

Sacramento-Yolo  
MOSQUITO & VECTOR  
CONTROL DISTRICT

MARCH 17, 2026

BOARD OF TRUSTEES

BOARD PACKET

10:00 A.M.

8631 BOND ROAD  
ELK GROVE, CA 95624

**SACRAMENTO/YOLO MOSQUITO  
& VECTOR CONTROL DISTRICT  
BOARD OF TRUSTEES REGULAR MEETING**

8631 Bond Road  
Elk Grove, CA 95624  
AND  
707 West Main Street  
Winters, CA 95694

**AGENDA  
March 17, 2026  
10:00 AM**

*In compliance with the Americans with Disability Act, if you are a disabled person and you need a disability-related modification or accommodation to participate in this meeting, please contact the District office at (916) 685-1022 or (916) 685-5464 (fax). Requests must be made as early as possible, and at least one-full business day before the start of the meeting. Documents and materials relating to an open session agenda item that are provided to the SYMVCD Board less than 72 hours prior to a regular meeting will be available for public inspection and copying at 8631 Bond Road, Elk Grove, Ca 95624. The documents will also be available on the agency's website at [www.fightthebite.net](http://www.fightthebite.net).*

*IMPORTANT NOTICE REGARDING VIRTUAL PUBLIC PARTICIPATION: The District currently provides in person as well as virtual public participation via the Zoom link below until further notice. The public shall have the opportunity to directly address the Board on any item of interest before or during the Board's consideration of that item. Public comment on items within the jurisdiction of the Board is welcomed, subject to reasonable time limitations for each speaker.*

Zoom link and call in numbers are available at the meeting registration link on our website at <https://www.fightthebite.net/about/about-the-board/>

**CALL TO ORDER:**

- **Roll Call**
- **Pledge of Allegiance**

**1. Items for Approval by General Consent:**

- a. Minutes of the February 17, 2026 Board of Trustees Meeting**
- b. Expenditures for February 2026**

**2. Opportunity for Public Comment**

*This item is reserved for members of the public who wish to speak on items not on the agenda*

**3. Reports to the Board**

- **Manager's Report**
- **Written Reports from District Departments**
  - **Lab/Surveillance**

- **Ecological Management**
- **Biological Control**
- **Larval and Adult Control**
- **Public Outreach**

4. **Board Review and Consideration of Supporting the AMCA Research Foundation in the Amount of \$100,000**
5. **Board/Staff Reports and Requests**
6. **Adjournment**

**MINUTES OF THE FEBRUARY 17, 2026  
MEETING OF THE BOARD OF TRUSTEES OF THE SACRAMENTO-YOLO  
MOSQUITO & VECTOR CONTROL DISTRICT**

**Location:** In Person @ 8631 Bond Rd, Elk Grove, California

**Time:** 10:00 a.m.

**Call to Order:** The meeting was called to order by Board President Janell Darroch at 10:01 a.m.

**Trustees Present:**

Janell Darroch	President	West Sacramento
Staci Gardiner	Vice President	Isleton
William Reisen	Secretary	Yolo County
Tania Garcia-Cadena*		Woodland
Craig Burnett		Folsom
Lyn Hawkins		Elk Grove
Chris Barker		Davis
Jayna Karpinski-Costa		Citrus Heights
Charles Duty		Sacramento County
Marcia Mooney		Galt
Robert McGarvey		Rancho Cordova
Raymond LaTorre		Sacramento
<b>ABSENT</b>		
Gar House		Winters

\*Appeared Remotely - Trustee Garcia-Cadena's remote appearance was due to illness.

**Staff Present:**

Gary Goodman	Manager
Gavin Ralphs	Legal Counsel
Lisa Pelletier	Administrative Manager
Sarah Wheeler	Laboratory Director
Dan Fisher	IT Administrator

**Roll Call**

This meeting was in person. Attendance was taken by Roll Call.

**Pledge of Allegiance**

*All phones and electronic devices are requested to be silenced during the Pledge of Allegiance and for the duration of the meeting.*

**1. Items for Approval by General Consent**

- a. Minutes of the January 20, 2026 Board of Trustees Meeting
- b. Expenditures for January 2025
- c. Quarterly Investment Report for Period Ending December 31, 2025
- d. CalPERS Contract Resolution of Intention

It was noted that the January minutes incorrectly reported attendance by Jennifer Buckman as legal counsel instead of Gavin Ralphs. Trustee Mooney moved to approve General Consent Items A-C with the noted attendance correction and Trustee Burnett seconded the motion. The Board voted to approve the General Consent Items. Roll call vote was taken and the motion passed 12-0 with 1 member absent.

Trustee Karpinski-Costa requested to pull Consent Item d due to vagueness. The Manager explained the process CalPERS is undertaking to amend the PERS contract for PEPRA members. He acknowledged that the language to be stricken was not available, which made it difficult to approve a notice of intent to adopt the contract revision.

On a motion by Trustee Karpinski-Costa to table Item “d” and seconded by Trustee Gardiner, the Board voted to table the CalPERS Contract Resolution of Intention. Roll call vote was taken and the Board agreed 12-0 with 1 member absent to table Item d of the General Consent items.

**2. Opportunity for Public Comment**

None

**3. Reports to the Board**

**Manager’s Report:** The District promoted Don Henson to replace Robert Fowler as Shop Supervisor upon retirement April 3, 2026. Kylie Letamendi has been promoted to replace Brett Day, North Yolo Supervisor who will retire April 30, 2026. Letamendi and Henson are currently acting as interim supervisors.

Seasonal recruitment is underway with April 1<sup>st</sup> as the target start date. MVCAC was successful and staff presentations went well. Contractors will break ground on the new parking garage within the next week or so. Construction is expected to last about a month.

**Reports from Trustees attending MVCAC:**

Trustee Duty reported that Palm Springs was a good venue, including hotel, presentations, and schedule. He highlighted the “Canary” session, which emphasized the positive impact of cross collaboration and added that the District’s presentations were excellent. Lastly, he enjoyed the presentation on grade school field trips for school-aged children, describing them as enriching.

Trustee Darroch added that the District's presenters did a great job and the ability to download slides was helpful. She was reminded of the vastness of California and its unique concerns and needs and shared some trivia she learned at the conference. She was very impressed by District staff making themselves consistently available for participation at the meeting with questions and discussions.

**Reports from District Departments:**

Laboratory Director gave a presentation on the results of the District's SIT program last year.

**4. Board Review and Consideration of \$400,000 to Fund the Public Outreach Advertising Plan for the 2026 Mosquito Season.**

The Manager described the evolution and growing needs of public outreach.

On a motion by Trustee LaTorre and seconded by Trustee Karpinski-Costa, the Board voted to approve allocating \$400,000 to fund the Public Outreach Advertising Plan for the 2026 Mosquito Season. Roll call vote was taken and the motion passed 12-0 with 1 member absent.

**5. Board Review and Consideration of Installing Outdoor Surveillance Cameras and System.**

The Manager explained the research completed by the Assistant Managers and two quotes obtained and discussed the advantages/disadvantages of each.

On a motion by Trustee Mooney and seconded by Trustee Burnett the Board voted to approve contract execution between the District and Verkada to install outdoor surveillance cameras and system. Roll call vote was taken and the motion passed 12-0 with 1 member absent.

**6. Board Review and Consideration of Contract with MosquitoMate to Expand the District's Sterile Insect Technique Program.**

The Manager discussed expansion of the SIT program to a minimum of 4 new areas, as well as repeating the control study in Natomas. This aligns with the District's long term goal to utilize SIT in conjunction with other control techniques to reduce the mosquito population and virus spread.

On a motion by Trustee Burnett and seconded by Trustee Barker the Board voted to approve execution of a contract between MosquitoMate and the District. Roll call vote was taken and the motion passed 12-0 with 1 member absent.

**7. Board Review and Consideration for Approval of Amendment to General Manager Employment Agreement**

The Board revisited last month's discussion and the Ad Hoc Committee's recommendation to approve the General Manager's contract revision.

On a motion by Trustee Burnett and seconded by Trustee Gardiner, the Board voted to approve an increase to the General Manager's monthly base salary and retirement contribution made by the District on his behalf retroactive to January 1, 2026. Role call vote was taken and the motion passed 12-0 with 1 member absent.

**8. Board/Staff Reports and Requests**

The General Manager confirmed attendance and itineraries to AMCA in late March. He will meet with statewide legislators and invited Trustees to attend. The Board discussed MVCAC donations in hopes that other agencies will also donate.

The Manager informed the Board that the non-union supervisor staff approached him in an effort to advocate for change as a collective group. One request was that supervisors be allowed to work alternative work schedules. The Manager has requested a clear plan to demonstrate effective coverage during the season from the supervisors. The supervisors also requested the ability to take additional time off during the season and shorten the season dates. The Manager will revisit this discussion with the Board in the coming months. Attorney Ralphs is available to answer questions regarding FLSA and updating the employee manual if needed.

Trustee Karpinski-Costa left at 11:43 a.m.

**9. ADJOURNMENT**

The meeting adjourned at 11:59 a.m.

I certify that the above minutes substantially reflect the general business and actions taken by the Board of Trustees at the meeting on February 17, 2026.

---

Lisa Pelletier, Administrative Manager

Approved as written and/or corrected by the Board of Trustees at the February 17, 2026, meeting.

---

William Reisen, Board Secretary

**Sacramento-Yolo Mosquito and Vector Control District**  
**STATEMENT OF OPERATION**  
July 2025 through February 2026

	Jul '25 - Feb 26	Budget	\$ Over Budget
<b>Ordinary Income/Expense</b>			
<b>Income</b>			
4000 · REVENUE	12,870,546.86	22,592,564.00	-9,722,017.14
<b>Total Income</b>	12,870,546.86	22,592,564.00	-9,722,017.14
<b>Gross Profit</b>	12,870,546.86	22,592,564.00	-9,722,017.14
<b>Expense</b>			
5000 · SALARIES/BENEFITS/WC	9,865,419.26	13,576,494.00	-3,711,074.74
5200 · OPERATIONAL			
5210 · LIABILITY INSURANCE	352,233.00	360,492.00	-8,259.00
5250 · AUDITING/FISCAL	21,500.00	20,000.00	1,500.00
5270 · COMMUNICATIONS	58,453.51	100,000.00	-41,546.49
5310 · PUBLIC INFORMATION	214,993.93	678,000.00	-463,006.07
5340 · STRUCTURE & GROUNDS	191,942.14	183,000.00	8,942.14
5370 · MEMBER/TRAINING	59,748.38	170,000.00	-110,251.62
5390 · DISTRICT OFFICE EXPENSES	7,942.86	25,000.00	-17,057.14
5430 · PROFESSIONAL SERVICES	141,866.64	350,000.00	-208,133.36
5440 · MATERIALS & SUPPLIES	11,400.95	16,000.00	-4,599.05
5450 · RENTS & LEASES	6,873.30	91,000.00	-84,126.70
5470 · SAFETY PROGRAM	1,770.00	5,000.00	-3,230.00
5480 · UTILITIES	75,589.74	140,000.00	-64,410.26
6120 · AIRCRAFT SERVICES	775,173.77	1,179,000.00	-403,826.23
6140 · ECOLOGICAL MANAGEMENT	2,615.52	23,000.00	-20,384.48
6160 · MICROBIAL	1,559,225.88	1,800,000.00	-240,774.12
6170 · BIORATIONALS	961,705.76	1,200,000.00	-238,294.24
6180 · INSECTICIDES	664,307.26	950,000.00	-285,692.74
6220 · FISHERIES	86,994.93	35,000.00	51,994.93
6280 · GEOGRAPHIC INFO SYSTEMS	2,910.00	9,000.00	-6,090.00
6320 · INFORMATION TECHNOLOGY	133,884.42	180,000.00	-46,115.58
6350 · CONTROL OPERATIONS	27,078.32	55,000.00	-27,921.68
6370 · SHOP DEPT	85,544.97	134,250.00	-48,705.03
6420 · LAB SERVICES	151,774.40	244,500.00	-92,725.60
6450 · GAS & PETROLEUM	87,202.99	200,000.00	-112,797.01
<b>Total 5200 · OPERATIONAL</b>	5,682,732.67	8,148,242.00	-2,465,509.33
62600 · Ask Accountant	0.00		
<b>Total Expense</b>	15,548,151.93	21,724,736.00	-6,176,584.07
<b>Net Ordinary Income</b>	-2,677,605.07	867,828.00	-3,545,433.07
<b>Other Income/Expense</b>			
<b>Other Income</b>			
67001 · GASB 31 Fair Market Value	-5,884.00		
67005 · Gain(Loss) on Sale of Assets	51,885.00		
<b>Total Other Income</b>	46,001.00		

	<u>Jul '25 - Feb 26</u>	<u>Budget</u>	<u>\$ Over Budget</u>
<b>Other Expense</b>			
<b>7000 · CAPITAL ACCOUNTS</b>			
70010 · CAPITAL OUTLAY	264,726.14	258,500.00	6,226.14
70070 · RESEARCH FUND	0.00	100,000.00	-100,000.00
70080 · BUILDING IMPROVEMENT	25,109.88	395,000.00	-369,890.12
<b>Total 7000 · CAPITAL ACCOUNTS</b>	<u>289,836.02</u>	<u>753,500.00</u>	<u>-463,663.98</u>
<b>Total Other Expense</b>	<u>289,836.02</u>	<u>753,500.00</u>	<u>-463,663.98</u>
<b>Net Other Income</b>	<u>-243,835.02</u>	<u>-753,500.00</u>	<u>509,664.98</u>
<b>Net Income</b>	<u><b>-2,921,440.09</b></u>	<u><b>114,328.00</b></u>	<u><b>-3,035,768.09</b></u>

## Sacramento-Yolo Mosquito and Vector Control District

03/09/26

## Check Register

Accrual Basis

February 2026

Num	Date	Name	Credit	Type
<b>Feb 26</b>				
60268	02/10/2026	Airgas USA, LLC	115.68	Bill Pmt -Check
60269	02/10/2026	Aleshire & Wynder, LLP	273.00	Bill Pmt -Check
60270	02/10/2026	AutoZone, Inc.	324.90	Bill Pmt -Check
60271	02/10/2026	Barnes Welding	559.95	Bill Pmt -Check
60272	02/10/2026	CA Housing and Community Development	37.00	Bill Pmt -Check
60273	02/10/2026	Cintas Fire Protection	7,163.92	Bill Pmt -Check
60274	02/10/2026	City of Woodland	149.91	Bill Pmt -Check
60275	02/10/2026	Cleanit Maintenance Systems LLC	3,145.00	Bill Pmt -Check
60276	02/10/2026	Culligan Quench	1,669.62	Bill Pmt -Check
60277	02/10/2026	Elk Grove Plumbing and Drain	100.00	Bill Pmt -Check
60278	02/10/2026	GreatAmerica Financial Services	376.28	Bill Pmt -Check
60279	02/10/2026	Hunt & Sons Inc	2,017.10	Bill Pmt -Check
60280	02/10/2026	Kimball Midwest	648.30	Bill Pmt -Check
60281	02/10/2026	Kingsley Bogard, LLP	7,923.36	Bill Pmt -Check
60282	02/10/2026	Leading Edge Associates Inc.	1,800.00	Bill Pmt -Check
60283	02/10/2026	Mann Urrutia Nelson CPAs & Assoc LLP	2,500.00	Bill Pmt -Check
60284	02/10/2026	PG & E	2,969.27	Bill Pmt -Check
60285	02/10/2026	Primo Brands	120.91	Bill Pmt -Check
60286	02/10/2026	Red Shoe Productions	9,450.00	Bill Pmt -Check
60287	02/10/2026	SMUD	3,819.67	Bill Pmt -Check
60288	02/10/2026	Stericycle, Inc.	137.33	Bill Pmt -Check
60289	02/10/2026	Top Rank Heating Air Conditioning Inc	984.94	Bill Pmt -Check
60290	02/10/2026	Valley Fire & Security Alarms, Inc	69.50	Bill Pmt -Check
60292	02/10/2026	Benefit Coordinators Corp.	9,154.50	Bill Pmt -Check
60293	02/10/2026	Sutter Health Plan		Bill Pmt -Check
60294	02/10/2026	Sutter Health Plan	20,440.38	Bill Pmt -Check
60295	02/11/2026	Airgas USA, LLC	135.20	Bill Pmt -Check
60296	02/11/2026	Elk Grove Water District	616.39	Bill Pmt -Check
60297	02/11/2026	Enterprise Fleet Management	2,488.38	Bill Pmt -Check
60298	02/11/2026	Kimball Midwest	622.04	Bill Pmt -Check
60299	02/11/2026	Safety Kleen Systems, Inc.	552.75	Bill Pmt -Check
60300	02/11/2026	T-Mobile	2,661.78	Bill Pmt -Check
60301	02/11/2026	Waste Management C & R, Inc.	740.67	Bill Pmt -Check
60302	02/11/2026	T-Mobile	8,058.09	Bill Pmt -Check
60303	02/17/2026	Kaiser Foundation Health Plan	69,527.00	Bill Pmt -Check
60304	02/17/2026	P & A Administrative Services Inc	112.50	Bill Pmt -Check
60305	02/17/2026	Western Health Advantage	1,239.13	Bill Pmt -Check
60306	02/17/2026	Western Health Advantage	9,326.69	Bill Pmt -Check
60309	02/19/2026	Barnes Welding	311.47	Bill Pmt -Check
60310	02/19/2026	BKS Law Firm, PC	2,640.00	Bill Pmt -Check
60311	02/19/2026	Buckmaster Office Solutions	257.61	Bill Pmt -Check
60312	02/19/2026	Elk Grove Lock and Safe Company	20.62	Bill Pmt -Check
60313	02/19/2026	Hunt & Sons Inc	176.62	Bill Pmt -Check
60318	02/19/2026	Kingsley Bogard, LLP	4,284.00	Bill Pmt -Check
60337	02/19/2026	NEOGOV - Governmentjobs.com, Inc.	5,861.33	Bill Pmt -Check
60315	02/19/2026	PG & E	313.56	Bill Pmt -Check
60314	02/19/2026	Sacramento County Utilities	1,171.74	Bill Pmt -Check
60316	02/19/2026	Vector Disease Control International	120,000.00	Bill Pmt -Check
60341	02/25/2026	AA Construction	49,822.00	Bill Pmt -Check
60342	02/25/2026	Barnes Welding	291.89	Bill Pmt -Check
60343	02/25/2026	Chris Miller Consulting	12,000.00	Bill Pmt -Check
60344	02/25/2026	Elk Grove Chevrolet	157.96	Bill Pmt -Check
60345	02/25/2026	Ferrellgas	31.37	Bill Pmt -Check
W00516	02/02/2026	CalPERS 457 Plan	19,138.86	Check
W00517	02/05/2026	CalPERS Financial Reporting & Accounting	108,580.32	Check
60291	02/10/2026	Goodman, Gary W.	2,847.17	Check
60307	02/19/2026	Janell Darroch	61.88	Check
60308	02/19/2026	Duty, Charles	288.75	Check
60317	02/19/2026	Smith, Helen	170.05	Check
60319	02/19/2026	Davis Cemetery	170.05	Check
60320	02/19/2026	Yolo County General Services	170.05	Check
60321	02/19/2026	Nakahara Farms	170.05	Check
60322	02/19/2026	Schene Enterprises	170.05	Check
60323	02/19/2026	Carmichael Park	55.23	Check
60324	02/19/2026	Natomas Mutual Water Co	55.23	Check
60325	02/19/2026	Donaldson, Brad	55.23	Check
60326	02/19/2026	Folsom Water Treatment	55.23	Check
60327	02/19/2026	Gramercy Court	55.23	Check
60328	02/19/2026	Raymond Coupe	55.23	Check
60329	02/19/2026	Rancho Murieta Association	55.23	Check
60330	02/19/2026	KTXL-TV Fox 40	55.23	Check
60331	02/19/2026	Nature Conservancy Cosumnes River Preserv	55.23	Check
60332	02/19/2026	Randy Johnson	55.23	Check
60333	02/19/2026	Steve Simunich	55.23	Check
60334	02/19/2026	Leona Beaver	55.23	Check
60335	02/19/2026	KCRA TV 3	55.23	Check
60336	02/19/2026	Dolores Lopez-Swain		Check

12:53 PM

# Sacramento-Yolo Mosquito and Vector Control District

03/09/26

## Check Register

Accrual Basis

February 2026

---

<u>Num</u>	<u>Date</u>	<u>Name</u>	<u>Credit</u>	<u>Type</u>
60338	02/20/2026	U.S. Bank	28,819.80	Check
60339	02/25/2026	Darroch, Janell - C	116.26	Check
60340	02/25/2026	Garfield House	758.30	Check
60346	02/25/2026	Operating Engineers Local Union No. 3	1,224.00	Check
60347	02/25/2026	CA State Disbursement Unit	350.00	Check
W00518	02/27/2026	Nationwide Retirement Solutions	2,825.00	Check
W00519	02/27/2026	Nationwide Retirement Solutions	4,700.00	Check
W00520	02/27/2026	CalPERS 457 Plan	19,238.58	Check
			<hr/>	
<b>Feb 26</b>			<b>559,888.47</b>	
			<hr/> <hr/>	

# **Sacramento-Yolo Mosquito and Vector Control District**

## **March 17, 2026 Board Meeting**

### **3. Reports to the Board**

#### **a. Manager's Report**

#### **b. Reports from District Departments**

- **Lab/Surveillance (Sarah Wheeler)**
- **Ecological Management (Kevin Combo)**
- **Biological Control (Ken Harris)**
- **Larval and Adult Control (Marty Scholl)**
- **Public Outreach (Luz Maria Robles)**

#### **a. Manager's Report**

The warm weather is creating more service requests from the public and keeping our crews busy to start the season.

The AMCA annual conference is scheduled for March 23-27 in Portland, Oregon. Staff will be giving 5 presentations.

The MVCAC Legislative Days were held on March 10<sup>th</sup>. The Manager met with 9 representatives to update them on vector control in their respective Districts. The association is not sponsoring specific legislation this year and focused on educating our legislators on the issues facing vector control issues. I have attached the issue papers that we communicated to them during the visits.

The AMCA Washington Conference is currently scheduled for May 11-14.

We have been working on scheduling presentations with all of the City Councils. The presentations will be either live or a submitted report depending on the individual preferences of the City. We will update the Board members on the specific schedule of when we will be at their respective locations.

District staff is working on scheduling interviews to fill seasonal vacancies within various departments.

#### **b. Reports from District Departments**

- **Lab/Surveillance (Sarah Wheeler)**
- **Ecological Management (Kevin Combo)**
- **Biological Control (Ken Harris)**
- **Larval and Adult Control (Marty Scholl)**
- **Public Outreach (Luz Maria Robles)**



# STATE OF MOSQUITO CONTROL IN CALIFORNIA

California mosquito and vector control districts remain vigilant in protecting residents from mosquito-transmitted diseases. Despite this ongoing commitment to safeguarding public health, mosquito districts throughout the state face mounting challenges year after year.



## Mosquito-Borne Public Health Emergencies Increasing

Large weather events, flooding, heavy rains, hurricanes, and wildfire burn scars leave behind abandoned pools, standing water, and damaged infrastructure that fuel major mosquito population surges and increase disease risk. In 2025, the Eaton and Palisades fires left thousands of unmaintained swimming pools that were producing mosquitoes and needed mosquito control treatments.



## Locally-Transmitted Dengue in California

In 2023, for the first time in California, there were cases of locally transmitted dengue. In 2025, there were six locally-acquired dengue infections reported in California. Dengue is transmitted by invasive *Aedes* mosquitoes which continue to spread throughout the state and are now in 28 counties. While there have been travel-associated cases of dengue in California before, local transmission is now a new reality for mosquito districts.



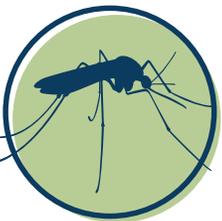
## Invasive Mosquitoes Exacerbate Public Health Risks

Warming temperatures facilitate the spread of invasive *Aedes* mosquitoes which are difficult to control with traditional mosquito control methods. These mosquitoes pose a significant public health threat because of their ability to transmit several diseases like Zika, dengue, chikungunya, and yellow fever. Malaria is also a public health threat because, for the first time since 2003, locally acquired cases of malaria were reported in 2023 in Florida, Texas, Maryland, and Arkansas.



## Financial Constraints Squeezing Mosquito Districts

Surveillance and treatment for invasive *Aedes* mosquitoes are very expensive and labor-intensive, and mosquito and vector control districts throughout the state are saddled with skyrocketing costs. While mosquito and vector control districts maintain reserves, some districts with invasive *Aedes* activity spend a significant portion of their budget to control the spread of invasive mosquitoes and protect public health.



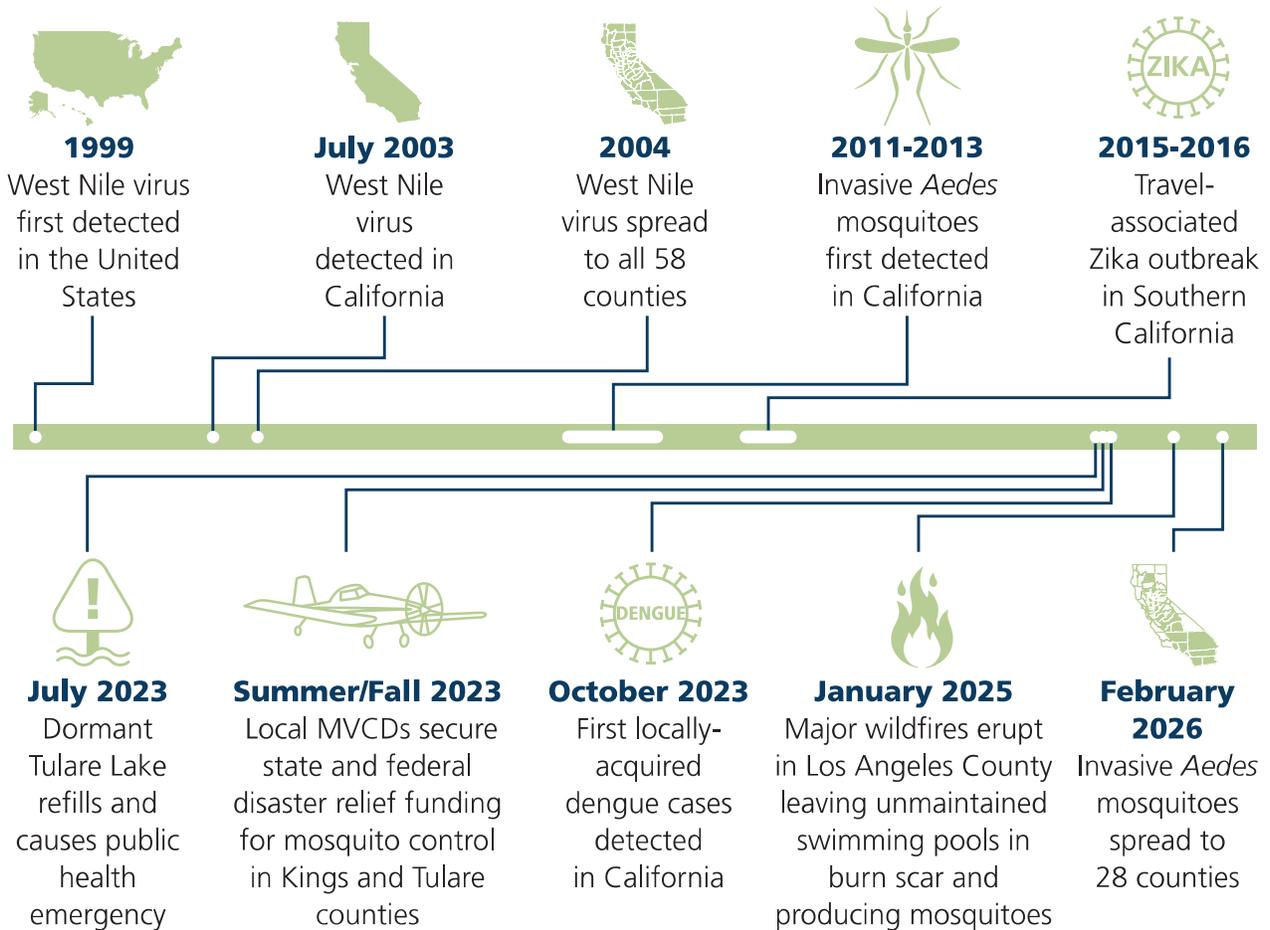
## Continued West Nile Virus Threat

West Nile virus is endemic in California. Our state had very high West Nile virus activity in 2023 (402 human cases, 17 were fatal). Fortunately, there were fewer cases in 2025 with 113 human cases 11 of those were fatal. There have been more than 8,000 human cases and over 400 deaths reported in California since 2003.



## Timeline of Important Mosquito and Vector Control News

Over 100 years ago, in 1915, the state enacted legislation (the Mosquito Abatement Act) to combat mosquito threats in California. The threats continue to grow and California mosquito and vector control districts are on the front lines protecting public health.



### What's Next for Mosquito Control in California?

Climate change is creating weather whiplash that facilitates the spread of invasive mosquitoes and intensifies the transmission of mosquito-borne diseases. Mosquito and vector control districts throughout the state are preparing for this new normal but anticipate that state funding and assistance will be needed to keep pace with increasing mosquito-related public health threats. We look forward to partnering with the state to ensure that we can respond to public health emergencies and keep residents throughout California protected.



# MOSQUITO AND VECTOR CONTROL POLICY ISSUES

Local, state, and federal governments often consider legislation and regulations that can impact a mosquito and vector control agency's ability to carry out responsive and effective control strategies to protect public health. Below are some of the key policy issues that the Mosquito and Vector Control Association of California (MVCAC) regularly monitors and engages in.

## Invasive Mosquitoes and Imported Diseases

Climate change has created more favorable environments for invasive *Aedes* mosquitoes to develop and they continue to spread throughout the state. In 2023, for the first time, locally transmitted dengue cases were reported in southern California. While there have been travel-associated cases of dengue in the state, local transmission is now a new reality that mosquito districts have to contend with. Surveillance and treatment for invasive *Aedes* mosquitoes are very expensive and labor-intensive, and mosquito and vector control districts throughout the state are saddled with skyrocketing costs. Some districts with *Aedes* activity report spending a significant amount of their budget to control the spread of invasive mosquitoes and protect public health.

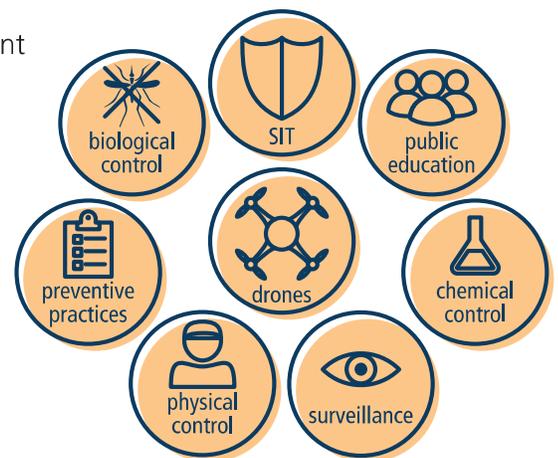
## Public Health Pesticide Use and Availability

Mosquito and vector control districts use Integrated Vector Management (IVM), an evidence-based, data-driven decision making tool used to suppress vector-borne diseases. IVM includes the use of public health pesticides in a safe and environmentally sensitive manner. Public health pesticides used for mosquito and vector control are different from agricultural pesticides. Current public health pesticides are susceptible to limits on available chemistry and mosquito districts face challenges with pesticide resistance. It is critical that mosquito control experts have continued access to public health pesticides and there is a focus on developing new products.

## Innovative Technologies

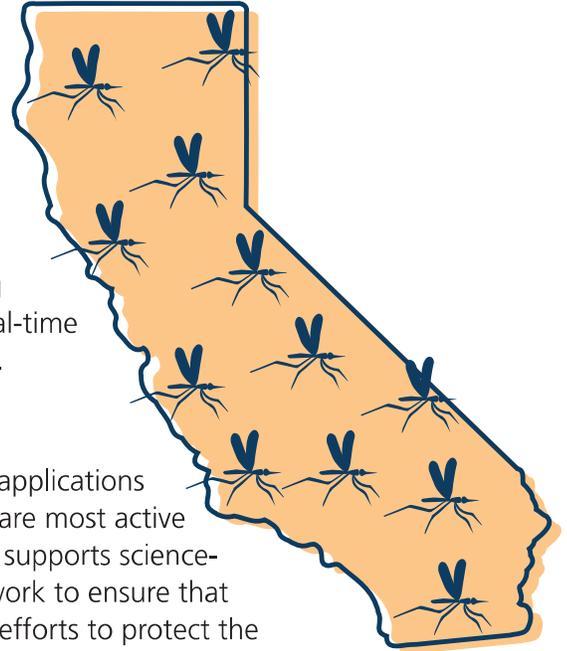
As invasive mosquitoes continue to spread throughout the state, mosquito control professionals are increasingly using innovative but costly technologies to prevent the spread of serious diseases. One innovative control method involves using drones to optimize field operations and enable mosquito control agencies to easily detect mosquito habitats and make precise control treatments. Other innovative technologies include irradiation and *Wolbachia*, which are Sterile Insect Techniques. Having the ability to use innovative technologies as part of an Integrated Vector Management program is critical for protecting public health.

## Integrated Vector Management



## Mosquito and Vector Research

The California Vector-borne Disease Surveillance Gateway (CalSurv) is an essential tool in fighting vector-borne diseases. It is recognized in statute (AB 320 – Quirk) as the statewide surveillance database critical to preventing the spread of mosquito-borne diseases. Housed at UC Davis, CalSurv curates local and statewide data to enable 80+ mosquito and vector control and public health agencies to make informed decisions on public health interventions. The state's ongoing support for this online interactive platform is essential as it enables real-time collection, visualization, and analysis of data on vector-borne diseases.



## Pollinator Protection

When the risk of disease transmission is high, adult mosquito control applications are made before dawn or after dusk to target mosquitoes when they are most active and avoid day-active pollinators such as butterflies and bees. MVCAC supports science-based efforts to ensure pollinator populations are protected and we work to ensure that legislation and regulations do not have unintended impacts that limit efforts to protect the public from mosquito-transmitted diseases.

## Stormwater Management

Balancing strict water quality objectives with public health and safety protections is increasingly complex for stormwater practitioners. Urban stormwater conveyance infrastructure is often a significant source of mosquito production. It is important that trash capture devices are designed so that mosquito control professionals can access and inspect them and apply mosquito control treatments needed to protect public health. MVCAC engages with the State Water Resources Control Board to review trash capture devices during the application phase and works to foster collaboration among stormwater professionals, municipal planners, public health officials, and mosquito and vector control districts.

## Stakeholder Collaboration

MVCAC works with water districts, utilities, property owners, and cities and counties throughout the state to increase awareness about the importance of public health mosquito control. We partner on multi-beneficial goals such as limiting urban runoff, serve as a subject matter expert on vector-related issues, and work to increase collaboration so that Californians are protected from mosquitoes and the diseases they can transmit.



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

(916) 440-0826  
mvmcac@mvmcac.org  
mvmcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814



# MOSQUITOES ARE THE WORLD'S DEADLIEST ANIMALS

Mosquitoes are more than a nuisance — they can transmit pathogens that can cause serious diseases in humans and animals. The U.S. Centers for Disease Control and Prevention says that mosquitoes are the world's deadliest animal. In California, West Nile virus is the most prevalent and serious disease transmitted by mosquitoes.

## Facts About Mosquitoes

- There are more than 50 mosquito species in California. Not all of them are a threat to humans.
- Mosquitoes need a small amount of standing water to reproduce.
- Mosquito-borne diseases are transmitted when an infected mosquito bites a person or animal.
- Only female mosquitoes bite. Male mosquitoes do not bite and cannot transmit diseases.



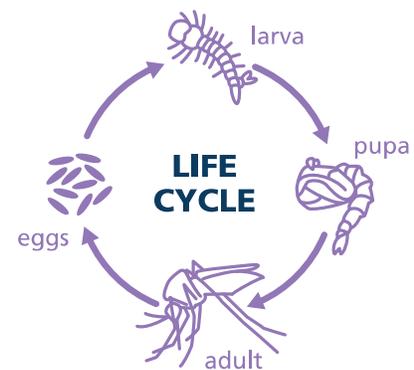
*Culex* mosquitoes are widespread in California

## West Nile Virus

- The main species of mosquitoes that spread West Nile virus are mosquitoes in the *Culex* genus.
- *Culex* mosquitoes are typically active at dawn and dusk.
- West Nile virus has sickened more than 8,000 Californians and killed nearly 400 residents since it was first detected in 2003.
- There is no vaccine to protect people from West Nile virus and many other mosquito-transmitted diseases.

## Mosquito Life Cycle

- Mosquitoes can develop from eggs to adults in 5-7 days.
- Mosquito eggs can look like small specks of dirt so it's important to scrub containers holding water each week.



## Mosquito Production Sources

- Mosquitoes can develop in water sources as small as bottle cap.
- Any amount of standing water can be a mosquito source.
- Invasive mosquitoes tend to develop in and around people's homes.



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

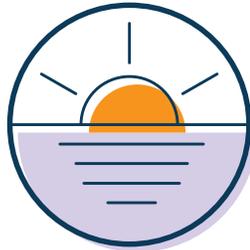
(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814

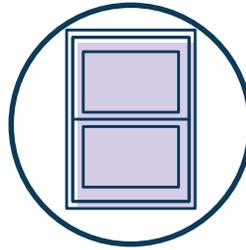
## Protect Yourself From Mosquito-Transmitted Diseases



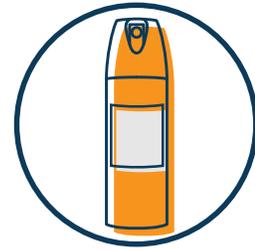
Wear protective clothes



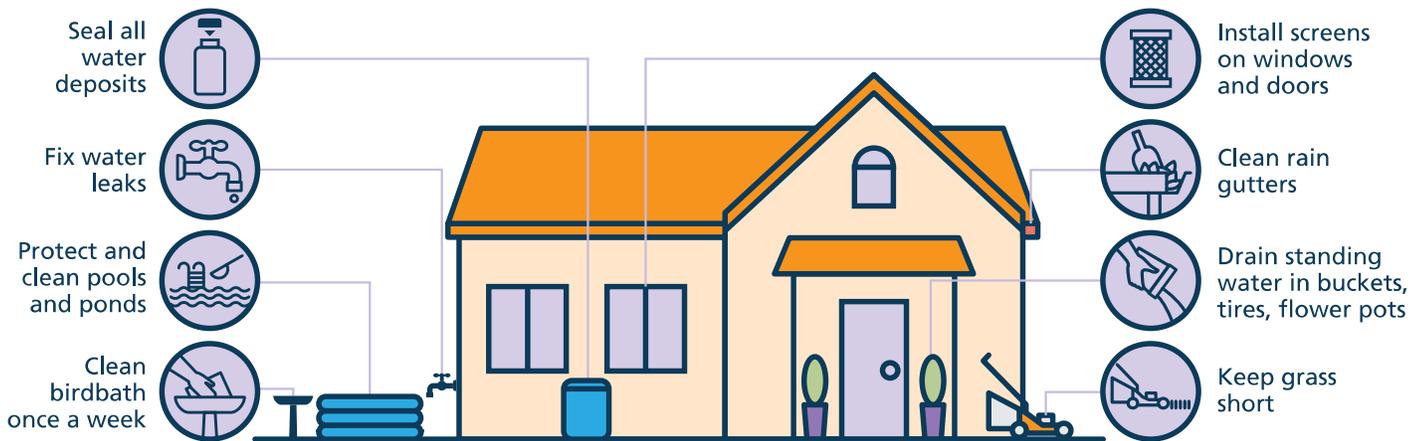
Avoid going out at dusk/dawn when mosquitoes are more active



Stay in a place with air conditioning and window screens



Use EPA-registered insect repellent



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

(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814



# ABOUT THE MOSQUITO AND VECTOR CONTROL ASSOCIATION OF CALIFORNIA

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

## **Mosquito Control Matters**

More than a century ago, California enacted legislation – the Mosquito Abatement Districts Act of 1915 – to combat mosquito threats in the state. Today, there are increasing public health risks from global travel, trade, and climate change. Mosquito and vector control agencies are on the front lines protecting public health and promoting prevention strategies for mosquito-transmitted diseases such as West Nile, St. Louis encephalitis, dengue, chikungunya, and Zika viruses. MVCAC agencies use Integrated Vector Management (IVM), an evidence-based, data-driven decision-making tool used to suppress vector-borne diseases. Throughout the state, mosquito and vector control districts work to protect Californians from the health risks, discomforts, and economic impacts of vector-borne diseases.

## **Members**

Mosquito and vector control agencies throughout the state are members of MVCAC. Our membership also includes a diverse group of experts, academics, and organizations who are all committed to protecting public health and advancing the science of mosquito control.

## **Partners**

MVCAC partners with **CalSury Gateway**, an online data management and visualization platform to better track and predict the emergence of mosquitoes, problem areas, and response, the California Department of Public Health's **West Nile Virus Call Center** and the **American Mosquito Control Association**.



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

(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814



### **Advocacy**

MVCAC is the leading voice for mosquito and vector control in the California Legislature, and each year, MVCAC hosts a Legislative Day at the Capitol where participants meet with legislators. MVCAC also monitors legislation that could impact mosquito and vector control and mobilizes member agencies to take action.



### **Regulation & Permitting**

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



### **Certification & Continuing Education**

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



### **Public Education**

MVCAC works to increase public awareness about the importance of mosquito and vector control through a variety of activities, including “Mosquito Awareness Week,” which takes place each spring. MVCAC also collaborates with stakeholders to increase mosquito and vector-borne disease prevention.



### **Mosquito Research**

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



### **Collaboration**

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



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

(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814



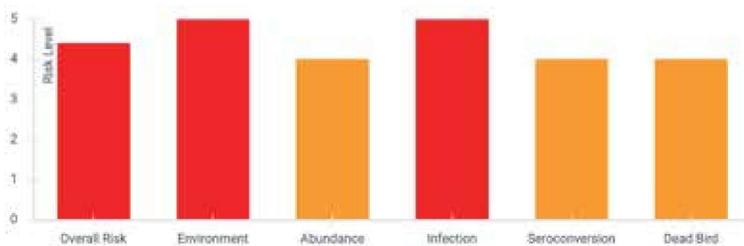
# CALSURV CONTINUES TO REVOLUTIONIZE MOSQUITO CONTROL

**The California Vector-Borne Disease Surveillance Gateway (CalSurv)** is an essential tool in fighting vector-borne diseases. It is recognized in statute (AB 320 – Quirk) as the statewide surveillance database critical to preventing the spread of mosquito-borne diseases. The platform was included in the 2025-26 state budget as an annual appropriation. The state’s ongoing support for this online interactive platform is critical as it enables real-time collection, visualization, and analysis of data on vector-borne diseases.

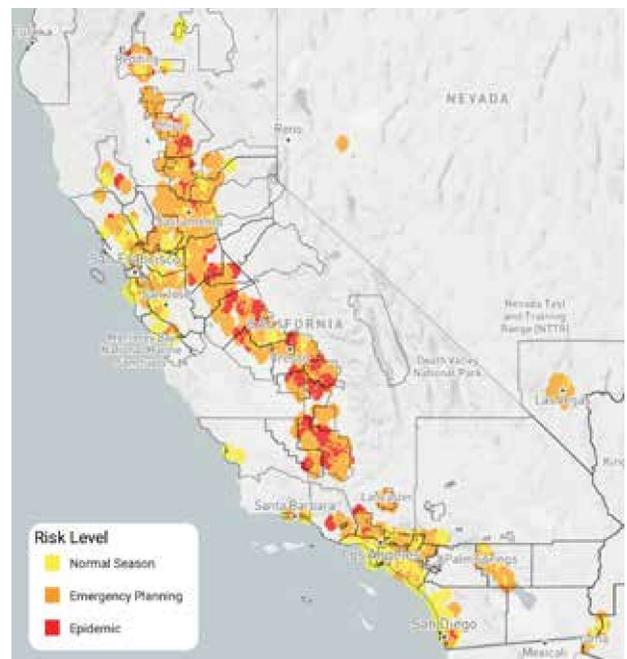
## State Funding Has Sustained CalSurv and Enabled the Addition of New Capabilities

- New map-based data viewer that enables each agency to see and manage their surveillance data in one place.
- Service visit tracking with tools to record and view history of vector control services provided to California residents.
- Improved dengue risk map that estimates the potential for dengue virus transmission based on mosquito trap results and environmental temperatures, offering real-time weekly risk assessments at sub-county level.
- Open data to support predictive modeling and accelerate research on the spread of invasive species and climate change-related impacts.
- Support for Integrated Vector Management practices through immediate reporting of mosquito and tick surveillance and pathogen test results.
- Improved local, state, and national interoperability to enable evidence-based decision-making at all scales.

### West Nile Virus Risk Components for Week Ending September 7, 2025



### West Nile Virus Human Infection Risk Assessment for Week Ending August 9, 2025



### Overall West Nile Virus Risk Levels for 2025



## Learn How CalSurv Works

### Turns data into evidence for public-health decision-makers

- Tracks the spread of invasive mosquitoes
- Enables real-time control decisions based on surveillance data to prevent the spread of vector-borne diseases

### Supports cutting-edge research

- Provides data that supports research to enhance surveillance and control strategies and predict new disease outbreaks

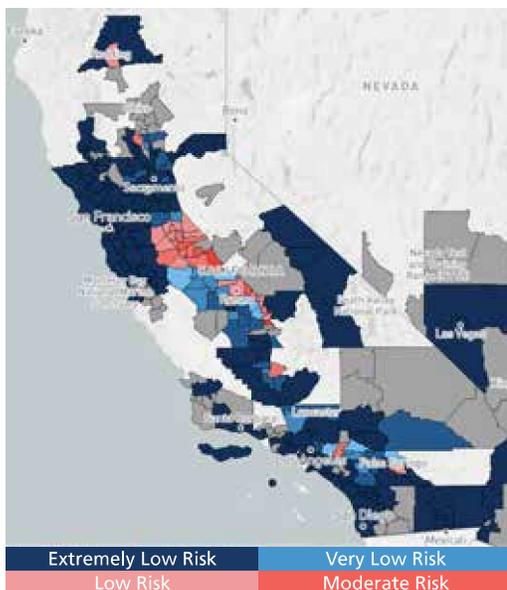
### Enables state and national reporting and risk assessment

- CA Dept. of Public Health uses CalSurv data on mosquito abundance, mosquito infection rates, dead birds, sentinel chickens, and weather to provide statewide reports and assess transmission risk for vector-borne diseases.

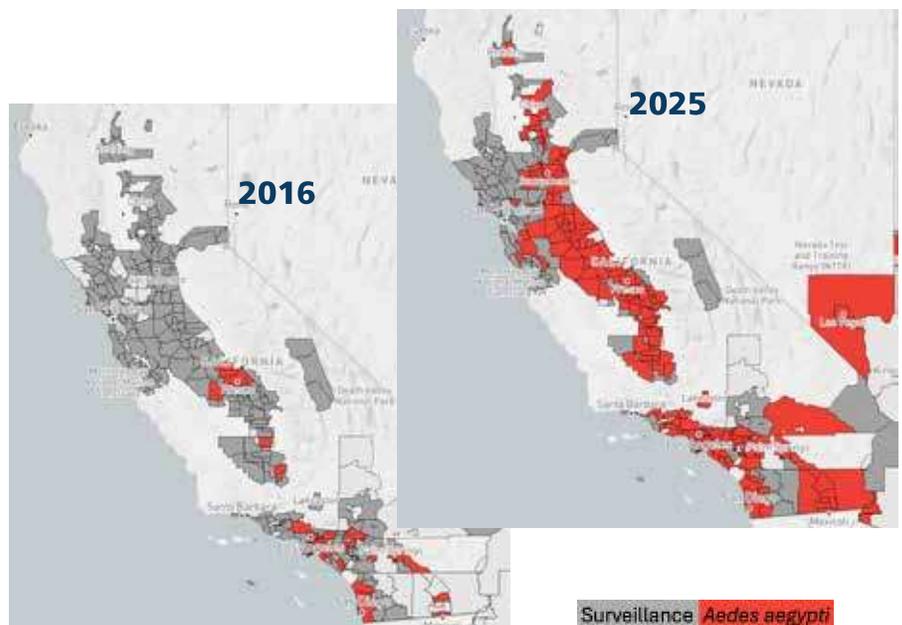
### Reduces health disparities

- Local vector control programs vary greatly in funding and operational capacity.
- CalSurv provides a software solution for surveillance data in smaller rural communities that have a higher risk of arbovirus transmission but limited vector control resources.

## Dengue Risk Map for Week Ending September 6, 2025



## *Aedes aegypti* Detections Based on Surveillance



## CalSurv Visualizes Disease Outbreak Risks

CalSurv, based at UC Davis, provides local and statewide data to support 80+ mosquito and vector control agencies in making informed public health decisions. Amid ongoing West Nile virus and new invasive *Aedes* mosquito threats, CalSurv plays a crucial role in controlling these mosquitoes by identifying pesticide resistance and mapping disease outbreak risks.



# MOSQUITO-BORNE PUBLIC HEALTH EMERGENCIES INCREASING IN CA

Mosquito-related threats to public health continue to increase across California. Climate change is driving extreme weather variability that expands mosquito habitat, intensifies the transmission of mosquito-borne diseases, and lengthens the mosquito season by creating conditions that allow mosquitoes to survive longer.

## **Flooding, wildfires, and other natural disasters are increasingly followed by drastic surges in mosquito populations capable of transmitting serious diseases.**

Mosquito control is most effective when it happens early, before mosquito populations surge and disease begins to spread. Districts in California conduct surveillance, plan, and implement treatments in advance to prevent outbreaks, especially following floods, wildfires, and other extreme weather events. However, emergency funding is typically released only after a disaster has already escalated - once mosquito samples begin testing positive for disease or people get sick. This reactive funding structure does not align with the urgent, preventive nature of mosquito control. When standing water is identified, districts must act immediately to treat it before mosquito populations develop and disease risk increases.

California must act now to ensure mosquito control districts have the resources needed to prevent and respond to more frequent, disaster-driven mosquito emergencies. **Dedicated state funding, streamlined emergency response authority, and strengthened coordination among local, state, and federal agencies** are essential to stopping mosquito-borne disease outbreaks before they occur.

## **Locally-Acquired Dengue in California**

There were two locally acquired dengue cases reported in 2023, 18 in 2024, and six in 2025. Warmer temperatures, milder winters, and shifting rainfall patterns linked to climate change are lengthening mosquito seasons and expanding where invasive *Aedes* mosquitoes, that can transmit Zika, dengue, chikungunya and yellow fever, can survive. When cases emerged, mosquito control districts and public health partners mobilized quickly, but the need for surge staffing, lab testing, and rapid-response treatments to prevent local disease outbreaks continues to strain local mosquito control district budgets.



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

(916) 440-0826  
mvmac@mvmac.org  
mvmac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814

## Wildfires Leave Dangerous Unmaintained Swimming Pools in Burn Scars

The January 2025 Eaton Fire in the San Gabriel Mountains and the Palisades Fire along the coast left thousands of unmaintained swimming pools, creating ideal conditions for mosquito

development and raising public health concerns. In the San Gabriel Valley, 1,475 nonfunctional pools were found in the Eaton Fire burn scar, with roughly 80% actively producing mosquitoes capable of spreading disease. In the Palisades Fire burn zone, over 1,700 parcels with pools or spas were identified as potential sites for mosquito development. Local mosquito control districts responded with inspections, treatments, and emergency staffing, requiring tens of thousands of dollars in additional funding to manage the unprecedented scope of mosquito control.

The 2018 Camp Fire, which ignited on November 8 in Paradise, outside Northern California's typical mosquito season, created mosquito development conditions that were not evident until the following May, when thousands of swimming pools and septic tanks remained abandoned in the burn area. By then, the emergency declaration had lapsed, leaving mosquito control districts unable to access local, state, or federal disaster-response funding. This highlights a recurring statewide issue: post-fire mosquito threats often emerge months after a wildfire is contained, long after traditional funding mechanisms have closed.

## Dormant Tulare Lake Refilled and Caused West Nile Virus Crisis

In 2023, heavy rains caused historic flooding across the Central Valley and Tulare Lake re-emerged to a size comparable to Lake Tahoe. This created ideal conditions for disease-carrying mosquitoes to develop. Mosquito populations surged in Kings and Tulare Counties, with nightly trap counts of 2,000-3,000 compared to the normal 25-75, and testing confirmed West Nile virus-positive mosquitoes. Mosquito control districts expanded surveillance and treatment, but the scale of the lake, much of it outside district boundaries, exceeded local capacity. State and federal funding from CalOES and FEMA was secured to support coordinated aerial and ground-based treatments, monitoring, and interagency response to reduce the risk of widespread disease transmission.

Los Angeles Times

Mosquitoes are breeding in pools in the Eaton fire area. Officials may not be able to control them much longer.



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

(916) 440-0826  
mvmcac@mvmcac.org  
mvmcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814



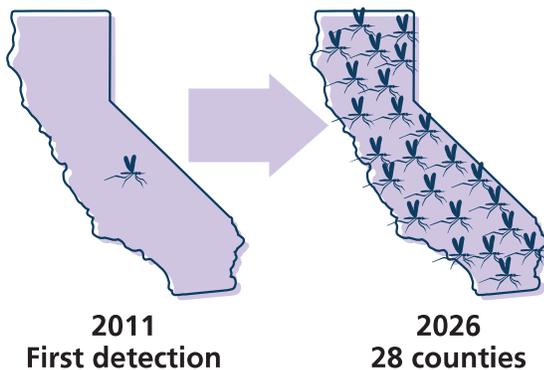
# INVASIVE *Aedes* MOSQUITOES ARE SPREADING IN CALIFORNIA

Invasive *Aedes* mosquitoes are rapidly spreading across California although they are not native to the state and don't have a place in our ecosystem. Since their initial detection in 2011, *Aedes* mosquitoes have spread to over 28 counties in the state. Not only are they a nuisance, *Aedes* mosquitoes pose a significant public health threat because of their ability to transmit several diseases like Zika, dengue, chikungunya and yellow fever.

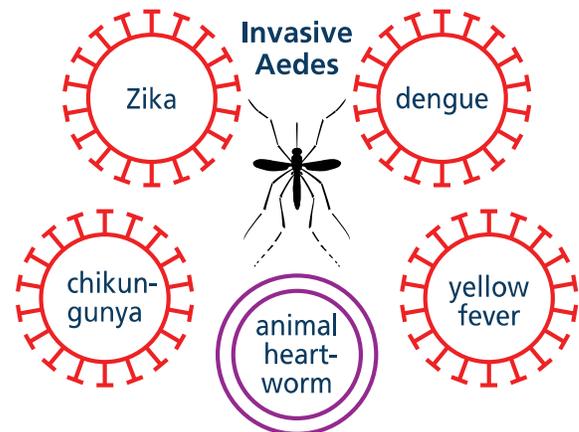
Invasive *Aedes* mosquitoes are characterized by their aggressive, daytime-biting behavior. They are hard to control and can become resistant to commonly-used insecticides. Female *Aedes* mosquitoes lay their eggs in small water sources in front yards, backyards, and patios, areas where mosquito control agencies can't easily inspect or control. Also, their eggs are resistant to drying out and can survive for many months.

Climate change has created more favorable environments for invasive mosquitoes to develop and they have adapted to urban and suburban environments. Surveillance and treatment for invasive *Aedes* mosquitoes are very expensive, labor-intensive, and mosquito and vector control districts throughout the state are saddled with skyrocketing costs.

## *Aedes* Mosquitoes Are Invading Our State



## Disease Transmission



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

(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814

## Innovative Technologies and Sterile Insect Technique



Finding environmentally friendly mosquito control tools is a priority. Innovative technologies will not replace traditional mosquito control methods but will be another Integrated Vector Management tool used to protect public health.

## Integrated Vector Management Program

Due to the difficult nature of controlling invasive mosquitoes, many mosquito and vector control agencies have been exploring the use of Sterile Insect Techniques (SIT) and innovative technologies such as drones, self-limiting mosquitoes, *Wolbachia*, and irradiation.



Drones



Self-limiting mosquitoes



*Wolbachia*



Irradiation



**Invasive *Aedes* mosquitoes are more than a nuisance — they are a serious public health threat and California's mosquito and vector control agencies need new ways to control them.**



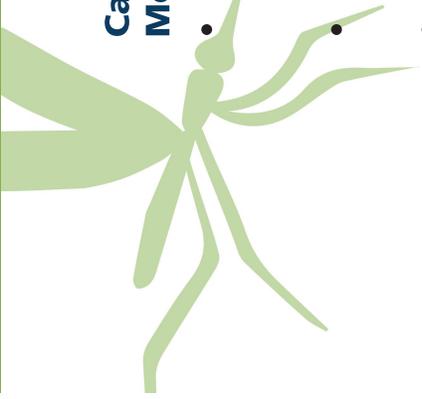
**MVCAC**  
Mosquito and Vector Control  
Association of California

(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814



# THE IMPORTANCE OF PUBLIC HEALTH PESTICIDES



## California Mosquito and Vector Control Districts Use a Variety of Methods to Control Mosquitoes and Protect Public Health

- Mosquito and Vector Control Districts in California use Integrated Vector Management (IVM), an evidence-based, data-driven approach to suppress mosquitoes and mosquito-borne diseases that affect public health.
- IVM incorporates various tools such as monitoring, source reduction, public education, and promoting effective water management to prevent recurrence of mosquitoes.
- When necessary, the use of public health pesticides is a vital component of IVM due to their versatility, effectiveness, and rapid deployment in comparison to other control methods.

## Public Health Pesticides Are Evaluated and Regulated by State and Federal Agencies

-  The U.S. Environmental Protection Agency evaluates pesticides to ensure they can be used effectively without posing unreasonable risks to human health and the environment.
- The EPA places a special emphasis on children's health in making regulatory decisions about all registered pesticide products, including public health pesticides.
- The EPA requires scientific evidence that products used to control public health pests (such as those that carry West Nile virus and dengue virus) are effective against the target species.
-  The California Department of Pesticide Regulation also evaluates and registers pesticide products to ensure the instructions and precautions printed on their labels do not adversely affect human health and the environment with a focus on California-specific uses.
- DPR also monitors pesticides in the air, surface water, and groundwater and evaluates new scientific information to ensure that people and the environment are protected from adverse effects.



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

(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814



## Public Health Pesticides Are Needed to Control Mosquitoes at Different Life Stages

The classes of pesticides used for public health applications are limited and generally fall into two categories: larval mosquito control and adult mosquito control.

**Larvicides** are pesticides used to target the immature larval stage of mosquitoes and are applied to localized water sources where mosquitoes lay eggs. Wide area larviciding strategy (WALS) involves using a fine mist that contains a small amount of pesticide to control mosquito larvae in a large area.

This type of public health pesticide application eliminates mosquitoes early in their development process before they mature to flying adults and have the ability to feed on humans or animals and spread diseases.



**Adulticides** are pesticides used to target the adult (mature) stage of mosquitoes. Adulticides are typically applied in very small amounts (less than 1 ounce per acre) through ultra-low volume (ULV) treatments to control adult mosquitoes in a large area.

This is the sole means of quickly killing adult mosquitoes that are capable of biting and transmitting harmful diseases such as West Nile virus or dengue to humans. Adulticides can effectively reduce mosquito populations over a large area and rapidly reduce disease transmission risk and protect public health.



**Public health pesticides play an important role in protecting residents throughout the state from mosquito-transmitted diseases**



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

(916) 440-0826  
mvcac@mvcac.org  
mvcac.org

One Capitol Mall  
Suite 800  
Sacramento, CA 95814

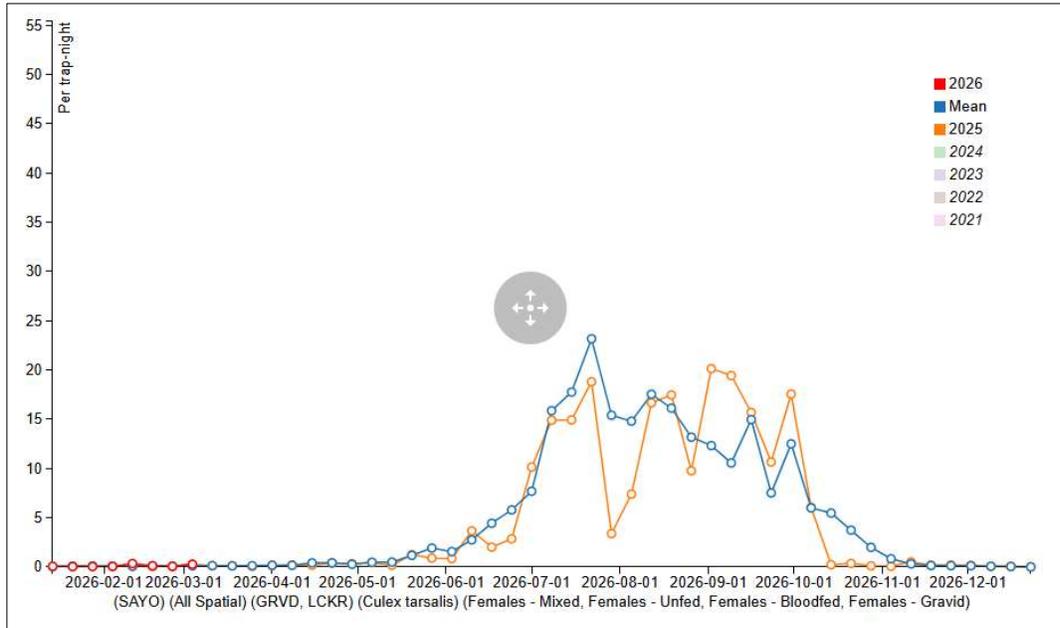
## LABORATORY Monthly Report, March 2026 Board Meeting

### Insectary:

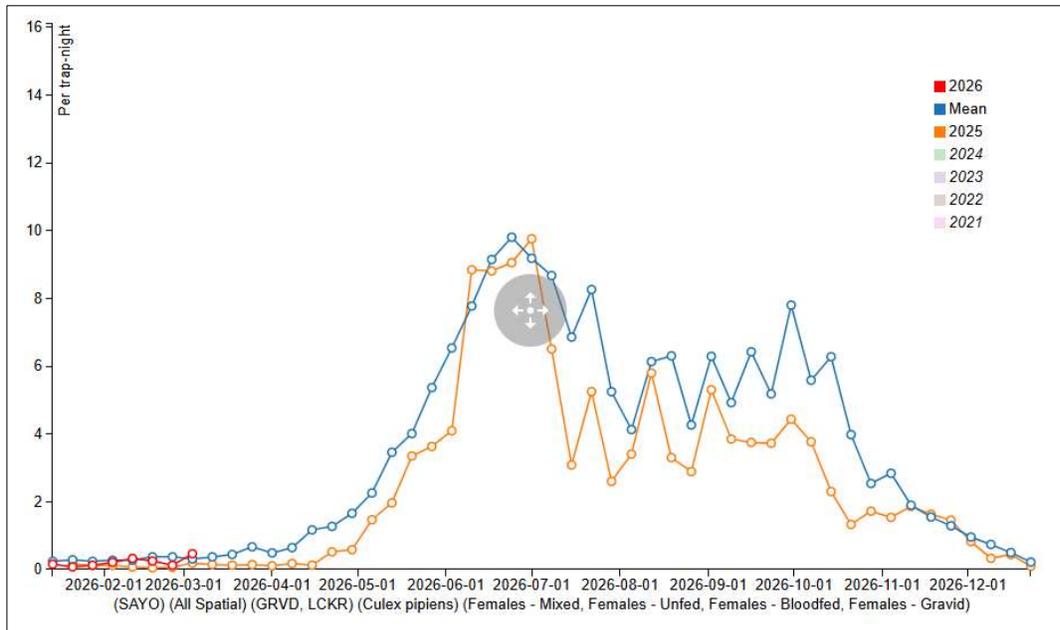
Species	Name	Origin	Resistance Status
<i>Culex tarsalis</i>	KNWR	Kern National Wildlife Refuge (2009)	susceptible
<i>Culex quinquefasciatus</i>	CQ1	Merced, CA (1950s)	susceptible
<i>Culex quinquefasciatus</i>	Sebring	Florida (1988)	susceptible
<i>Culex pipiens</i>	WCP	Woodland, CA (2023)	resistant: pyrethrins/pyrethroids, methoprene, and spinosad
<i>Culex tarsalis</i>	VFCT	Vic Fazio Yolo Wildlife Area (2024)	resistant: pyrethrins/pyrethroids

### Surveillance update through 3/10/2026

**Weekly mosquito collections** – The following graphs show overall *Culex tarsalis* and *Culex pipiens* abundance from gravid traps and locker traps placed in permanent locations throughout Sacramento and Yolo Counties. These traps run year-round and provide stable mosquito abundance data.



*Culex tarsalis* abundance in constant operation locker and gravid traps.



*Culex pipiens* abundance in constant operation locker and gravid traps.

**Encephalitis Vector Surveillance (EVS)** – This program will resume in May, 2026.

**Dead bird surveillance** – The dead bird program will resume in April 2026.

**Rice surveillance** – Surveillance will resume in May 2026.

**Human disease response surveillance** – Since the last report, no new human cases were reported to the District.

***Aedes aegypti* trapping effort in Sacramento and Yolo Counties** – Surveillance for *Aedes aegypti* will resume in April, 2026.

**The California Arbovirus Surveillance Bulletin updates will resume in May 2026**

**Tick surveillance** – Tick surveillance is on-going. Each permanent site is flagged once per month. Collection sites were selected based on land use and habitat. All *Ixodes pacificus* collections were separated by sex, collected in samples up to five ticks, and tested for *Borrelia burgdorferi*, the causative agent of Lyme disease. The following table shows the number of ticks collected by city and the minimum infection prevalence for *Borrelia burgdorferi*.

***Ixodes pacificus* minimum infection prevalence (MIP\*) for  
*Borrelia burgdorferi* s.l.**

City	County	Nov 2025		Dec 2025		Jan 2026		Feb 2026	
		Total collected	MIP	Total collected	MIP	Total collected	MIP	Total collected	MIP
Brooks	Yolo	4	0.0	17	0.0	4	0.0	29	0
Carmichael	Sacramento	1	0.0	0		0		0	
Fair Oaks	Sacramento	34	2.9	87	0.0	8	0.0	11	0.0
Folsom	Sacramento	71	1.4	21	0.0	26	7.7	76	0.0
Gold River	Sacramento	1	0.0	1	0.0	2	0.0	6	0
Orangevale	Sacramento	0		18	0.0	7	14.3	7	14.29
Rancho Cordova	Sacramento	2	0.0	5	0.0	2	0.0	2	0
Rumsey	Yolo	3	0.0	1	0.0	1	0.0	0	
Winters	Yolo	0		0		1	0.0	7	0

\*Minimum Infection Prevalence (MIP): MIP equals the number of positive pools divided by the number of ticks tested multiplied by 100.

## ECOLOGICAL MANAGEMENT DEPARTMENT

### March 2026 Board Update

#### **Ecological Management Projects**

##### Koobs Nature Preserve (Carmichael)

Koobs Nature Area, a 4.7-acre nature preserve located in Carmichael, is owned by the San Juan School District and is maintained by the Kiwanis Club. The nature area struggles with an overgrowth of invasive plant species in its three ponds, primarily cattails (*Typha latifolia L.*) and hardstem bulrush (*Schoenoplectus acutus*). This dense vegetation creates an ideal breeding ground for mosquito larvae, while also hindering the effectiveness of natural mosquito predators like mosquitofish. To address this issue, District staff were dispatched to remove the invasive vegetation, restoring the ponds to their former open water conditions. As a result, mosquitofish are now able to thrive once again, significantly reducing mosquito breeding in the area and creating a more balanced ecosystem. This restoration project has not only improved the overall health of the nature preserve, but also will reduce the adult mosquito populations near residential and urban areas.



#### **Regulatory, Environmental and Planning Program-**

The Ecological Management Department actively evaluates planning documents submitted by local, city, and county planning departments and commissions, applying a detailed, project-by-project review process that allows for tailored feedback and recommendations. Since December, the department has examined a diverse array of proposals—including a mixed-use redevelopment (Panhandle WD-40) in the Natomas area, a wetland restoration plan for Twitchell Island, and a Final Environmental Impact Report (FEIR) for the proposed Village Farms Davis subdivision project. Each submission has been scrutinized for ecological and mosquito control impacts along with long-term maintenance objectives, with specific comments and mitigation strategies documented for the projects. The following list highlights the key planning projects reviewed during this period.

- Grand Park Southwest Specific Plan United States Army Corp of Engineers (*USACE*)-
- Twitchell Island Enhancement Project -Department of Water Resources (*DWR*)
- Conoelos Project- (*Natomas*)
- Panhandle Project- (*Natomas*)
- Summer Villas at Sheldon (*Elk Grove*)
- Cordova Arena-(*Rancho Cordova*)
- H & H Tire Shop-(*Rancho Cordova*)
- Village Farms Davis-(*Davis*)
- Legado Specific Plan-(*Rancho Cordova*)

## **Wetland/Waterfowl Habitat Programs**

### **Bird Returns Program**

The Migratory Bird Conservation Partnership (*Audubon California, Point Blue Conservation Science, and The Nature Conservancy*) has announced that applications for the 2026 BirdReturns Summer Wetland Program are now open, with the initiative aiming to provide critical habitat for migrating, nesting, and brood-rearing birds during the summer months—a period marked by limited wetland availability in the Sacramento Valley. However, the Audubon Society has noted that enrollment for the upcoming season will be restricted due to ongoing transitions in funding sources, a shift that will significantly curtail the program’s capacity. For 2026, the expected total of flooded wetland acres in Sacramento Valley is projected to be around 168 flooded wetland acres, representing a 60% reduction from 2025. This reduction in acres will lower expenditures on larvicide and adulticide treatments, as well as aircraft costs for mosquito control, which are typically tied to the scale of wetland flooding.

**BIOLOGICAL CONTROL**  
**Monthly Report for March 2026 Board Meeting**

In February, Fisheries staff continued preparing ponds and infrastructure for the upcoming season. Work on pond fencing continued, and staff replaced an aging net on one of the mosquitofish ponds. Pond leveling and aerator maintenance were also performed.

During this period, Field Technicians planted 6.95 pounds of mosquitofish across 35 sites. The department has approximately 82 pounds of mosquitofish on hand and available for technician use as weather improves and service requests increase.

A contractor completed installation of fencing around the new earthen Sacramento perch pond. Materials including rock and netting have been delivered, and site preparation work is underway.

The department has begun fertilizing ponds to promote healthy plankton blooms. With annual training nearly complete, staff will begin moving fish from the netted ponds into open grow-out ponds as temperatures continue to warm.

Log of Treatment Applied for February

<u>Material</u>	<u>AMT</u>	<u>Area Treated</u>	<u>Treatments</u>
Mosquitofish ( <i>Gambusia affinis</i> )	6.9 lbs	52 Acres	35
Guppies ( <i>Poecilia reticulata</i> )	0 lbs	0 Acres	0

Log of Treatment Applied for the year 2026 - Year to Date

<u>Material</u>	<u>AMT</u>	<u>Area Treated</u>	<u>Treatments</u>
Mosquitofish	7.9 lbs	52.2 Acres	39
Guppies	0 lbs	0 Acres	0

Fisheries Budget

<u>Total</u>	<u>Spent</u>	<u>Remaining</u>	<u>% Spent</u>
35,000.00	14,471.85	20,528.15	41%



*Above: Newly installed fencing around the Sacramento perch pond.*

*Bottom Left: Fisheries technicians installing a new bird net over a pond.*

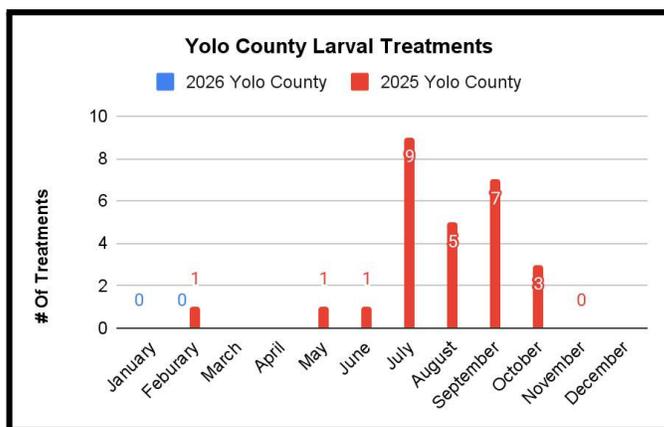
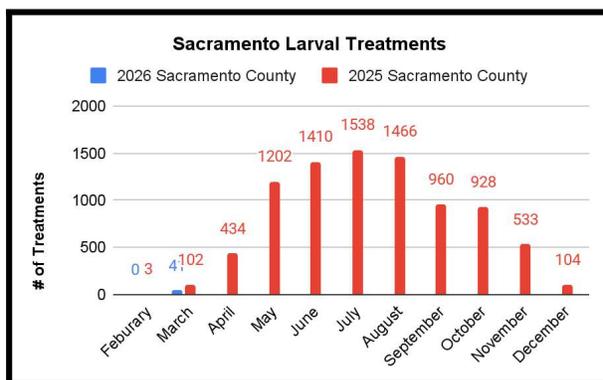
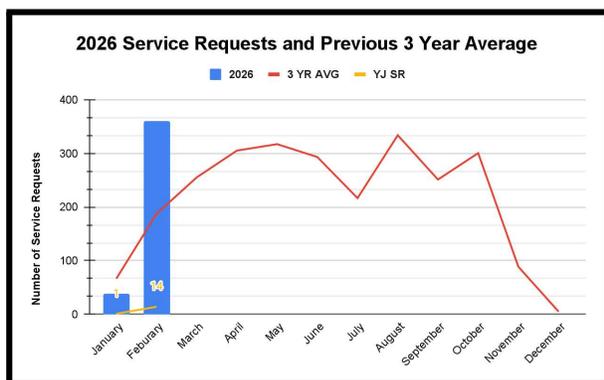
*Bottom Right: Fisheries technicians spreading manure to promote plankton growth.*



## CONTROL OPERATIONS Monthly Report for the March 2026 Board Meeting

### Culex, West Nile Virus (WNV) and General Mosquito Control

No response was needed for WNV control in the month of February. Early spring sources including the post flooded Discovery Park, treeholes, a few catchbasins, and other small areas were inspected and treated in addition to some residential barrier treatments made in response to the service requests received in both counties.



No aerial or larval applications have been performed in 2026.

No new Aedes detections or services have been performed in 2026.

## Trainings, Continued Education, and Winter Projects

Staff continue to complete annual education and training, clean and calibrate equipment in each truck, perform source reduction brush projects as the weather allows and respond to service requests as the weather begins to warm up.

District Staff participated in the annual pesticide and hazardous materials training day held March 4th. Azelis A&ES as well as Clarke helped with leading a series of very successful and informative sessions.



**PUBLIC INFORMATION AND EDUCATION  
Monthly Report for March 2026 Board Meeting**

**Media coverage:**

Warm weather in March has increased mosquito activity and community service requests. The District has already performed some live interview requests, and more requests are expected through the month. These interviews are a great opportunity to remind residents about our services and to do their part in eliminating stagnant water around their homes.

**Advertising**

Planning for the 2026 advertising and media buy is underway. Following approval of the advertising budget, collaborative work with our media consultant, Benjamin/Luken has started to provide a media strategy and a draft advertising plan. A more detailed plan will be developed and executed to launch Mosquito Awareness Week in April!

**Events:**

2026 community outreach and event season has already begun. The District is reviewing applications to be returning vendors at various community events.

In early March the District participated in Gardners Market event in Sacramento's McKinley park and plans to attend at least two more events towards the end of the month on top of already scheduled school presentations.

**School Assemblies**

The *What Bugs You* assemblies, organized by Red Shoe Productions, are ongoing at various schools.

The following assemblies are currently scheduled:

**March**

3/19: Capital City School in Sacramento

**Government affairs:**

As part of our government affairs and outreach to local elected officials, we have been reaching out to all city councils to set up our annual update and presentation given by Gary Goodman, Steve Ramos and Luz Robles

### **Repellent Distribution**

As mosquito activity increases, repellent wipes are in high demand. Boxes of wipes were recently shared with various Girl Scout troops selling cookies and organizations serving homeless residents, especially those along the river.

# **Sacramento-Yolo Mosquito and Vector Control District**

## **March 17, 2026 Board Meeting**

### **4. Board Review and Consideration of Supporting the AMCA Research Foundation in the Amount of \$100,000**

#### **Staff Report:**

The District has a strong history of supporting the work done by the Mosquito Research Foundation to further the study of vectors and vector borne diseases. The District's annual budget has \$100,000 allocated for research. I have included a request by the AMCA president, Herff Jones, requesting funds to support the program along with a summary of the past recipients of the work supported by the Research Foundation.

#### **Recommendation:**

**Authorize the Donation to the AMCA Research Foundation in the Amount of \$100,000**



One Capitol Mall, Suite 800  
Sacramento, CA 95814  
Phone: (888) 626-0630  
Fax: (916) 444-7462  
[www.mosquito.org](http://www.mosquito.org)

March 10, 2026

Gary Goodman  
District Manager  
Sacramento Yolo Mosquito & Vector Control District  
8631 Bond Road  
Elk Grove, CA 95624

Dear Mr. Goodman:

On behalf of the American Mosquito Control Association (AMCA), I want to thank you for your continued support of the AMCA Research Fund. Your partnership has played an important role in advancing practical, science-based research that directly supports mosquito control professionals working to protect public health and the environment.

The AMCA Research Fund was established to support innovative research that addresses real-world challenges faced by mosquito and vector control programs. Each year, the program funds projects that improve mosquito surveillance, develop new control technologies, evaluate environmental impacts, and strengthen community engagement strategies that reduce the risk of mosquito-borne disease.

Demand for these research grants continues to grow. In recent years, the AMCA Research Fund has received between twenty and thirty research proposals annually from scientists across the United States and internationally. The proposals are consistently high quality and reflect the critical need for applied research that directly supports vector control operations. Unfortunately, the limited funds available allow us to support only a small portion of these projects each year.

Expanding the resources available through the AMCA Research Fund would allow AMCA to support more of these highly competitive research proposals and accelerate the development of tools and strategies that mosquito control programs rely on to protect their communities.

In light of this continued demand, we respectfully request your support of the AMCA Research Fund with a contribution of \$100,000 for the coming year. Your investment would directly support competitive research grants that provide actionable science for mosquito control professionals working to prevent and manage vector-borne diseases such as West Nile virus, dengue, and other emerging public health threats.

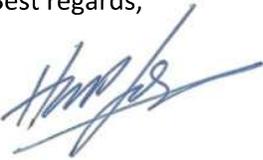
Over the past several years, the AMCA Research Fund has supported a range of applied research projects designed to strengthen mosquito control and vector surveillance programs. Funded studies have explored new technologies for identifying mosquito vectors, improved strategies for predicting and responding to arbovirus activity, evaluated potential environmental impacts of mosquito control practices, and investigated innovative tools to support more targeted and effective mosquito management. These projects help provide mosquito control professionals with the scientific information and practical tools needed to protect public health and respond to emerging vector-borne disease threats.

The Research Fund continues to play an important role in advancing practical science that can be applied directly in the field. By supporting early-stage and operationally relevant research, AMCA helps accelerate the development of tools, data, and best practices that benefit mosquito control programs nationwide. Continued investment in the AMCA Research Fund allows us to expand the number of high-quality projects we are able to support each year and further strengthen the scientific foundation that protects communities from mosquito-borne disease. A brief summary of research projects funded through the AMCA Research Fund over the past several years is included in the attached appendix.

We are deeply grateful for your continued partnership and your commitment to advancing the science that protects public health. If you would like additional information about the AMCA Research Fund or the research projects it supports, I would be happy to provide it.

Thank you again for your ongoing support.

Best regards,

A handwritten signature in blue ink, appearing to read 'Herff Jones', with a long horizontal flourish extending to the right.

**Herff Jones**

President, 2025-2026

American Mosquito Control Association

## **Appendix A - Recent AMCA Research Fund Projects (2025–2020)**

### **2025**

#### **Norah Saarman – Utah State University**

*Efficient, low-cost identification of Culex mosquito vectors of West Nile Virus using computer vision-based AI tools*

This project seeks to improve mosquito surveillance by developing artificial intelligence–based tools capable of rapidly and accurately identifying Culex mosquito species that transmit West Nile virus. Closely related Culex species are often difficult to distinguish using traditional methods, which can complicate surveillance efforts and lead to inefficient targeting of control measures. The project will develop computer vision algorithms using convolutional neural networks to analyze mosquito images and distinguish between key vector species.

Working with collaborators from mosquito abatement districts and research institutions, the study will validate these tools using field-collected mosquitoes and genetic identification methods. In addition to improving species identification, the project will examine how environmental factors influence the distribution of these mosquito species. The resulting AI-based identification system could provide mosquito control programs with a rapid, low-cost surveillance tool to better target control efforts and reduce the risk of West Nile virus transmission.

### **2024**

#### **Bradley Willenberg – University of Central Florida**

*New Attractive Toxic Sugar Baits with Propylene Glycol as a Sugar Substitute and Toxicant in Capillary Alginate Gel Biomaterials*

This project explored the development of improved Attractive Toxic Sugar Baits (ATSBs) to control mosquito populations using propylene glycol as both a sugar substitute and toxicant. Laboratory experiments evaluated how mosquitoes respond to propylene glycol when incorporated into innovative capillary alginate gel biomaterials designed to deliver bait efficiently.

The research demonstrated that propylene glycol can significantly reduce mosquito survival when incorporated into ATSB formulations while the capillary alginate gel delivery system shows promise as a stable and efficient platform for mosquito control. This work contributes to the development of new mosquito management tools that may reduce reliance on conventional insecticides while improving targeting of vector species.

### **2023**

#### **Julianne Miranda-Bermúdez – Puerto Rico Vector Control Unit**

*Infrastructure to evaluate community engagement efforts for an Integrated Vector Management Program*

This project developed tools and infrastructure to evaluate community engagement efforts supporting integrated vector management programs in Puerto Rico. Researchers conducted extensive outreach and household interviews to assess public knowledge, attitudes, and participation in mosquito control initiatives.

Findings highlighted strong community concern about mosquito-borne diseases while identifying knowledge gaps about mosquito biology and prevention practices. The project provides a framework for evaluating public engagement programs and offers practical guidance for improving outreach and participation in mosquito control efforts.

**Emily Mader – Northeast Regional Center for Excellence in Vector-Borne Diseases, Cornell University**

*Analysis of perceived risks and benefits of mosquito abatement and personal protection strategies*

This research examined how communities perceive the risks and benefits of mosquito control activities and personal protection strategies. Through focus groups and surveys, the project explored how residents balance concerns about mosquito-borne diseases with concerns about pesticide use and environmental impacts.

The findings provide recommendations for improving communication strategies and community engagement efforts, helping mosquito control agencies better address public concerns while encouraging personal protective behaviors.

**2022**

**Michael Reiskind – North Carolina State University**

*Towards the Mosquito Tricorder: One Stop Determination of Species, Age, Infection Status, and Pathogen Identification*

This project explored the use of mid-infrared spectroscopy as a rapid diagnostic tool capable of identifying mosquito species, determining mosquito age, and detecting pathogen infection status in a single analysis. Researchers conducted experiments infecting mosquitoes with several pathogens and tested whether spectroscopy could identify infection signatures.

Preliminary findings demonstrate promising potential for this technology as a powerful surveillance tool that could significantly improve the speed and efficiency of mosquito monitoring and disease detection programs.

**Joseph McMillan – Connecticut Agricultural Experiment Station & Texas Tech University**

*Informative and Real-Time Arbovirus Risk Mapping Based on Surveillance Data Synchrony Estimates*

This project developed models to improve prediction and mapping of arbovirus risk using mosquito surveillance data. Researchers analyzed patterns of mosquito population synchrony and virus detection across surveillance sites to better understand how risk varies across geographic areas.

The resulting models help forecast West Nile virus and Eastern Equine Encephalitis risk in areas without surveillance traps and support the development of visual mapping tools that mosquito control programs can use to communicate disease risk and guide targeted control efforts.

**2021**

**Jason Pitts – Baylor University**

*Modified Attractive Toxic Sugar Baits for Aedes Vectors*

This project investigated compounds that could improve Attractive Toxic Sugar Bait technologies for controlling Aedes mosquitoes, which are important vectors of several diseases. Researchers evaluated compounds that could be incorporated into sugar feeding systems to reduce mosquito survival.