

AGENDA
1116th MEETING OF THE BOARD OF TRUSTEES
OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
AUGUST 9TH, 2023

TIME: 5:00 P.M.

PLACE: Join in person at the Office of the District
23187 Connecticut Street, Hayward, CA 94545 or
Join remotely via teleconference: <https://us02web.zoom.us/j/89290620027>
see below for additional details.

TRUSTEES: Victor Aguilar, President, City of San Leandro
Cathy Roache, Vice-President, County-at-Large
Steven Cox, Secretary, City of Livermore
Tyler Savage, City of Alameda: *from 2315 Lincoln Ave, Alameda, CA*
Robin López, City of Albany: *from 1000 San Pablo Ave, Albany, CA*
P. Robert Beatty, City of Berkeley
Kashef Qaadri, City of Dublin: *from 100 Civic Plaza Dublin, CA*
Courtney Welch, City of Emeryville: *from 6301 Shellmound St, Emeryville CA*
George Young, City of Fremont: *from 35679 Dee Place, Fremont CA*
George Syrop, City of Hayward
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Hope Salzer, City of Piedmont: *from 76 Cambrian Ave, Piedmont, CA*
Valerie Arkin, City of Pleasanton: *from 3740 Newton Way, Pleasanton, CA*
Subru Bhat, City of Union City

1. Call to order.
2. Roll call.
3. President Aguilar 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 1115th Regular Meeting held July 12th, 2023 (**Board action required**).
5. Approve expenditure to purchase an unmanned air system, by Lab Director Eric Haas-Stapleton, PhD (**Board action required**).
6. Presentation by Judith Pierce, MPH *Education and Outreach Updated, Summer 2023* (Information only):
7. Financial Reports as of July 31st, 2023: (Information only).
 - a. Check Register
 - b. Income Statement
 - c. Investment, 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. Training due: AB 1825: Young

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# 892 9062 0027** followed by the pound (#) key.

Computer: Watch the live streaming of the meeting from a computer by navigating to <https://us02web.zoom.us/j/89290620027>

Mobile: Log in through the Zoom mobile app on a smartphone and enter **Meeting ID# 892 9062 0027**

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.

CEQA NOTICE:

Unless expressly stated otherwise on the agenda (that an MND or EIR is being considered), discretionary actions taken on agenda items will include a finding by the Board that the action is exempt under CEQA. More information about the CEQA determination can be found in the corresponding staff report.

MINUTES

1115th MEETING OF THE BOARD OF TRUSTEES OF THE ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

July 12th, 2023

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/87507712016>
TRUSTEES: Victor Aguilar, President, City of San Leandro
Cathy Roache, Vice-President, County-at-Large
Steve Cox, Secretary, City of Livermore
Tyler Savage, City of Alameda: from 2315 Lincoln Ave, Alameda, CA
Robin López, City of Albany: from 1000 San Pablo Ave, Albany, CA
P. Robert Beatty, City of Berkeley
Kashef Qaadri, City of Dublin
Courtney Welch, City of Emeryville
George Young, City of Fremont
George Syrop, City of Hayward
Eric Hentschke, City of Newark
Jan O. Washburn, City of Oakland
Hope Salzer, City of Piedmont: from 76 Cambrian Ave, Piedmont, CA
Valerie Arkin, City of Pleasanton
Subru Bhat, City of Union City

1. Board President Aguilar called the regularly scheduled board meeting to order at 5:02 pm.
2. Trustees Aguilar, Cox, Qaadri, Syrop and Washburn were present in-person at the district. Trustees Savage, López and Salzer attended remotely from the publicly posted locations noted above. Trustee Hentschke attended remotely under his first annual AB 2449 exemption due to a contagious illness. Trustees Bhat and Young attended remotely as members of the public. Trustee Roache arrived in-person at the district at 5:15 pm. Trustees Welch, Beatty and Arkin were absent.
3. President Aguilar invited members of the public to speak on any issue relevant to the district. Field Operations Supervisor, Joseph Huston, was present for Item 5. Vector Biologist, Sarah Lawton, was present to record the minutes. Information & Technology Director, Robert Ferdan, was present remotely for technical support. Trustee Bhat said that it was nice to see everyone.
4. Approval of the minutes of the 1114th meeting held June 14th, 2023.
Motion: Trustee Washburn moved to approve the minutes
Second: Trustee Qaadri
Vote: motion carries

5. Presentation by the General Manager and Field Operations Supervisor, Joseph Huston:
Malaria & Alameda County.

Discussion: After the presentation by staff, questions from the Board were also answered by Trustee Washburn. Trustee Qaadri asked if there are just the four species in the county that can spread malaria. (Yes.) Are there other species out there that can transmit malaria? (Yes, but only *Anopheles* mosquitoes.) Trustee Washburn brought up Farinholt's Rule, which describes how specific pathogens have evolved alongside specific species. Trustee Syrop asked if there are any treatments or vaccines for malaria. (there is a prophylaxis treatment, but it has side effects; there is a vaccine available in Africa, but not in the US, with limited results; the physiology of the malaria protozoan makes it difficult to develop a vaccine.) Trustee Salzer asked about the children death rate versus adults and if there are any treatments or long-term health effects. (children are typically malnourished and cannot fight infections; bed nets, which are treated with pesticides, are the most effective at keeping mosquitoes away; malaria will flare up again in an infected individual over time, symptoms can be physically debilitating, and the resulting financial losses are significant; developing a vaccine is extremely difficult, as the target changes rapidly.) Trustee Savage asked about his child who is now sick after multiple mosquito bites acquired near Lake Tahoe, how can the community respond or look out for symptoms? (Trustee Washburn asked about how long the fever has lasted and based on the symptoms, it appears like the child does not have malaria but you should still consult a physician; Joseph pointed out that the likely daytime biting mosquito species near Lake Tahoe is not a competent vector of malaria or West Nile virus.) Trustee Salzer asked if we will be discussing community outreach during the next Strategic Planning session. (Yes.) Trustee Aguilar noted how he was not aware of mosquito abatement before joining the Board, so feels that more marketing would be very beneficial. He asked if there is anything the Trustees can do in their cities to spread the word? (Joseph Huston said that anyone can send us pictures or provide specimens for identification, and we can determine the species and likely where they came from, and therefore treat the appropriate site for mosquitoes as while we are aware of all major mosquito breeding sites, we rely on the public's input to alert us about new issues such as a neighbor's unmaintained swimming pool; mosquito districts tend to "fly under the radar" until there is a major issue; the General Manager reminds Trustees to reach out if you would like to attend a ride-along with your city's technician for an eye-opening experience. Trustee Aguilar asked if a ride-along could be scheduled on a Saturday since many have work during the week. (Yes, we can work it out, but it may not be with the technician from your city.) Trustee Salzer asked about any efforts to reduce fertilizer use to minimize algae, which could reduce the *Anopheles* mosquitoes. (Many of the fertilizers or pesticides are applied by the general public, and there is no way to record or manage residential use.)

6. ACMAD Manager Evaluation Committee Annual Evaluation Process

a. October 11th, 2017, 1049th meeting minutes

Discussion: The General Manager, and President Aguilar, received many questions about the General Manager's evaluation process after the June meeting and would like to clear up any confusion by presenting additional background information. Trustee Washburn gave background on how and why the evaluation process changed back in 2017. Trustee Roache said that although the evaluation may have felt rushed, it did not affect the integrity of the evaluation. Trustee Washburn suggested adding the minutes from 2017 again before the next evaluation process, especially for new Board members. Trustee Syrop said he is a fan of 360 feedback from employees if it is anonymous. He added that there is always room for

improvement, even with the money spent on private HR consultants. The General Manager expressed concerns that a “360 evaluation” in the context of connecting a Director of a Board directly with staff (e.g., an anonymous survey) related to a CEO/GM/City Manager/ County Administrator/Exec Director’s performance often creates Trustee-Staff connections that may lead to unintended consequences such as abuse by both parties. This connection may also undermine the role of a supervisor and is out of line with the role of a Board. Rather, there are signs/symptoms of an underperforming organization that a Board can rely upon such as turnover, absenteeism, workers comp claims, damage to equipment, and legal fees. The General Manager added that a hallmark in his tenure at the district has been the increased overall transparency (for example, having staff present for this personal discussion). Trustee Cox clarified that the reason that the evaluation committee is formed by the past, current, and future Board President is because those Trustees are familiar working closely with the General Manager and are the most qualified to evaluate the performance. Trustee Washburn said his previous employers successfully performed evaluations in this way; there are protocols in place for employees to file a complaint if they need to directly with the Board President, and it works well for ACMAD; the way the GM evaluation process changed in 2017 made the evaluation process much better than the years prior, and he does not see a need to change it. Trustee Roache mentioned that there are not many interactions with the General Manager and the rest of the staff, so a 360 evaluation would not be needed. She added that there are many long-term employees, and they would not stay if they were unhappy. The time-off requests are low, which may also indicate the staff is happy. Trustee Syrop wanted to clarify: he suggested sending out an anonymous evaluation form to employees because he wants the Board to have as much data as possible. Trustee Qaadri added that some Trustees have long-standing relationships, others are new and cannot tell if there are grievances. The General Manager explained the grievance process from employees with an example: an employee may try to appeal something to their supervisor, if denied, the employee can then appeal to the General Manager, if denied, the employee can then appeal to the Board President, which would then form an Ad Hoc Committee. Most staff are held accountable for their own zone or their own tasks, and it has been working well. Trustee Roache asked hypothetically: if a mayor or city manager was being evaluated, would you go ask every single employee for an evaluation? Trustee Syrop responded, no, only the people who directly report to that person (the hypothetical mayor/ city manager). Trustee Aguilar added that this was his first evaluation process on and off the Board, and after he apologized how it went, he assured it will go more smoothly in the future.

7. Financial Reports as of June 30th, 2023:

Discussion: The General Manager pointed out items of interest and summarized the report. Trustee Syrop asked about Jan Washburn’s check (an uncashed check for travel reimbursement was discovered while closing a bank account by Michelle Robles, HR & Financial Specialist.) Trustee Cox asked about the reimbursement for light-traps. (\$40 per year, but we no longer have light-traps in the county.) Trustee Cox asked if these are the final fiscal year numbers. (No, these are un-audited internal numbers, but the final numbers will not deviate much.)

8. Presentation of the Monthly Staff Report.

Discussion: The General Manager pointed out items of interest and summarized report. Joseph Huston summarized his portion of the report and gave reasoning for how he compiles the report. Trustee Washburn asked about the mosquito-fish population because it seems to be down where he has looked. (Some fish have been washed out after the heavy rain, but in some

places the rain caused fish to flood over into other areas.) The General Manager discussed that our UAS (drone) crashed in marsh today likely due to the outdated/unsupported technology of this older drone model. Joseph Huston added that we have Board support for UAS use in district policy and via Board resolutions; he also described the hurdles we have had to overcome to get this relatively old drone to operate, since the software is no longer supported by the manufacturer. Trustee Aguilar asked how much a new drone will cost. (The original was \$20,000 but the new one will be over \$40,000 since it will have to be American made because proposed bills in California requiring that.) Trustee Qadri suggested signing up for Threads for outreach. (We just were discussing this internally, yes great idea.) Trustee Syrop asked how Judith Pierce, Public Outreach Coordinator, would prefer to receive service requests. (Online is streamlined and can easily track. However, having a conversation can usually reduce the number of unnecessary service requests before a technician gets sent out to the area.) Trustee Syrop asked if all boxes are checked on the service request form, would it get flagged differently? (It will usually require more follow-up questions to clarify the actual issue.)

9. Presentation of the Manager's Report.

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

Discussion: None

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

Discussion: Trustee Syrop mentioned the "3rd Thursday" Festival in downtown Hayward this Thursday night.

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

Discussion: The General Manager would like to discuss purchasing a new drone, since it will be over his \$15,000 purchasing limit. Judith Pierce will also give a presentation on her public outreach and equity studies that have been done for ACMAD.

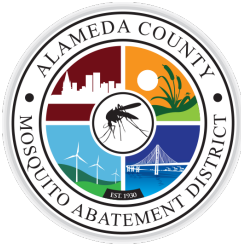
13. Adjournment at 6:54 pm.

Respectfully submitted,

Approved as written and/or corrected
at the 1116th meeting of the Board of
Trustees held August 9th, 2023

Victor Aguilar, President
BOARD OF TRUSTEES

Steven Cox, Secretary
BOARD OF TRUSTEES



23187 Connecticut Street
Hayward, CA 94545

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

acmad@mosquitoes.org

Board of Trustees

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San Leandro

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Cathy Roache

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Steven Cox

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Berkeley

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Dublin

Courtney Welch

Emeryville

George Young

Fremont

George Syrop

Hayward

Jan O. Washburn

Oakland

Eric Hentschke

Newark

Hope Salzer

Piedmont

Valerie Arkin

Pleasanton

Subru Bhat

Union City

Ryan Clausnitzer

General Manager

Action: Approve expenditure to purchase an unmanned air system (*i.e.*, aerial drone) that can lift 40 pounds of granular larvicide (one bag) and apply it to control immature mosquitoes in Alameda County.

Overview:

Traditional methods of mosquito control, which involve walking or driving with ground-based equipment to distribute larvicide, present multiple challenges. These methods are physically strenuous for staff, elevate the risk of injury, and can potentially harm environmentally sensitive habitats. Incorporating aerial drones for larvicide application can not only address these issues, but also improve the precision of insecticide distribution.

Contrary to smaller drones that have limited payload capabilities and end up using over half of their battery life flying between loading and application areas, larger drones can carry an entire bag of granular larvicide, weighing approximately 40 pounds. The increased capacity of these larger drones enables them to dedicate a greater proportion of their operational time to the application of larvicide. This results in a substantial increase in their operational efficiency and effectiveness for mosquito control.

The legislative climate around drones is changing. The California Legislature has proposed Assembly Bill 740 (AB 740), which is aimed at improving the cybersecurity of drones, particularly those operating near crucial infrastructure. If enacted, this bill would prevent government agencies in California from acquiring or using unapproved drones, effectively banning drones manufactured outside North America. AB 740 follows the precedent of Florida Senate Bill 44, which forbade Florida's government agencies from using drones not manufactured in the USA.

Given these factors, it is our belief that investment in a larger, USA-made drone for larvicide application is not only a more efficient and safer method of mosquito control, but also a proactive response to the expected legislative changes. Although the price point may be high, the benefits in terms of staff safety, environmental preservation, and operational efficiency may significantly outweigh the initial cost.

The two USA-based manufacturers of drones that can lift 40 pounds and apply granular larvicide are Leading Edge Aerial Technologies (based in Florida), and Hyllo (based in Texas).

Price Quote Evaluation:

- **Leading Edge Precision Vision 40X (PV40X):**
- **Hyllo AG-230:**

Staff Recommendation:

Staff recommends purchasing the **PV40X model** based on its wider swath width, application speed, hand-held controller option, and proven success by peer mosquito districts.

Table 1. Comparative analysis of the main features of aerial drones manufactured by Leading Edge and Hyllo that can lift 40 lbs. and distribute granular insecticide. Differences that may contribute to improved drone performance are highlighted in purple, and those that potentially hinder optimal drone function are signified in red.

Key Specifications	PV40X	AG-230
Payload capacity	40 lbs.	40 lbs.
Payload type	granular, liquid, adulticide	granular, liquid
Spreading distance max.	90 feet	30 feet
Application speed	3 acres / min	1 acre / min
Autonomous flight	✓	✓
Multi-drone control	x	✓
Controller	Hand-held	Hand-held & laptop
Piloting camera	Forward & downward	Forward
Obstacle avoidance	LiDAR, radar & RTK*	Radar & RTK*
Software	MapVision*	AgroSol
Remote ID built in	✓	✓
Manufactured in USA	✓	✓
Hands-on training	✓	x
MVCAC sponsor	✓	x
Used in California	✓	x
Vector control use current	✓	x
Quoted cost	\$64,450	\$45,300
Cost with sales tax (10.75%)	\$71,378	\$49,976

*Additional cost



TARGET

SPECIALTY PRODUCTS

524 Galveston St
 West Sacramento, CA
 95691
 916-374-9900
 800-533-0816

Contact: Eric Haas-Stapleton, Ph.D. Address: 23187 Connecticut St.
 Customer: Alameda County M.A.D. City, State: Hayward, CA
 Zip: 94545

Item #	Quantity	Description	UOM	Unit Price	Total
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Unmanned Aircraft Systems

I514089	1	LEAT PrecisionVision 40X UAS (incl Avionics Suite)	Ea	\$35,390.00	\$35,390.00
I514094	1	LEAT PV40X Ground Control Station	Ea	\$3,800.00	\$3,800.00
I514091	1	LEAT PV40X Annual Software Lincense	Ea	\$1,700.00	\$1,700.00

Payload Systems

I514093	1	Granular Payload System (PV40X)	Ea	\$3,825.00	\$3,825.00
I514095	0	Liquid Payload System (PV40X)	Ea	\$3,025.00	\$0.00
I514088	0	Adulticide Payload System (PV40X)	Ea	\$3,990.00	\$0.00

Batteries & Chargers

I514092	2	LEAT PV40X Battery Charger	Ea	\$1,430.00	\$2,860.00
I514090	6	LEAT PV40X 18ah 22.2 Volt Battery Set	Set	\$2,530.00	\$15,180.00

Training

I513292	1	LEAT Certificate of Authorization Submission	Ea	\$1,995.00	\$0.00
I513291	1	LEAT Aerial Application Course	Ea	\$1,695.00	\$1,695.00

Subtotal	\$64,450.00
Shipping	FREE
Taxes	
Misc	
Balance	

Special Notes and Instructions

This quote is valid for 2023. Free shipping on orders greater than \$700. The prices quoted do not include any sales tax. Sale tax will be added at time of invoicing.
**** Leading Edge will bill for travel related expense for Leading Edge employees estimated at \$1,500.00****

Quote Prepared By:

Joe Camacho

Vector Specialist 916-291-3173

Sales Representative joe.camacho@target-specialty.com

Hylío, Inc.

1020 Agnes Road

Richmond, TX 77469

Sales: +1-832-219-6778

General: +1-877-495-4669

<https://www.hyl.io>orders@hyl.io**CONFIGURATOR QUOTE**

QUOTE ID: 3947E9C7

1X AG230 - SPRDR

KURTGEORGE@HYL.IO



QTY	PRODUCT	UNIT PRICE	TOTAL PRICE
1	AG-230 Base Price	\$30,000.00	\$30,000.00
1	FPV Camera System	included	
1	20L Spreader System	\$4,000.00	\$4,000.00
1	Obstacle Avoidance System	included	
1	Handheld RC Controller	included	
1	AG-230 Toolkit	included	
1	2 Pumps + 2 Flowmeters Spray System	\$1,000.00	\$1,000.00
1	FAA Regulatory Onboarding	included	
			KIT TOTAL \$35,000.00
ACCESSORIES			
8	12S 16000 mAh Battery	\$675.00	\$5,400.00
4	3000w Battery Charger	\$900.00	\$3,600.00
1	Spare Parts Kit AG-230	\$1,300.00	\$1,300.00
		50% DEPOSIT \$22,650.00	GRAND TOTAL \$45,300.00

Terms

Minimum of 50% of total due to begin production

Remaining balance due before shipment

Payment Instructions

**Please contact our sales team at (832) 219-6778
to pay by electronic bank transfer**

Pay by Check:

Make Check Payable to: Hyllo, Inc.

Mail Check to: 1020 Agnes Rd, Richmond, TX 77469

Purchase Orders:

Send Purchase Orders to: orders@hyl.io

TANK CAPACITY

8 gallons

EFFICIENCY

Up to 50 ac/hr @ 1gpa

MAX SPRAY RATE

2.6 gpm

SWATH WIDTH

Up to 35 feet



AG-230

AGRICULTURAL SPRAY DRONE
OPERATIONAL: 81" x 81" x 35" | FOLDED: 44" x 44" x 35"

Your Kit Includes:**Tank Capacity**

Two 4 gallon tanks = 8 gallons

Efficiency

Up to 50 acres per hr @ 1 gallon per acre

Max Spray Rate

2.6 gallons per minute (no nozzles max)

Swath Width

Up to 35 feet

Obstacle Avoidance

Millimeter-wave radars (both forward and backward facing)

FPV

1080p HD first-person-view live camera feed

Toolkit

Includes torque wrench, pliers, screwdrivers, digital level, GPS tracker, and more

Software

Lifetime license to AgroSol (Ground Control Software) standard edition

Training

Comprehensive manuals and simulation training program

Shipping

Domestic shipping to 48 contiguous states, drone is shipped fully assembled

Regulatory Assistance

FAA documentation and consulting

One Year Manufacturer Warranty

Covers manufacturer defects

Education and Outreach Update

Summer 2023



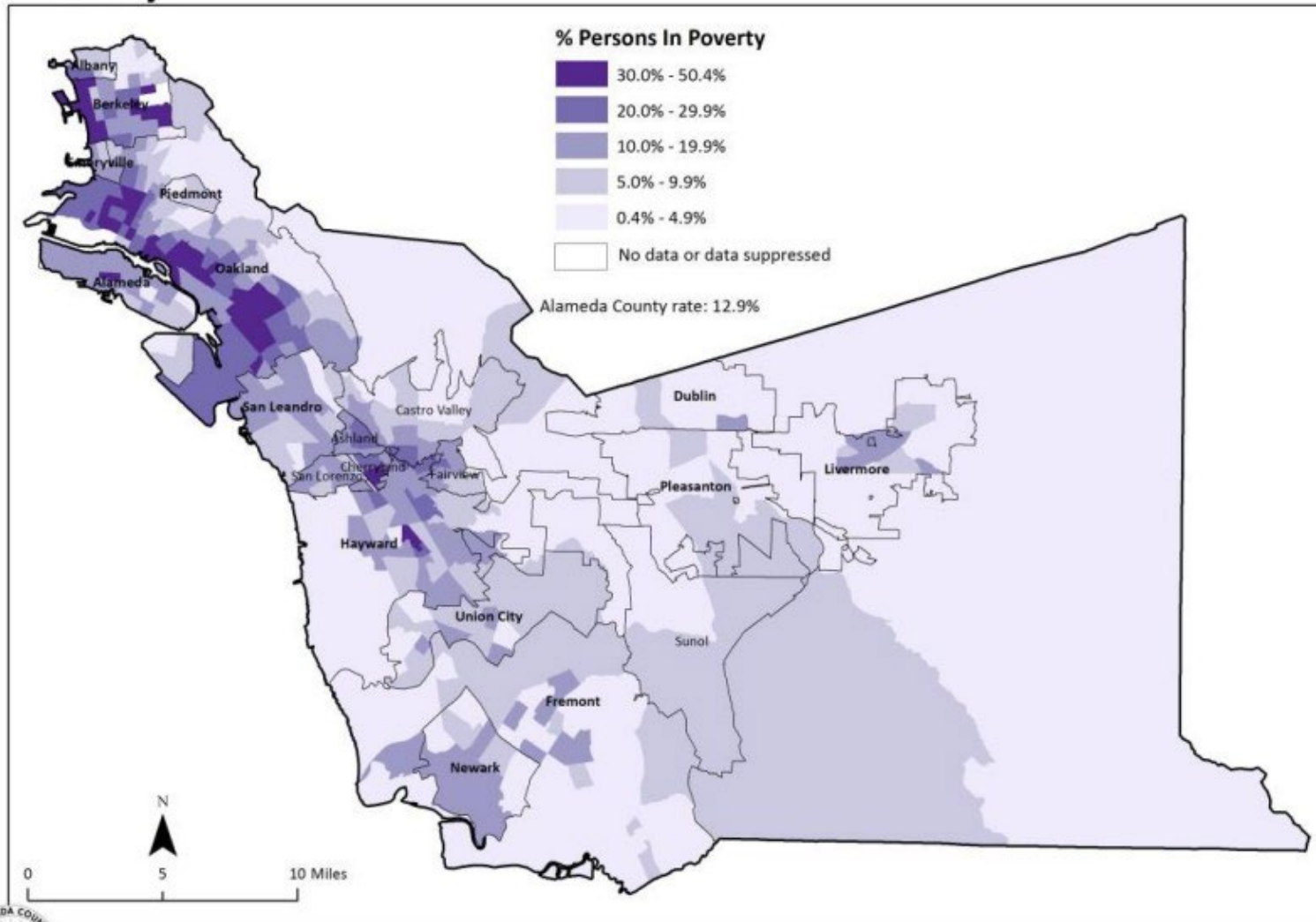
Presented by Judith Pierce, MPH Public Outreach Coordinator



Why have a position dedicated
to outreach?



Poverty



Source: CAPE, with data from American Community Survey 2014 5-year files.



Equity and Service Gap Research for ACMAD

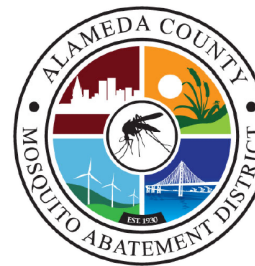
Emily Estus: Service request spread is proportional by geography, but could be better. Areas to improve are outreach to non-English speakers, lower income homes and homeless populations. (2020)

Sky Mihaylo: Ensure equitable geographic spread of services and outreach, especially in areas that are vulnerable to invasive *Aedes* (2022)

Equitable, Effective Practices for Mosquito Abatement in Alameda County: Challenges and Solutions

Emily Estus, MPP/MPH Candidate 2021
University of California, Berkeley
May 2020

Measuring and Distributing Workload at Alameda County Mosquito Abatement District



Sky Mihaylo, MPP
Consultant – UC Berkeley,
Goldman School of Public Policy

www.mosquitoes.org

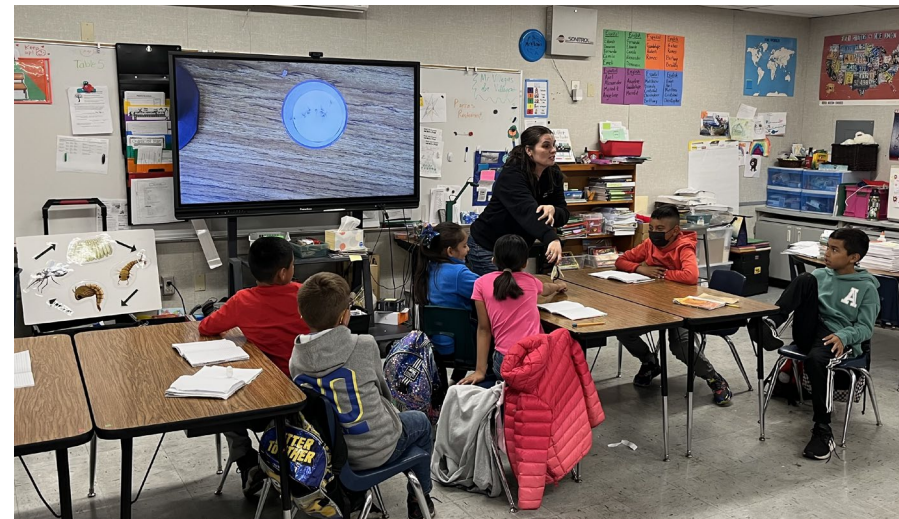


Judith's background

- Health educator for decades in SF, Atlanta, East Bay, Seattle
- Teacher in Oakland Unified
- 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



2013



2023



Addressing Equity and Service Gaps

Judi's work:

- School curriculum
- New events, focus on low-income families
- Agency and organization collaborations
- Additional research how we can support unhoused population



In addition, the role includes fielding most service requests and questions online and phone, social media, press releases, committees etc.



Public Outreach: Schools and Camps

2022-2023: 13 classrooms

- 5 of those classes were teachers who reconnected and asked to bring it back
- Added an option for full weeklong curriculum or partial one day lesson
- 2 camps reconnected as well

2022-2022: 5 classes

- 2 camps (Peralta Hacienda Historical Park in Oakland and Adventure Time in Castro Valley)

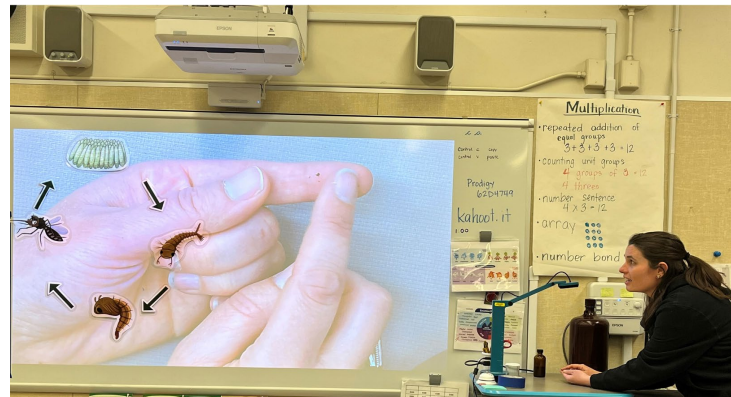
Events and partnerships:

Scientific Adventures for Girls Science Night at MLK Elementary in West Oakland

Newark Unified Family Science Afternoon at Lincoln Elementary

Career Day at Laurel Elementary in East Oakland

Agriculture Day in Livermore



Public Outreach: Events

New events focused on lower to mid income families:

Science Night at MLK Elementary (West Oakland)

Khmer New Year Festival (East Oakland)

Healthy Families Festival (Emeryville)

Road to Wellness Festival (Fremont)

Safe Kids Festival (East Oakland)

Juneteenth Festival (Berkeley)

Quest Science Festival (Livermore)

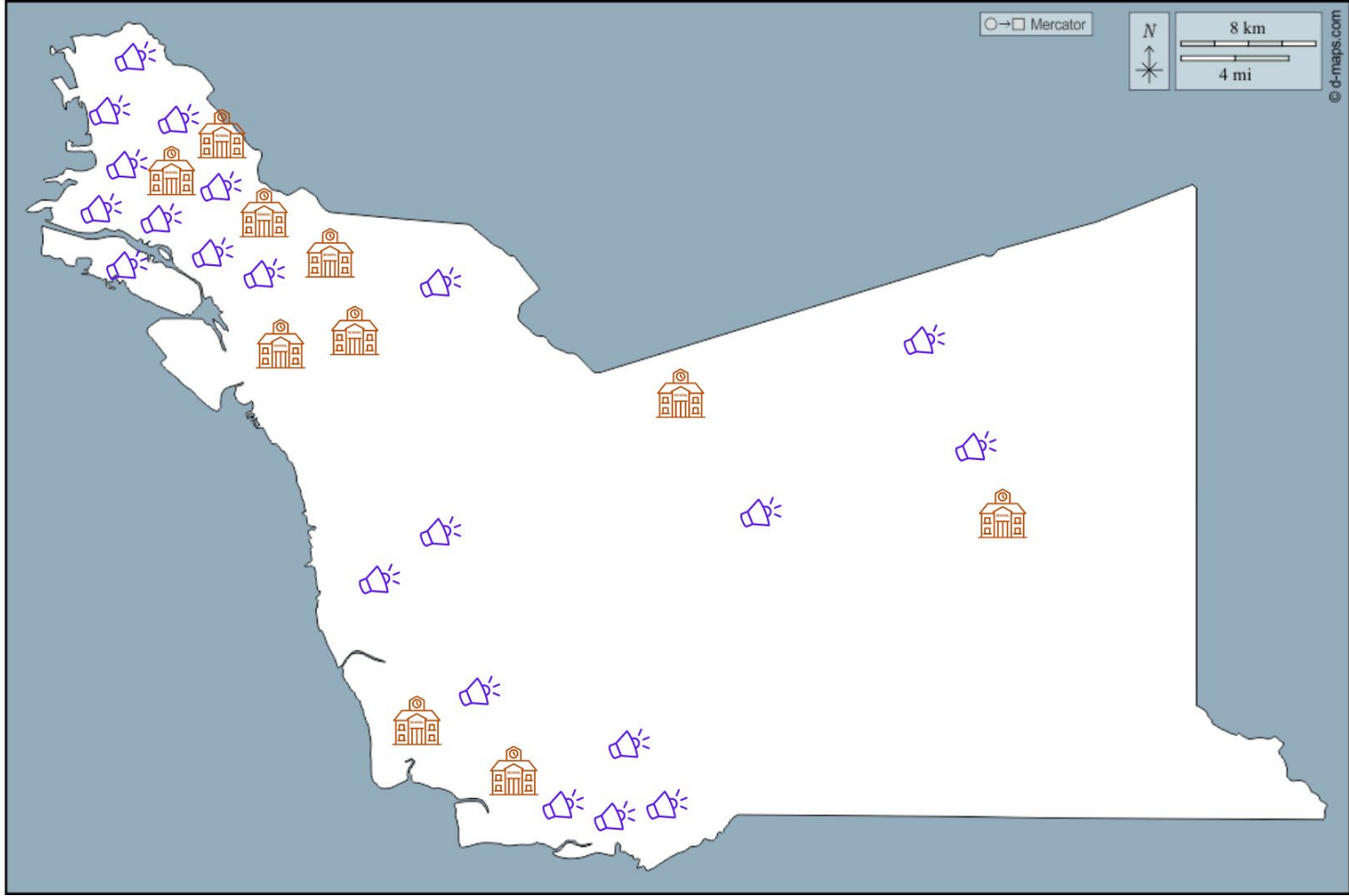
Low Income Housing Fair (Hayward)



Public Outreach: Events

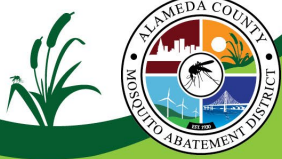


Classroom education and Events map

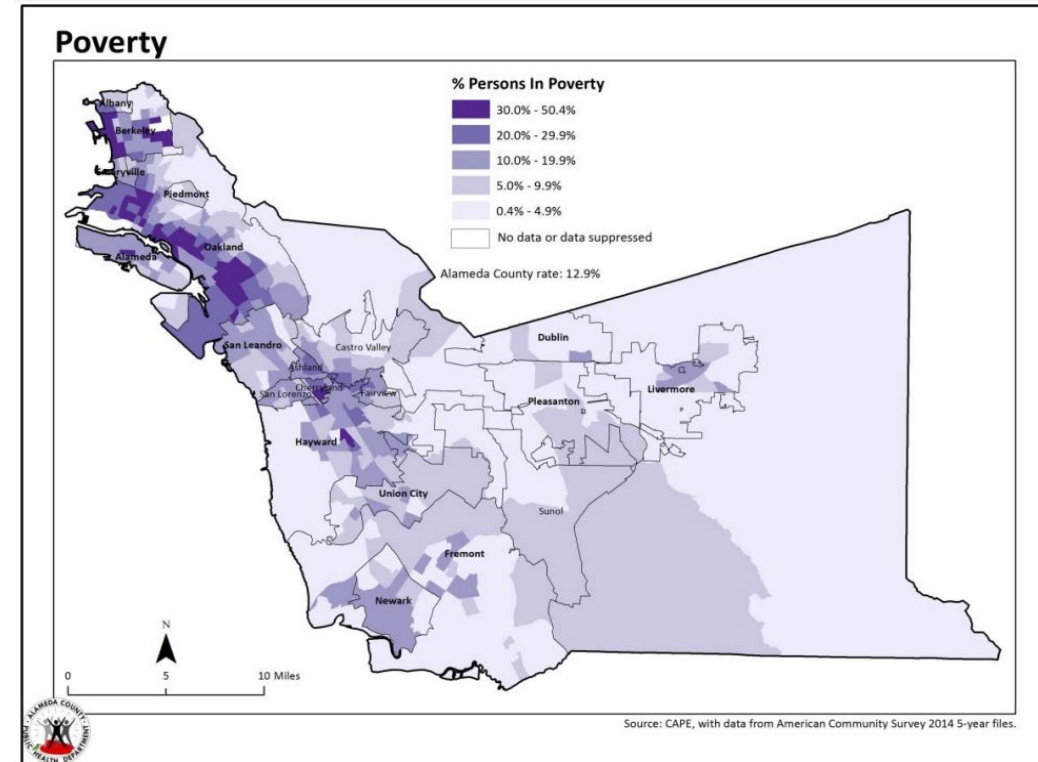
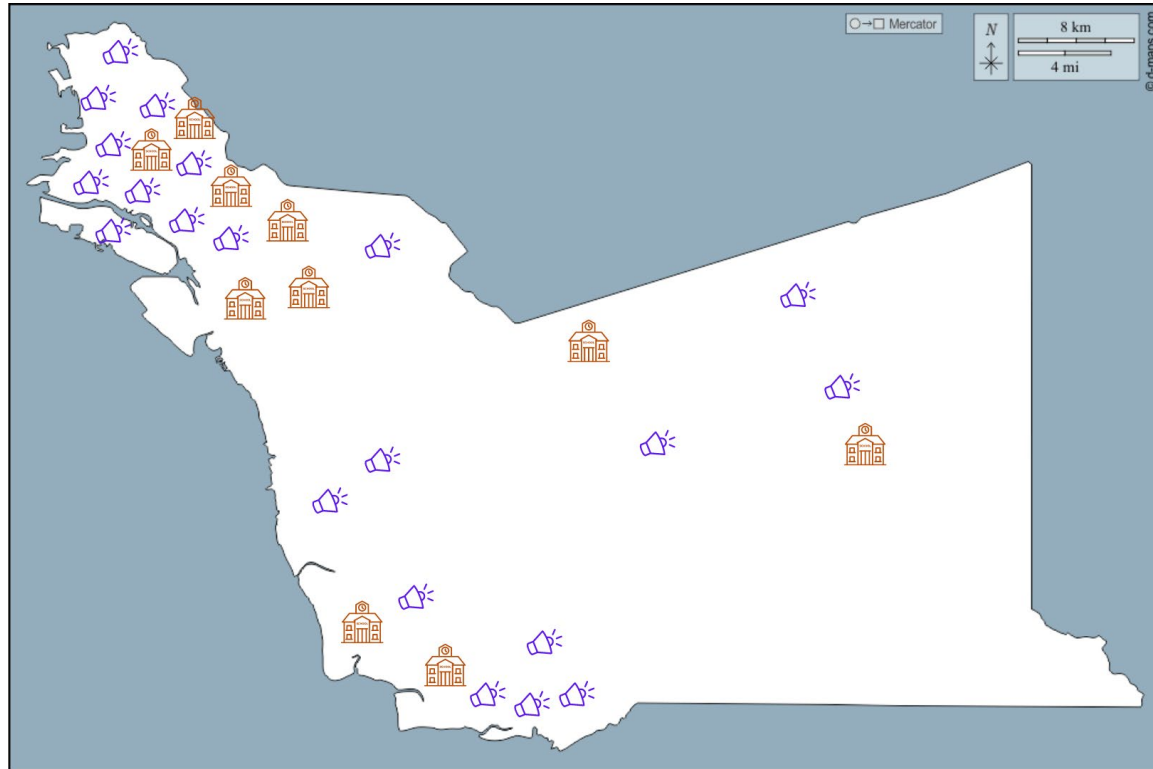


Purple: Event

Orange: Presentation



Classroom education and events map for 2023 update



Purple: Event Orange: Presentation



Outreach to residents is getting better, but still a long way to go

School challenges

- Many schools still do not want in-class presentations
- Staff retention and inaccurate contact information
- Advance planning of units
- Ghosting is rampant

Organization challenges

- Lots of turnover at nonprofits
- HOA's are outsourced beyond area

Media challenges

- High costs of large outreach campaigns
- Disease fatigue
- Same old message, that seeks to educate and reassure not fear monger



Ways to increase outreach to underserved areas

Written materials

- Translate existing materials into Spanish, Chinese, Vietnamese (video is in English, Spanish and Chinese already)
- Simplify materials

Enhance relationships with established community members

- Focus on schools and which entities they trust, then move beyond
- Reconnect with CERT, animal shelters every year
- Engage *promotoras* programs at organizations and hospitals



Questions? Comments?



Thank you for your time!

Judith Pierce, MPH



Alameda County Mosquito Abatement Dist.
Check Register
For the Period From Jul 1, 2023 to Jul 15, 2023

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Amount
4059	7/12/23	Adapco	5,138.80
4060	7/12/23	Airgas	971.70
4061	7/12/23	Alameda County LAFCO	694.00
4062	7/12/23	AT&T	84.10
4063	7/12/23	Bay Alarm	667.07
4064	7/12/23	Belden Consulting Engineers	117.50
4065	7/12/23	California Department of Public Health	2,941.00
4066	7/12/23	Cintas	684.77
4067	7/12/23	Coverall North America, Inc.	495.00
4068	7/12/23	Delta Dental	4,746.80
4069	7/12/23	Grainger	355.29
4070	7/12/23	Industrial Park Landscape Maintenance	1,026.00
4071	7/12/23	KBA Docusys	639.26
4072	7/12/23	KIS	6,632.31
4073	7/12/23	PC Professional	2,496.00
4074	7/12/23	PFM Asset Management LLC	1,716.32
4075	7/12/23	PG&E	77.82
4076	7/12/23	Port of Oakland	1.00
4077	7/12/23	Rusmiser, Benjamin	3,504.50
4078	7/12/23	The Hartford	119.41
4079	7/12/23	UMPQUA Bank Commerical Card OPS	29,062.39
4080	7/12/23	U.S Bank Corporate Payment System	423.46
4081	7/12/23	VCJPA	209,342.00
4082	7/12/23	Voya Institutional Trust Company	183.00
4083	7/12/23	VSP	646.83
ACH	7/12/23	Alameda County Mosquito Abatement Dist (Payroll)	89,384.12
ACH	7/12/23	Alameda County Mosquito Abatement Dist (Payroll Float)	90,000.00
ACH	7/12/23	CalPERS Retirement	17,910.38
ACH	7/12/23	CalPERS Retirement	287,595.00
ACH	7/12/23	CalPERS 457	3,801.23

Total Expenditures - July 15, 2023. 761,457.06

Alameda County Mosquito Abatement Dist.
Check Register
For the Period From Jul 16, 2023 to Jul 31, 2023

Filter Criteria includes: Report order is by Date.

Check #	Date	Payee	Amount
4084	7/26/23	Airgas	1,613.17
4085	7/26/23	Alco Sheet Metal and Heating, Inc.	485.00
4086	7/26/23	Bay Alarm	139.13
4087	7/26/23	CarQuest	136.81
4088	7/26/23	Cintas	455.04
4089	7/26/23	Clarke	26,801.50
4090	7/26/23	Delta Dental	4,907.85
4091	7/26/23	Grainger	37.14
4092	7/26/23	Hentschke, Eric Armin	100.00
4093	7/26/23	NBC Supply Corp	398.70
4094	7/26/23	PG&E	26.28
4095	7/26/23	Verizon	331.51
4096	7/26/23	Veseris	9,261.03
4097	7/26/23	Visalia Times Delta	2,675.00
4098	7/26/23	VSP	563.59
4099	7/26/23	Voya Institutional Trust Company	183.00
4100	7/26/23	WEX Bank	538.65
4101	7/26/23	MVCAC	11,000.00
ACH	7/26/23	Alameda County Mosquito Abatement Dist (Payroll)	653.83
ACH	7/26/23	Aguilar, Victor	100.00
ACH	7/26/23	CalPERS Health	41,238.48
ACH	7/26/23	CalPERS Retirement	17,956.06
ACH	7/26/23	CalPERS 457	3,802.63
ACH	7/26/23	Cox, Steven	100.00
ACH	7/26/23	Qaadri, Kashef	100.00
ACH	7/26/23	Roache, Cathy J Pinkerton.	100.00
ACH	7/26/23	Salzer, Hope	100.00
ACH	7/26/23	Savage, Tyler	100.00
ACH	7/26/23	Syrop, George	100.00
ACH	7/26/23	Washburn, Jan	100.00
Total Expenditures - July 31, 2023			124,104.40

Alameda County Mosquito Abatement District
Income Statement
July 31, 2023. (1 of 12 mth, 8%)

REVENUES	Actual 2021/22	Actual 2022/23	Current Month	Year to Date 2023/24	Budget 2023/24	Actual vs Budget
Total Revenue	\$ 5,386,808.18	\$ 5,584,751.51	\$ 2,440.47	\$ 2,440.47	\$ 5,008,804.00	0%

EXPENDITURES	Actual 2021/22	Actual 2022/23 ¹	Current Month ²	Year to Date 2023/24	Budget 2023/24	Actual vs Budget
Salaries	\$ 2,129,077.24	\$ 2,309,118.48	\$ 199,826.41	\$ 199,826.41	\$2,462,469	8%
CalPERS Retirement	\$ 471,085.19	\$ 525,486.67	\$ 308,790.83	\$ 308,790.83	\$553,955	56%
Medicare & Social Security	\$ 30,025.60	\$ 33,691.96	\$ 2,852.01	\$ 2,852.01	\$40,292	7%
Fringe Benefits	\$ 484,487.10	\$ 604,257.75	\$ 52,222.96	\$ 52,222.96	\$605,491	9%
Total Salaries, Retirement, & Benefits	\$ 3,114,675.13	\$ 3,472,554.86	\$ 563,692.21	\$ 563,692.21	\$3,662,207	15%
Clothing and personal supplies (purchased)	\$ 7,881.80	\$ 7,517.57	\$ -	\$ -	\$9,000	0%
Laundry service and supplies (rented)	\$ 10,417.41	\$ 12,853.29	\$ 912.29	\$ 912.29	\$13,000	7%
Utilities	\$ 18,134.35	\$ 19,415.68	\$ 26.28	\$ 26.28	\$23,700	0%
Communications-IT	\$ 74,950.03	\$ 97,157.98	\$ -	\$ -	\$104,000	0%
Maintenance: structures & improvements	\$ 26,671.36	\$ 17,801.12	\$ -	\$ -	\$30,000	0%
Maintenance of equipment	\$ 25,354.56	\$ 36,209.89	\$ 136.81	\$ 136.81	\$30,000	0%
Transportation, travel, training, & board	\$ 120,418.29	\$ 133,124.33	\$ 7,884.15	\$ 7,884.15	\$127,990	6%
Professional services	\$ 97,726.00	\$ 91,409.70	\$ -	\$ -	\$122,950	0%
Memberships, dues, & subscriptions	\$ 25,103.23	\$ 24,593.62	\$ 11,694.00	\$ 11,694.00	\$27,000	43%
Insurance - (VCJPA, UAS)	\$ 160,932.64	\$ 177,717.48	\$ 209,342.00	\$ 209,342.00	\$211,959	99%
Community education	\$ 26,225.45	\$ 28,193.67	\$ -	\$ -	\$53,000	0%
Operations	\$ 182,575.57	\$ 120,638.42	\$ 36,462.23	\$ 36,462.23	\$261,500	14%
Household expenses	\$ 25,388.02	\$ 18,517.21	\$ 1,301.20	\$ 1,301.20	\$21,350	6%
Office expenses	\$ 7,002.84	\$ 7,247.77	\$ 639.26	\$ 639.26	\$13,000	5%
Laboratory supplies	\$ 82,354.03	\$ 106,783.12	\$ 2,356.02	\$ 2,356.02	\$140,000	2%
Small tools and instruments	\$ 1,963.31	\$ 2,119.69	\$ 37.14	\$ 37.14	\$3,000	1%
Total Staff Budget	\$ 893,098.89	\$ 901,300.54	\$ 270,791.38	\$ 270,791.38	\$1,191,449	23%
Total Operating Expenditures	\$ 4,007,774.02	\$ 4,373,855.40	\$ 834,483.59	\$ 834,483.59	\$4,853,656	17%

1 - As of June 30, 2023. Unaudited.

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

**Alameda County Mosquito Abatement District
Investment, Reserves, and Cash Balance Report
July 31, 2023. (1 of 12 mth, 8%)**

Account #	Investment Accounts	Beginning Balance	Deposits	Withdrawals	Earnings ¹	Ending Balance
1004	LAIF	\$ 106,513.88	\$ -	\$ -	\$ 829.66	\$ 107,343.54
1005	OPEB Fund	\$ 4,635,407.58	\$ -	\$ -	\$ 89,016.96	\$ 4,724,424.54
1006	VCJPA Member Contingency ²	\$ 353,832.00	\$ -	\$ -	\$ -	\$ 353,832.00
1011	CAMP: Capital Reserve Fund ³	\$ 367,878.07	\$ -	\$ (117.50)	\$ 1,660.21	\$ 369,420.78
1012	PARS: Pension Stabilization ⁴	\$ 2,099,103.47	\$ -	\$ -	\$ 37,879.89	\$ 2,136,983.36
1013	California CLASS: Public Health Emergency Fund	\$ 548,030.82	\$ -	\$ -	\$ 2,463.15	\$ 550,493.97
1014	California CLASS: Operational Fund ⁵	\$ 4,233,226.36	\$ -	\$ (885,443.96)	\$ 16,956.12	\$ 3,364,738.52
1015	California CLASS: Repair and Replace Fund	\$ 2,723,402.11	\$ -	\$ -	\$ 12,240.44	\$ 2,735,642.55
1016	California CLASS: Operating Reserve Fund	\$ 2,020,641.37	\$ -	\$ -	\$ 9,081.86	\$ 2,029,723.23
Total		\$ 17,088,035.66	\$ -	\$ (885,561.46)	\$ 170,128.29	\$ 16,372,602.49
Cash Accounts		Beginning Balance	Deposits	Activity	Ending Balance	
1001	Bank of America (Payroll Account) *	\$ 150,405.82	-	-	\$ 147,783.87	
1003	County Account	\$ 446,556.43	\$ -	\$ -	\$ 446,556.43	
1017	Five Star Bank (Transfer Account) *	\$ 209,783.54	-	-	\$ 317,126.31	
1018	Petty Cash	\$ 404.27	\$ -	\$ -	\$ 404.27	
Total		\$ 807,150.06	\$ -	\$ -	\$ 911,870.88	

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

2 - VCJPA Member Contingency balance is as of March 31, 2023.

3 - \$117.50 transferred from CAMP: Capital Reserve to Five Star Bank for expenditures relating to the fish project.

4 - PARS - Pension Stabilization balance is as of June 30, 2023.

5 - \$885,443.96 transferred from CA:CLASS Operational Fund to Five Star Bank for July expenditures.

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

Alameda County Mosquito Abatement
Balance Sheet Comparison
July

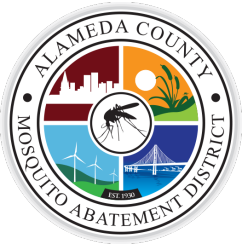
ASSETS	7/31/2023	7/31/2022	7/31/2021
Current Assets			
Bank of America payroll	\$ 148,437.34	\$ 157,249.82	\$ 102,463.71
Bank of the West ¹	-	443,437.00	329,179.80
County	446,556.43	397,580.31	375,269.85
Cash with LAIF	107,343.54	2,074,406.42	3,504,540.40
VCJPA- Member Contingency	353,832.00	351,141.00	373,610.00
CAMP - Repair and Replace ²	-	2,641,853.76	1,041,029.95
CAMP - Public Health Emergency ³	-	424.69	526,243.32
CAMP - Operating Reserve ⁴	-	1,952,115.00	1,944,413.82
CAMP - Capital Reserve Fund	369,420.78	370,213.94	19,993.39
PARS	2,136,983.36	2,123,230.54	1,860,366.38
Five Star Bank	192,703.76	-	-
California CLASS: Public Health Emergency Fund	550,493.97	527,778.03	-
California CLASS: Operational Fund	3,364,738.52	-	-
California CLASS: Repair and Replace Fund	2,735,642.55	-	-
California CLASS: Operating Reserve Fund	2,029,723.23	-	-
Accounts Receivable	533.54	-	9,921.88
Petty cash	404.27	387.16	386.14
	<u>12,436,813.29</u>	<u>11,039,817.67</u>	<u>10,087,418.64</u>
Total Current Assets			
Property and Equipment			
Acc Dep - equipment	(1,709,382.00)	(1,709,382.00)	(1,594,225.00)
Acc Dep - stru & improv	(2,723,997.00)	(2,723,997.00)	(2,604,632.00)
Construction in progress	26,127.93	-	-
Equipment	1,830,175.69	1,806,769.00	1,769,859.00
Structure/improvement	4,760,618.00	4,760,618.00	4,760,618.00
Land	61,406.00	61,406.00	61,406.00
	<u>2,244,948.62</u>	<u>2,195,414.00</u>	<u>2,393,026.00</u>
Total Property and Equipment			
Other Assets			
Net OPEB Asset	1,225,311.00	1,225,311.00	2,522,763.00
	<u>1,225,311.00</u>	<u>1,225,311.00</u>	<u>2,522,763.00</u>
Total Other Assets			
	1,225,311.00	1,225,311.00	2,522,763.00
Total Assets			
	<u>\$ 15,907,072.91</u>	<u>\$ 14,460,542.67</u>	<u>\$ 15,003,207.64</u>
LIABILITIES AND CAPITAL			
Current Liabilities			
Accounts payable	\$ 99,618.23	\$ 143,175.14	\$ 285,068.99
Acc payroll/vacation	210,892.93	201,023.94	208,228.89
Def inflow - 75	1,046,869.00	1,046,869.00	1,254,695.00
Def inflow pen defer GASB 68	1,941,395.00	1,941,395.00	208,602.00
Defer outflow pen cont GASB 68	(822,206.00)	(822,206.00)	(936,411.00)
Net pension liability GASB 68	2,034,280.00	2,034,280.00	3,603,091.00
	<u>4,510,849.16</u>	<u>4,544,537.08</u>	<u>4,623,274.88</u>
Total Current Liabilities			
	\$ 4,510,849.16	\$ 4,544,537.08	\$ 4,623,274.88
Total Liabilities			
	4,510,849.16	4,544,537.08	4,623,274.88
Capital			
Designated fund balances	3,044,832.55	3,044,832.55	4,412,645.55
Investment in general fixed as	9,135,487.49	7,642,845.18	6,677,881.96
Net Income	(784,096.29)	(771,672.14)	(710,594.75)
	<u>11,396,223.75</u>	<u>9,916,005.59</u>	<u>10,379,932.76</u>
Total Capital			
	11,396,223.75	9,916,005.59	10,379,932.76
Total Liabilities & Capital			
	<u>\$ 15,907,072.91</u>	<u>\$ 14,460,542.67</u>	<u>\$ 15,003,207.64</u>

1 - Bank of the West account was closed June 2023.

2 - CAMP: Repair and Replace Fund was closed February 2023.

3 - CAMP: Public Health Emergency Fund was closed September 2022.

4 - CAMP: Operating Reserve Fund was closed February 2023.



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MONTHLY STAFF REPORT –1116 July Data

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OPERATIONS REPORT

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West Nile virus (WNV) activity in July was at the highest levels for Alameda County in several years. This is the case state-wide this year. Way above average rainfall has led to above average numbers of *Culex spp.* mosquitoes throughout California, and Alameda County is no exception. Operations staff put the WNV positive detection response component of ACMAD’s WNV program to the test. A bird collected in Alameda tested WNV positive by the district lab on July 14th and three groups of adult mosquitoes collected in Fremont and Newark by the lab tested positive on Friday July 21st. All four collection sites received a rapid response from operations staff focusing on all potential *Culex spp.* larval sources within several mile radiuses of each collection point with numerous inspections and treatments.

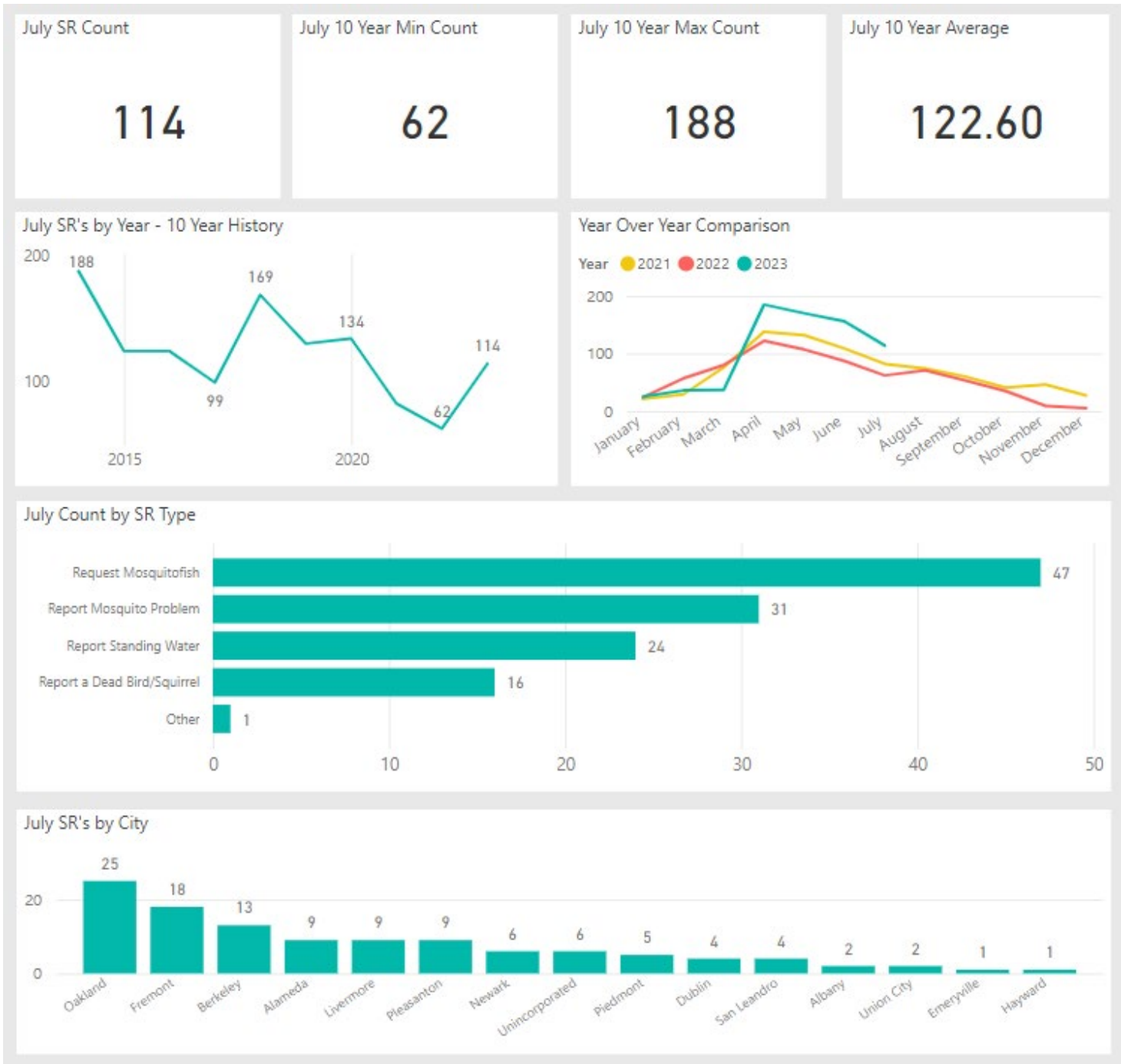
Though the positive adult mosquitoes were all *Culex tarsalis*, much emphasis was placed on *Culex pipiens*. *Cx. tarsalis* tends to prefer avian (bird) blood and is important in the WNV transmission cycle, however, *Cx. pipiens* are much more likely to take human blood, thus raising their potential to transfer the virus to humans. Also, *Cx. pipiens* larval sources are often difficult to locate or are numerous, such as catch basins. Catch basins in and around the detection areas were inspected and treated with ACMAD right-hand drive jeeps and with the district bike. Concurrently, marsh sources, unmaintained swimming pools and canals in these geographic areas were inspected and treated for both *Cx. tarsalis* and *Culex erythrothorax*, our third potential WNV vector. Numerous traps placed out by the lab collected several thousand adult mosquitoes in our southern part of the county that were pooled and tested on July 26th. The results were that all the pools tested at that time were WNV negative. With the detections in Alameda County to date, and several detections in Santa Clara County near our boarder, as well as other detections in Counties nearby, focused efforts by operations staff county-wide toward these species will continue for the next several months.

Requests for service received from the public in July were a bit below the ten-year average for the month. The most numerous of these requests were requests for mosquito fish for backyard ponds, unmaintained swimming pools, and livestock watering troughs. The next highest were requests to “report a mosquito problem.” Of these requests, over half were attributable to *Culiseta incidens*. This species can be found year-round in our county and are common backyard mosquitoes found in fishponds, fountains, and containers holding water. They also are common in slow moving side or pothole areas along creeks and canals. This mosquito is not a significant disease vector, but they can be aggressive and are also large/ noticeable to the public. This species was found in all the above-mentioned sources during the investigations of these requests. Activity levels of *Cx. pipiens* continued an upward trend in July; this species was implicated in 10 of the 33 “report a mosquito problem” requests. The sources causing these calls were catch basins or sumps in all 10 instances. Requests to “report standing water” remained consistent in July, as in months prior. Most of these were to report standing water in back yards, unmaintained swimming pools, and in street gutters. Eighteen requests to “report a dead bird” were received, though only one of these birds was WNV positive. Collection and testing of these dead birds plays a vital role in the ACMAD WNV program and are often the first indicator of virus activity in a given area of our county.

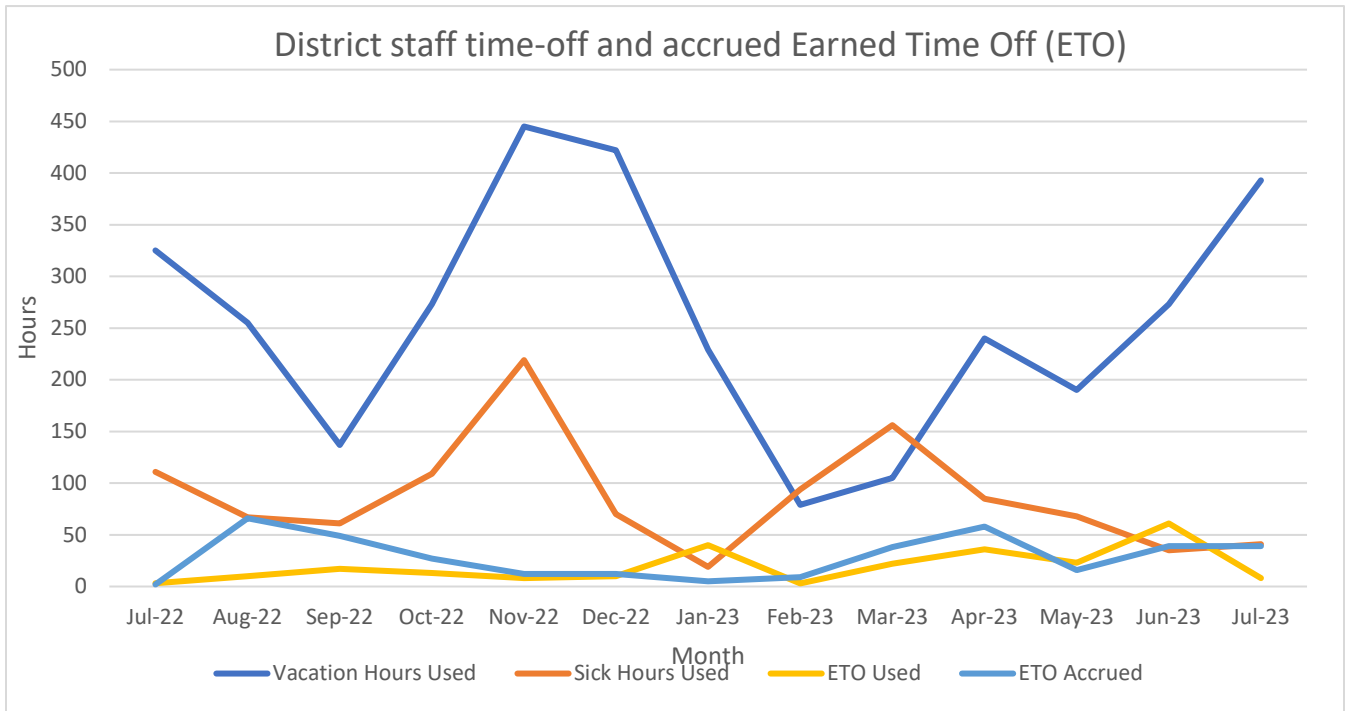
Field Operations Supervisor
Joseph Huston

Operational Report

Service Requests July 2023

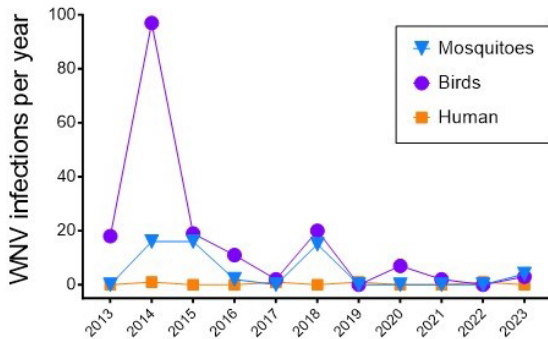


Activity Report

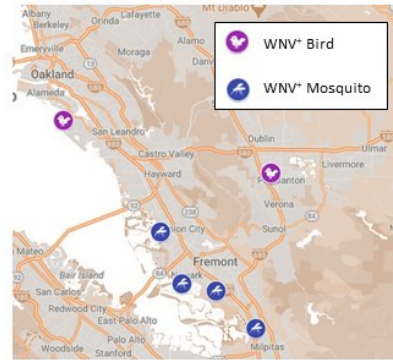


WNV Activity

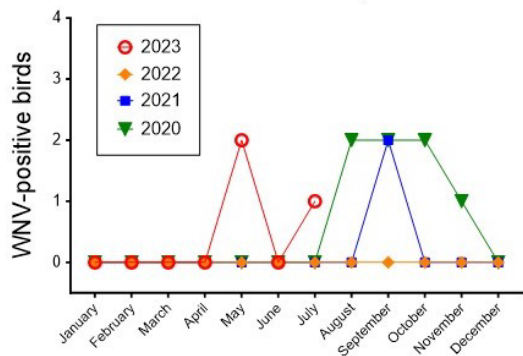
WNV infections detected in Alameda County 2013 – 2023



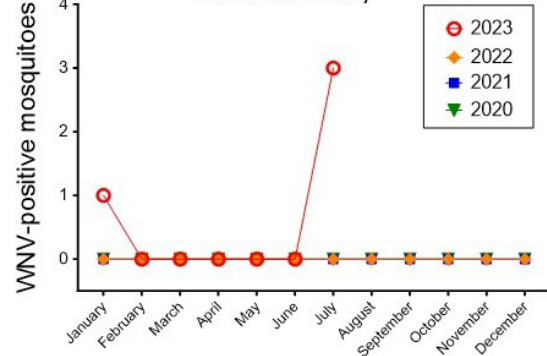
Locations of WNV-infected mosquitoes and birds in Alameda County during 2023



WNV-infected birds collected in Alameda County



WNV-infected mosquitoes collected in Alameda County



A. LAB

Summary

- *Arboviruses in mosquitoes.* *Culex tarsalis* that were collected in three traps in Alameda County were found to be infected with West Nile virus (WNV; one from Newark, and two from Fremont). Santa Clara Vector Control District reported a WNV-positive mosquito pool in Milpitas at southern border of Alameda County.
- *Arboviruses in birds.* An American crow that was collected in Alameda during July was infected with WNV. Saint Louis encephalitis virus (SLEV) and Western equine encephalitis virus (WEEV) have not been detected in birds from Alameda County this year.
- *Native mosquitoes.* A total of 594 encephalitis virus survey (EVS) traps were placed during July, catching 40,082 adult female mosquitoes (67.5 mosquitos per trap).
- Sentinel chicken flocks have not seroconverted, suggesting that WNV, SLEV, and WEEV are not present in Livermore and Union City where the flocks are located.
- Invasive *Aedes* mosquitoes have not been detected in Alameda County during 2023.

Arbovirus Monitoring

- 293 pools of vector species from EVS traps were tested using PCR this month and three contained *Culex tarsalis* that were positive for WNV (one from Newark and two from Fremont). Additionally, Santa Clara Vector Control District notified us of a positive pool of *Culex pipiens* in Milpitas from a trap that was 800 feet from the County boundary. The trapping response did not uncover additional WNV+ mosquitoes. So far this year, 4 mosquito pools have tested positive for WNV.
- WNV was detected in an American crow that was collected in Alameda. The mosquito trapping response did not collect any WNV-positive mosquitoes. To date, three WNV-positive birds have been detected in Alameda County this year.
- SLEV and WEEV have not been detected in the County for over a decade.
- No human WNV cases have been reported during 2023. The most recent human case in the County was reported for 2022.
- Test results from the blood samples collected from the sentinel chicken flocks in Livermore and Union City showed they had not been exposed to WNV, SLEV, or WEEV.

Native Mosquito Abundance

- In California, the main transmitters of WNV, SLEV, and WEEV are: *Culex pipiens* (typically 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).
- This month, 594 EVS traps collected 40,082 female mosquitoes (67.5 mosquitoes per trap), a 40% increase from last month. Adult mosquito abundance for July remained higher than 2021 and 2022 (Figure 1). Higher numbers of *Culex tarsalis* and *Culex erythrothorax* in marsh habitats drove the higher overall abundance in the county (Figure 2, left panels and Figure 3). Fortunately, *Culex pipiens* and *Culiseta incidens* remained low (Figure 2, right panels) as the former is an effective transmitter of WNV to people and the latter species motivates the public to make service requests.
- Most mosquitoes in the western part of the county were *Culex tarsalis* and *Culex erythrothorax* (Figure 4A, 4B). Mosquito abundance in the eastern region of the county was higher than the prior month, but lower overall relative to the bayside region of the county. Fourteen EVS traps did not collect any mosquitoes (2% of all EVS traps for the month; Figure 4A, insert).
- The BG-Counter trap near Sea Breeze Park captured 5,185 adult mosquitoes during the month, most of which were likely *Culex tarsalis* and *Culex erythrothorax*.

LAB FIGURES

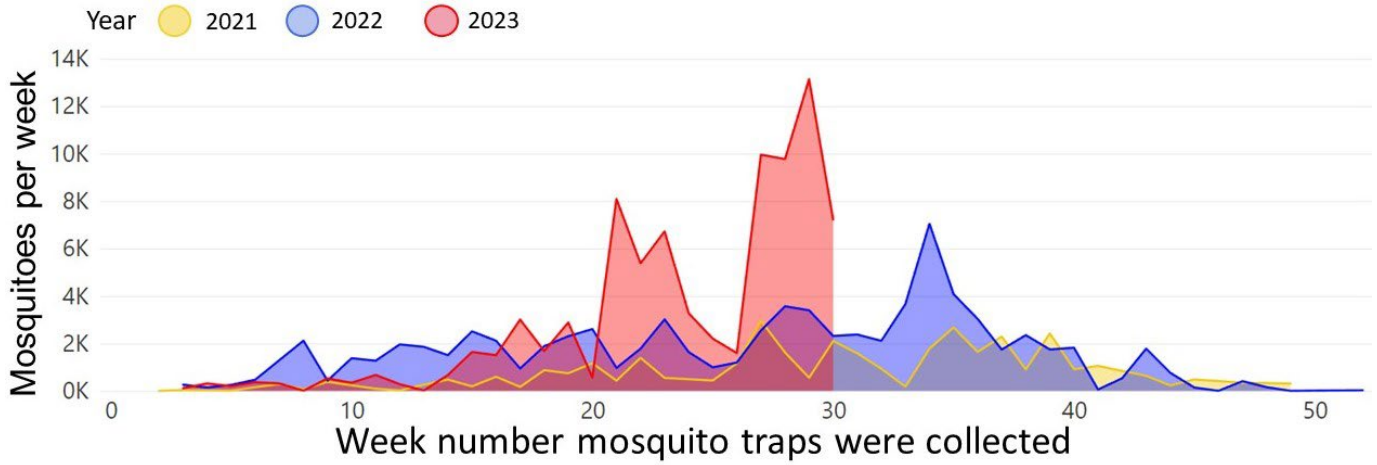


Figure 1. Mosquitoes captured in EVS CO₂ traps from 2021 – 2023. A total of 40,082 adult female mosquitoes were captured in CO₂-baited traps during the month and identified to species. Week 24 of 2021 was excluded from the graph because the high anomalous abundance that week skewed the y-axis.

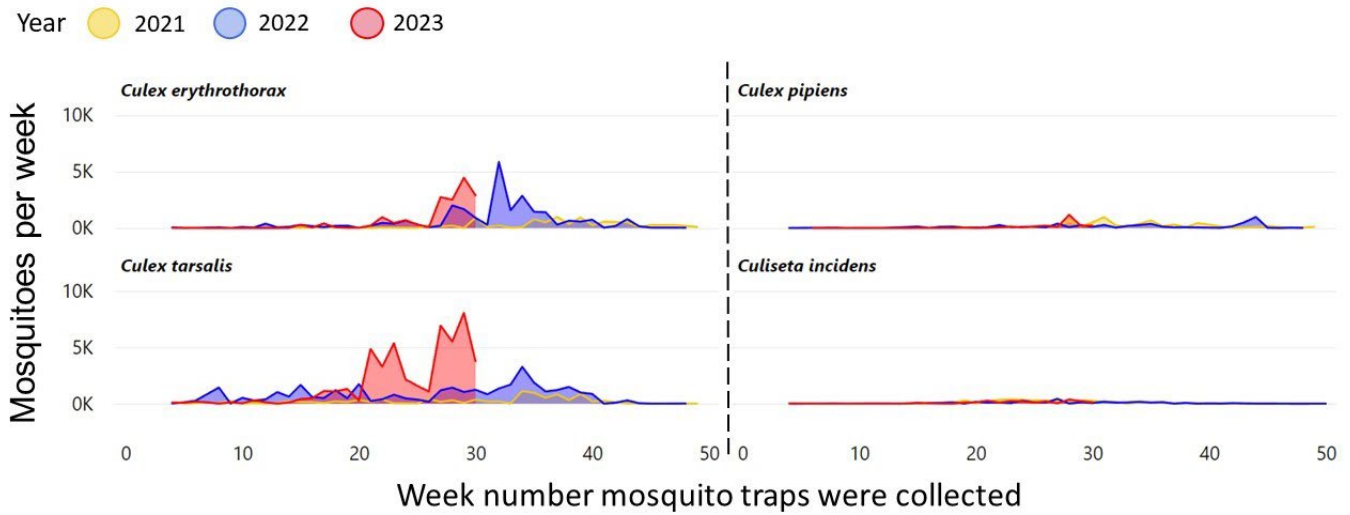


Figure 2. Weekly abundance of important mosquito species during 2021, 2022 and 2023.

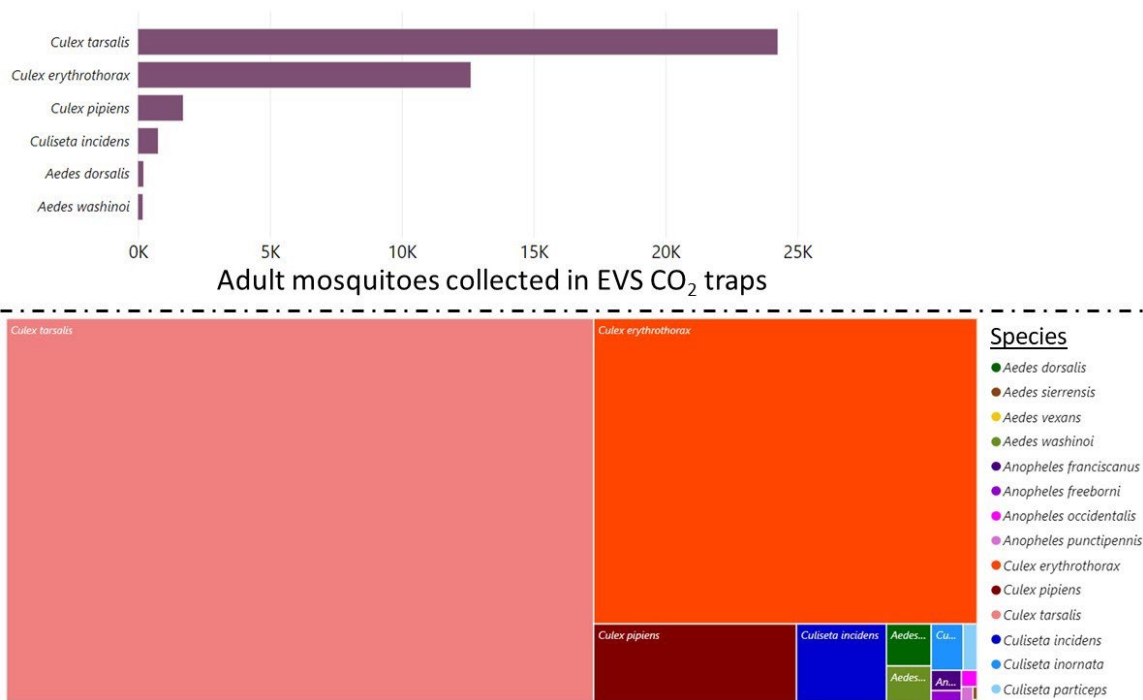
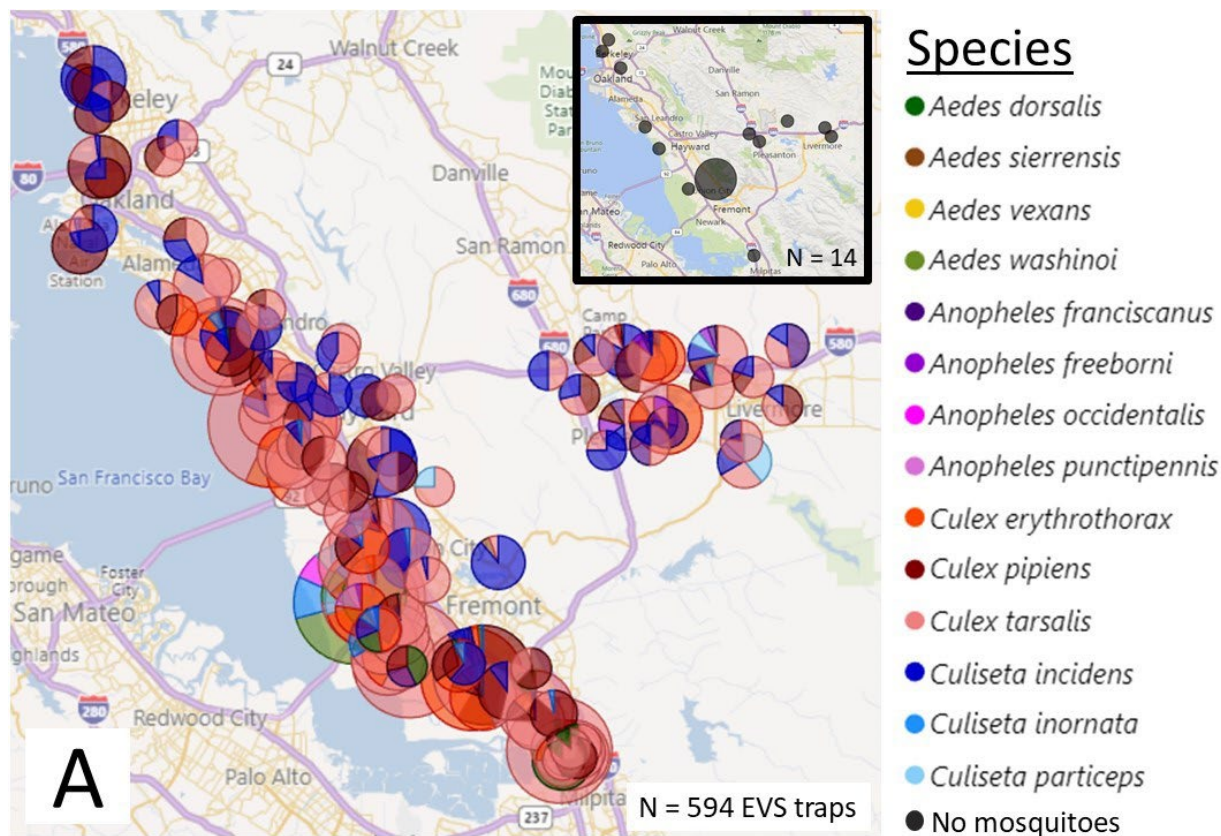


Figure 3. The most abundant species of mosquito captured using EVS CO₂ traps during the month of this report. Larger squares and rectangles indicate higher abundance of that species.



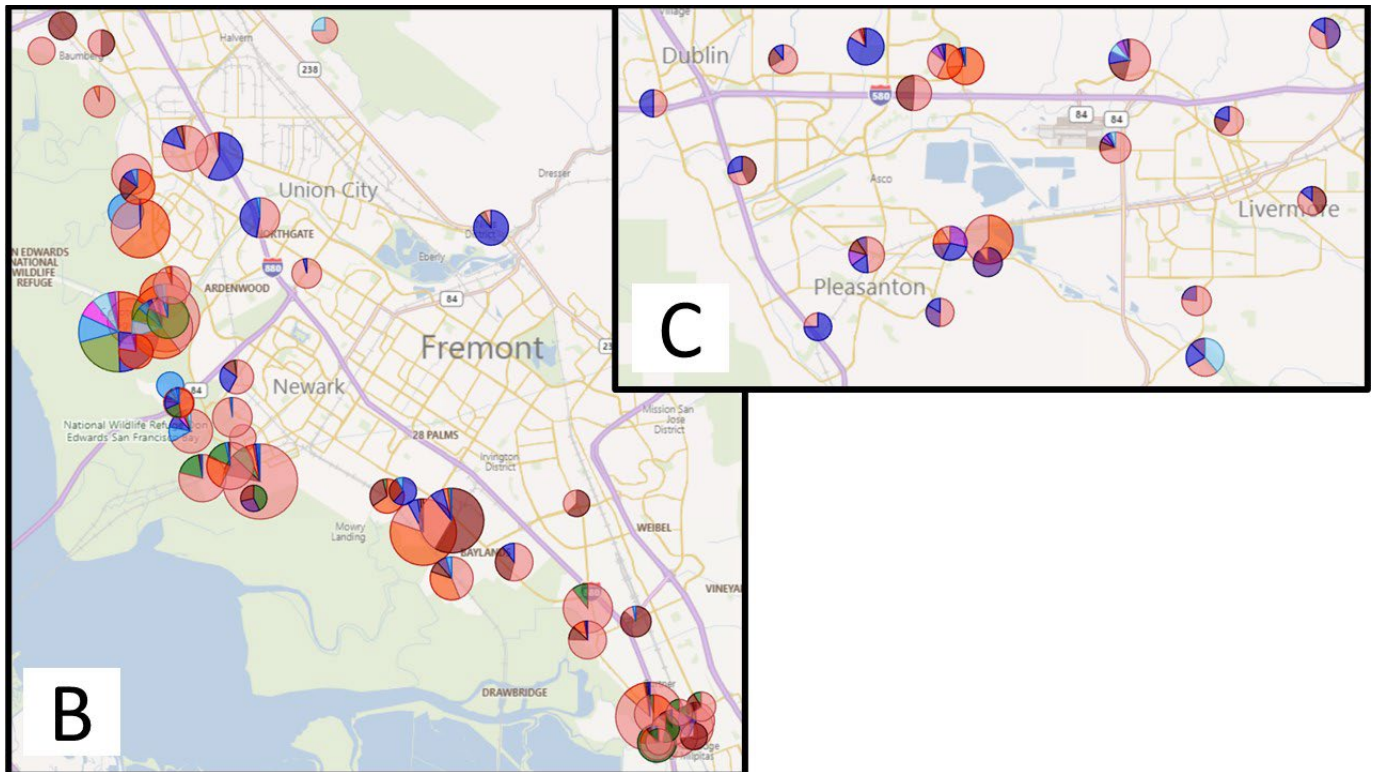


Figure 4. Mosquito abundance by trap site evaluated using EVS CO₂ traps. Pie charts over trap sites indicate the distribution of mosquito species collected at the trap site. The size of each pie chart indicates the relative number of mosquitoes at each site during the month in (A) Alameda County (insert shows traps that were placed but did not collect mosquitoes), (B) the central and southern bayside region, and (C) the eastern region of the county.

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

B. PUBLIC EDUCATION

Events and Education

Peralta Hacienda Historical Park ACE camp (July 19 and July 26)

Washington Hospital Road to Wellness Festival Fremont (July 29)

July Events and Presentations

Event

Presentation

Peralta Hacienda ACE Camp July 19 and 26 (Oakland)
Washington Hospital Road to Wellness Festival July 29 (Fremont)

The graphic features a map of Alameda County with two presentation icons (church symbols) in the north and one event icon (triangle with dots) in the south. A legend below the map identifies the icons. Below the legend, the text lists the events. At the bottom, three photographs show: 1) A woman in a green shirt sitting at a table covered with a blue cloth and a white banner that reads 'ALAMEDA COUNTY PUBLIC HEALTH DEPARTMENT'. 2) A child sitting at a table with a blue cloth, looking at a white container. 3) A man in a grey shirt standing and speaking to a group of people sitting around a blue table outdoors.

Google Analytics

July Data

Due to the consistent numbers (between 90 and 150 each day) along with bot activity on the first and last day of every month for the past few months, and the slow changeover of the Analytics website, we have decided to not report Google Analytics data every month. Instead, we will use it once a year in our December reports, unless there is a major change in data.

Social media

Top Facebook Post

**Getting a new plant?
Keep it mosquito free!**

Plants, especially plants that hold water such as bromeliads or other plants that hold standing water, can harbor mosquito eggs and larvae. Mosquitoes need standing water to complete their life cycle, and plants with a teaspoon of standing water can make an excellent location for mosquitoes. Follow the steps below to keep your plants and home mosquito-free!

1. When you bring it home, flush out old water- both in the planter and throughout the plant
2. Inspect plant and water for any larvae
3. Change water every 4-6 days
4. Place mosquito treatment, such as BtI, in any standing water and add more every 2-3 weeks

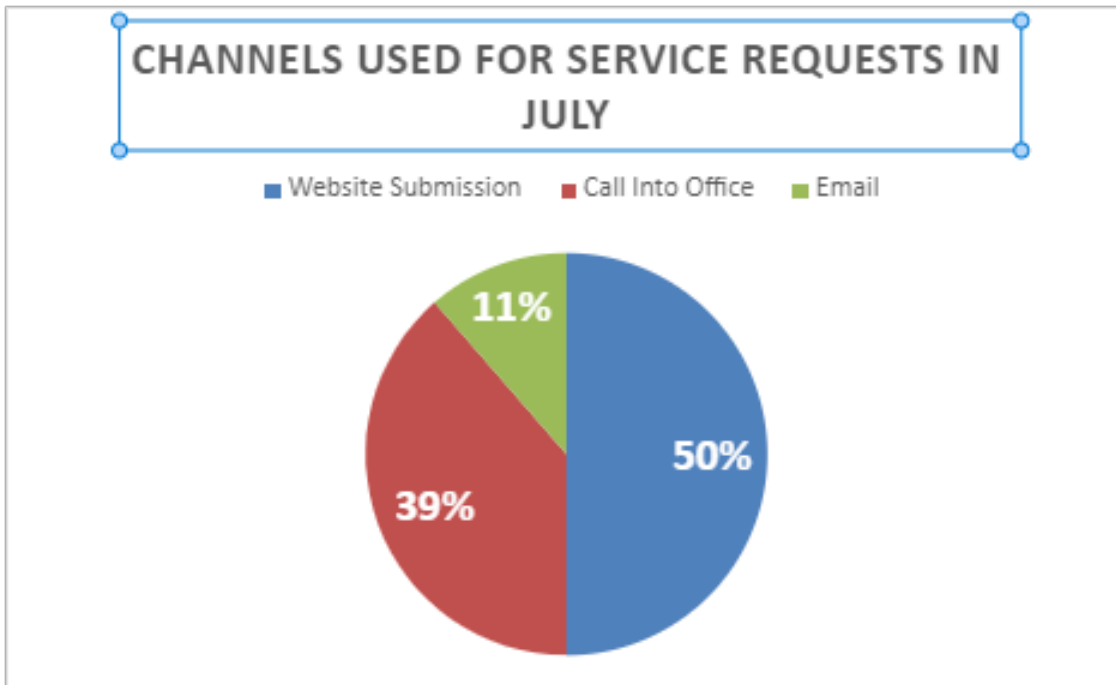
Top Twitter Post

You Retweeted
Placer Mosquito @PlacerMosquito - Jul 8
From the lab: Our Vector Control Technician Tim submitted a larval sample that had two Culex egg rafts with larvae emerging from the rafts. 🐛🐛

Posts: 11
Reach: 311
Followers: 407
Ad has 178,418 reach

Posts: 12
Reach: 1219
Followers: 804

Service Request Referral Summary for July



Calls: 57 Email: 13 Online submissions: 57

Channels Used by Residents to Request Service

