| Fresno | FRNO156 | 399 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/23/2022 | WNV |
| Fresno | FRNO156 | 400 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/23/2022 | WNV |
| Fresno | FRNO259 | 404 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/23/2022 | WNV |
| Fresno | FRNO259 | 405 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/23/2022 | WNV |
| Fresno | FRNO273 | 421 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/28/2022 | WNV |
| Fresno | FRNO31 | 422 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/28/2022 | WNV |
| Fresno | FRNO35 | 394 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/23/2022 | WNV |
| Fresno | FRNO35 | 395 | Culex quinquefasciatus | Fresno | 50 | GRVD | 6/23/2022 | WNV |
| Fresno | FRNO64 | 397 | Culex quinquefasciatus | Fresno | 21 | GRVD | 6/23/2022 | WNV |
| Fresno | FRWS5110 | 138 | Culex tarsalis | Tranquillity | 50 | CO2 | 6/28/2022 | WNV |
| Imperial | IMPR102 | 74 | Culex quinquefasciatus | Winterhaven | 9 | BGSENT | 6/22/2022 | SLEV |
| Kern | KERN2030 | 323 | Culex quinquefasciatus | Bakersfield | 50 | GRVD | 6/23/2022 | WNV |
| Kern | KERN2051 | 329 | Culex quinquefasciatus | Bakersfield | 36 | GRVD | 6/24/2022 | WNV |
| Kern | KERN3001 | 327 | Culex quinquefasciatus | Bakersfield | 30 | CO2 | 6/23/2022 | WNV |
| Kings | KNGS3028 | 5 | Culex tarsalis | Hanford | 50 | CO2 | 6/21/2022 | WNV |
| Kings | KNGS3028 | 6 | Culex tarsalis | Hanford | 50 | CO2 | 6/21/2022 | WNV |
| Kings | KNGS3028 | 7 | Culex tarsalis | Hanford | 44 | CO2 | 6/21/2022 | WNV |
| Kings | KNGS3028 | 8 | Culex pipiens | Hanford | 16 | CO2 | 6/21/2022 | WNV |
| Kings | KNGS3072 | 40 | Culex tarsalis | Hanford | 50 | CO2 | 6/24/2022 | WNV |
| Kings | KNGS3072 | 44 | Culex tarsalis | Hanford | 50 | CO2 | 6/24/2022 | WNV |
| Kings | KNGS3072 | 46 | Culex erythrothorax | Hanford | 20 | CO2 | 6/24/2022 | WNV |
| Kings | KNGS3122 | 4 | Culex tarsalis | Hanford | 45 | CO2 | 6/21/2022 | SLEV |
| Kings | KNGS3127 | 15 | Culex tarsalis | Corcoran | 50 | CO2 | 6/22/2022 | WNV |
| Los Angeles | GRLA2592 | 5458 | Culex quinquefasciatus | San Marino | 50 | GRVD | 6/23/2022 | WNV |
| Los Angeles | GRLA2593 | 5459 | Culex quinquefasciatus | San Marino | 50 | GRVD | 6/23/2022 | WNV |
| Los Angeles | SGVA291 | 620 | Culex quinquefasciatus | El Monte | 22 | GRVD | 6/29/2022 | WNV |
| Los Angeles | SGVA4 | 589 | Culex quinquefasciatus | Arcadia | 50 | GRVD | 6/21/2022 | WNV |

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| | | | | | | | | |
|-------------|------------|------|------------------------|----------------|-----|--------|-----------|-----|
| Los Angeles | SGVA491 | 585 | Culex quinquefasciatus | El Monte | 50 | GRVD | 6/21/2022 | WNV |
| Los Angeles | SGVA898 | 616 | Culex quinquefasciatus | San Gabriel | 50 | GRVD | 6/29/2022 | WNV |
| Los Angeles | SGVA996 | 622 | Culex quinquefasciatus | South Pasadena | 50 | GRVD | 6/29/2022 | WNV |
| Madera | MADR3334 | 156 | Culex quinquefasciatus | Madera | 50 | CO2 | 6/23/2022 | WNV |
| Orange | ORCO326 | 1663 | Culex quinquefasciatus | La Habra | 20 | GRVD | 6/28/2022 | WNV |
| Placer | PLCR197802 | 574 | Culex tarsalis | Elverta | 50 | CO2 | 6/28/2022 | WNV |
| Riverside | COAV48 | 3333 | Culex tarsalis | Mecca | 50 | CO2 | 6/28/2022 | WNV |
| Riverside | COAV48 | 3538 | Culex tarsalis | Mecca | 50 | CO2 | 6/30/2022 | WNV |
| Sacramento | SAYO214008 | 1665 | Culex pipiens | Carmichael | 20 | CO2 | 6/24/2022 | WNV |
| Sacramento | SAYO214008 | 1666 | Culex pipiens | Carmichael | 33 | GRVD | 6/24/2022 | WNV |
| San Joaquin | SJCM8018 | 705 | Culex tarsalis | Stockton | 100 | CO2 | 6/28/2022 | WNV |
| San Joaquin | SJCM8018 | 712 | Culex tarsalis | Stockton | 100 | CO2 | 6/28/2022 | WNV |
| San Joaquin | SJCM8204 | 649 | Culex tarsalis | Stockton | 50 | CO2 | 6/28/2022 | WNV |
| San Joaquin | SJCM8204 | 653 | Culex tarsalis | Stockton | 50 | CO2 | 6/28/2022 | WNV |
| Santa Clara | STCL31810 | 1555 | Culex pipiens | Sunnyvale | 2 | GRVD | 6/29/2022 | WNV |
| Solano | SOLA143 | 101 | Culex tarsalis | Elmira | 33 | CO2 | 6/28/2022 | WNV |
| Tulare | DLTA64071 | 1140 | Culex stigmatosoma | Dinuba | 11 | BGSENT | 6/28/2022 | WNV |
| Tulare | DLTA741632 | 1176 | Culex quinquefasciatus | Monson | 50 | CO2 | 6/29/2022 | WNV |
| Tulare | DLTA84242 | 1199 | Culex quinquefasciatus | Visalia | 35 | BGSENT | 6/29/2022 | WNV |
| Tulare | DLTA8508 | 1056 | Culex quinquefasciatus | Visalia | 44 | BGSENT | 6/23/2022 | WNV |
| Tulare | DLTA8527 | 1058 | Culex quinquefasciatus | Visalia | 28 | GRVD | 6/23/2022 | WNV |
| Tulare | DLTA94023 | 1047 | Culex quinquefasciatus | Visalia | 11 | GRVD | 6/23/2022 | WNV |
| Tulare | DLTA95063 | 1060 | Culex quinquefasciatus | Visalia | 24 | BGSENT | 6/23/2022 | WNV |

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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

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