

SACRAMENTO-YOLO  
MOSQUITO & VECTOR  
CONTROL DISTRICT

APRIL 17, 2019

BOARD OF TRUSTEES  
SPECIAL MEETING

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

**AGENDA  
April 17, 2019  
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).*

**CALL TO ORDER:**

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

1. **Items for Approval by General Consent:**
  - a. **Minutes of the March 19<sup>th</sup> Board of Trustees Meeting**
  - b. **Expenditures for March 2019**
  - c. **Board Consideration of Resolution Honoring Fred Goethel for His Years of Service**
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**
  - a. **Manager's Report**
  - b. **Reports from MVCAC Legislative Day**
  - c. **Reports from District Departments**
    - **Lab/Surveillance**
    - **Ecological Management**
    - **Biological Control**
    - **Larval and Adult Control**
    - **Public Outreach**
4. **Board Review and Consideration for Renewal of Farm Air Contract for Aerial Larviciding Services**

5. **Board Review and Consideration for Renewal of Leading Edge Contract for Aerial Larviciding Services by UAS**
6. **Board Review and Consideration for Purchase of Deltagard from Adapco**
7. **Board Review and Discussion of District Projects and Collaborations for 2019 Season**
8. **Closed Session- Provide Instruction to Designated Labor Representatives (Gov. Code s. 54957.6-Labor Negotiations)**  
**Agency Designated Representatives : [Gary Goodman, Janna McLeod, Samer Elkashef, Chris Voight]**  
**Employee Organization: [Operating Engineers Local Union #3]**
9. **Board/Staff Reports and Requests**
10. **Adjournment**

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

## **April 17, 2019 Board Meeting**

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

- a. Minutes of the March 19, 2019 Board of Trustees Meeting;
- b. Expenditures for March 2019.
- c. Board Consideration of Resolution Honoring Fred Goethel for His Years of Service

### **Recommendation:**

**Approve the Items by General Consent**

**MINUTES OF THE MARCH 19, 2019  
SPECIAL MEETING OF THE BOARD OF TRUSTEES OF THE  
SACRAMENTO-YOLO MOSQUITO & VECTOR CONTROL DISTRICT**

PLACE: 8631 Bond Road, Elk Grove, CA 95624  
TIME: 10:00 a.m.

**TRUSTEES PRESENT:**

Raymond LaTorre	President	Sacramento
Jayna Karpinski-Costa	Vice President	Citrus Heights
Craig Burnett	Secretary	Folsom
Christopher Barker		Davis
Raul DeAnda		West Sacramento
Sean Denny		Woodland
Bruce Eldridge		Yolo County
Frederick Goethel		Galt
Lyndon Hawkins		Elk Grove
Gar House		Winters
Susan Maggy		Sacramento County
Robert McGarvey		Rancho Cordova
Rosemarie Moore		Isleton

**TRUSTEES ABSENT:**

**LEGAL COUNSEL:**

Jennifer Buckman

**STAFF PRESENT:**

Gary Goodman	Manager
Samer Elkashef	Assistant Manager
Janna McLeod	Administrative Manager
Marcia Reed	Laboratory Director
Marty Scholl	Ecological Management Supervisor
Steven Ramos	Program Coordinator
Tony Hedley	Fisheries Supervisor

**CALL TO ORDER**

The meeting was called to order at 10:00 a.m. by President Raymond LaTorre.

**Roll Call**

Trustees Frederick Goethel and Craig Burnett arrived to the meeting at 10:04am with a quorum present.

**Pledge of Allegiance**

*All phones and electronic devices are requested to be silenced during the meeting.*

## **1. ITEMS FOR APPROVAL BY GENERAL CONSENT**

One correction to the Trustees present was noted with Robert McGarvey listed as both present and absent. He was absent; therefore, his name will be removed from the list of those present. Item c. was pulled by Manager Goodman as the employee's Jury Duty service was completed and the requested extension was no longer needed. Trustee Hawkins asked about a payment to the US Treasury which is the regular monthly Federal Payroll Taxes. On a motion by Trustee Moore seconded by Trustee Denny the Board voted to approve General Consent Items a., b., and d as corrected. The motion passed by the following vote: Ayes: 11, Noes: 0, Absent: 2.

- a. Minutes of the February 19, 2019 Board of Trustees Meeting;
- b. Expenditures for February 2019;
- c. Board Authorization to Grant Extended Paid Jury Duty Leave for District Employee Pursuant to Section 6.03 of the Personnel Manual and Section 10.4 of the MOU Between the District and Local OE3;
- d. Adoption of Resolution Authorizing Renewal of Contract with County of Sacramento, Division of Public Health.

## **2. OPPORTUNITY FOR PUBLIC COMMENT**

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

There were none.

## **3. REPORTS TO THE BOARD**

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

MVCAC Legislative Day will be held on April 3rd, 2019. Trustee Denny, Samer Elkashef and Manager Goodman will make visits to our local offices. The MVCAC is currently pushing one piece of legislation, AB 320, which would officially recognize the Calsurv Gateway program in statute. The long-term hope would be to obtain funding to enhance and expand the program in the future. Other discussions with our legislators will include the progress on the UAS process with CDPR and the current state of mosquito control in California. District staff represented the program very well at the AMCA Annual Conference. The AMCA Board voted to replace the current management firm, Association Headquarters with the firm that currently manages the MVCAC, AMG. District staff is working on scheduling interviews to fill current seasonal vacancies within various departments. The seasonal staff will begin in April. The Vector Control Joint Powers Agency (VCJPA) workshop was held in Santa Cruz earlier this month. Gary Goodman attended on behalf of the District. Our VCJPA is in a good financial position overall and the District continues to have minimal claims. The VCJPA is looking at alternate means for excess insurance over the \$1M current limit that is administered through CARMA. A decision will be made at the April Board meeting of VCJPA once costs and potential savings are known. The AMCA Washington Conference will be held on May 14-16. Trustee Denny and the Manager will represent the District.

### **b. Reports from Trustees Attending the AMCA Annual Conference:**

Trustee Christopher Barker attended and noted the conference was very busy with multiple concurrent sessions. He was impressed with the Harbaugh study and presentation on Catch

Basins. The presentation focused on larval products and adult populations with an interest to standardize metrics.

Trustee Lyndon Hawkins attended and was impressed by the level and amount of technologies emerging in the industry. Manu Prakash presented his work with countries and low cost microscopes which was particularly interesting to attendees. He also noted the presentations on resistance research and development which is working on the identification of mosquitoes down to the sub species which will be very useful in surveillance and control efforts.

Trustee Jayna Karpinski-Costa attended and said the plenary session was very good and set the tone for the overall conference. Association President Bill Walton spoke and discussed the goals and objectives of the association as a whole. She enjoyed several of the presentations specifically mentioning Gordon Patterson, Peter Ryan and Manu Prakesh.

**c. Reports from District Departments:** Written reports were provided in the Board packet from each department. Department supervisors gave an oral presentation and were available to answer any questions.

**Lab/Surveillance:** Laboratory Director, Marcia Reed reported on Laboratory activities including abundance data, surveillance traps and upcoming projects. So far this season we have not seen a mid winter week of warmer weather that usually brings out *Anopheles Freeborni* so their numbers are down for this time of year.

**Ecological Management:** Ecological Management Supervisor, Marty Scholl discussed department activities including Stormwater/Drainages, Pool Program, UAS Program and the AMCA conference. Staff gave two talks at the conference covering UAS mapping and spraying activities. Marty was asked to present on April 24th at the Small Unmanned Systems Business Expo on Mosquito Control.

**Biological Control:** Fisheries Supervisor, Tony Hedley reported on department activity including servicing equipment, repairing nets, and fish usage. Up to 55 lbs has been used for spring sources so far this season. Technicians have started to move fish from netted ponds to open ponds. Crayfish abatement activities has been added to regular duties due to the amount of crayfish being found in the ponds when seining. Staff is anticipating we will hear our status on the grant proposal this coming Friday.

**Larval and Adult Control:** Program Coordinator, Steve Ramos discussed activities including inhouse projects such as the making of water soluble packets for Catch Basins. Maps are being updated and transferred to digital files for Catch Basins. Crews have been working on brush projects during breaks in the rain. Annual pesticide training will take place in March followed by fire extinguisher training. Offers were made and accepted to fill two Field Technician positions.

**Public Outreach:** Public Information Officer, Luz Robles submitted a written report with the Board packet. Manager Goodman discussed the start of the advertising plan and the deadline for the Fight the Bite Contest is April 3rd. He also reviewed the scheduled dates for visits with local elected officials and city councils.

**4. CLOSED SESSION- PROVIDE INSTRUCTION TO DESIGNATED LABOR REPRESENTATIVES (GOV. CODE S. 54957.6-LABOR NEGOTIATIONS) AGENCY DESIGNATED REPRESENTATIVES: [GARY GOODMAN, JANNA MCLEOD, SAMER ELKASHEF CHRIS VOIGHT] EMPLOYEE ORGANIZATION: [OPERATING ENGINEERS LOCAL UNION #3]**



President LaTorre adjourned the Regular meeting to go into Closed Session at 11:16 am. The Board returned from closed session and re-opened the regular meeting at 11:48 am. The Board reported the following action. On a motion by Trustee Denny, seconded by Trustee Maggy, then Board voted to give direction to the District Labor Negotiators to attempt Interest Based Bargaining.

## **5. BOARD/STAFF GENERAL DISCUSSION**

Trustee Goethel gave the Board notice that he will be leaving the Board after next month.

Form 700's are due by April 2nd.

## **6. ADJOURNMENT**

The meeting adjourned at 11:53 am.

\* \* \* \* \*

I certify that the above minutes substantially reflect the general business and actions taken by the Board of Trustees at the February 19, 2019 meeting.

---

Gary Goodman, Manager

Approved as written and/or corrected by the Board of Trustees at the March 19, 2019 meeting.

---

Craig Burnett, Board Secretary

**March 2019 Check Register**  
**Activity From: 3/1/2019 to 3/31/2019**  
**Sacramento Yolo MVCD (SYC)**

Check Number	Check Date	Vendor Number	Name	Check
<b>Bank Code:</b> U US Bank				
052578	3/7/2019	0000504	US Bank	28,573.90
052579	3/8/2019	0000015	All Star Glass	305.48
052580	3/8/2019	0000018	ANDKO Building Maintenance Inc.	2,777.94
052581	3/8/2019	0000034	AutoZone Inc	92.56
052582	3/8/2019	0000039	Batteries Plus	1,896.91
052583	3/8/2019	0001024	Bonneville International	1,000.00
052584	3/8/2019	0001011	Buckmaster Office Solutions	106.62
052585	3/8/2019	0000186	Elk Grove Water District	355.81
052586	3/8/2019	0000200	Fastenal Company	514.13
052587	3/8/2019	0001233	Grow West	409.69
052588	3/8/2019	0000240	Hunt & Sons Inc	226.23
052589	3/8/2019	0000250	Jack Nadel International	3,895.92
052590	3/8/2019	0000262	John W Hock Co	1,118.31
052591	3/8/2019	0000277	Kimball Midwest	87.33
052592	3/8/2019	0000286	Leading Edge Associates Inc	5,728.17
052593	3/8/2019	0000308	Mann Urrutia Nelson CPAs & Assoc LLP	2,250.00
052594	3/8/2019	0000356	OReilly Automotive Stores Inc	196.17
052595	3/8/2019	0000367	PG & E	2,995.35
052596	3/8/2019	0000370	Pitney Bowes	313.49
052597	3/8/2019	0000388	Republic Services #922	33.18
052598	3/8/2019	0001012	Riebes Auto Parts	386.64
052599	3/8/2019	0000398	Russian American Media Inc	250.00
052600	3/8/2019	0000399	Ryan Herco Products Corp	305.55
052601	3/8/2019	0000411	Sacramento County Fair	675.00
052602	3/8/2019	0000428	Safetyville USA	150.00
052603	3/8/2019	0000943	Sherwin-Williams	409.34
052604	3/8/2019	0000451	SMUD	3,132.17
052605	3/8/2019	0000937	Staples Business Advantage	565.16
052606	3/8/2019	0000458	Staples Credit Plan	52.02
052607	3/8/2019	0000462	Sterling May Co	107.17
052608	3/8/2019	0001234	T-Mobile	635.73
052609	3/8/2019	0000497	TriCo Welding Supplies	223.50
052610	3/8/2019	0000505	US Bank Equipment Finance	102.36
052611	3/8/2019	0000518	Vector Disease Control International	50,000.00
052612	3/8/2019	0000522	Verizon Wireless	2,776.12
052613	3/8/2019	0000526	VWR International Inc	170.77
052614	3/8/2019	0000529	Waste Management	416.81
052615	3/8/2019	0000537	Winters Youth Day Committee	35.00
052616	3/14/2019	0000267	Kaiser Foundation Health Plan	18,822.70
052617	3/14/2019	0000267	Kaiser Foundation Health Plan	1,447.90
052618	3/14/2019	0000267	Kaiser Foundation Health Plan	2,171.85
052619	3/14/2019	0000267	Kaiser Foundation Health Plan	18,636.27
052620	3/14/2019	0000373	Preferred Benefit Ins Administrators	8,308.60
052621	3/14/2019	0000957	Sutter Health Plus	6,862.32
052622	3/14/2019	0000531	Western Health Advantage	6,401.27
052623	3/14/2019	0000531	Western Health Advantage	5,081.44
052624	3/15/2019	0000029	Arthur J Gallagher Risk Mngmt Svcs	4,329.00
052625	3/21/2019	0000087	CalPERS Financial Reporting & Accounting	4,000,000.00
052626	3/25/2019	0000014	Alhambra & Sierra Springs	182.03
052627	3/25/2019	0000038	Bartkiewicz Kronick & Shanahan	1,030.08

052628	3/25/2019	0000976	Blanning & Baker	6,387.50
052629	3/25/2019	0001019	Cintas Corporation	2,430.36
052630	3/25/2019	0000117	City of Woodland	883.06
052631	3/25/2019	0000126	Complete Welders Supply Inc	706.97
052632	3/25/2019	0000128	Consolidated Communications	2,512.69
052633	3/25/2019	0000168	Dignity Health Med Fdtn-Sacramento	100.00
052634	3/25/2019	0000186	Elk Grove Water District	163.02
052635	3/25/2019	0001240	Garfield House	178.20
052636	3/25/2019	0000219	Gary Goodman	3,380.67
052637	3/25/2019	0000958	GreatAmerica Financial Services	372.82
052638	3/25/2019	0001241	Guy Kachadorian	36.00
052639	3/25/2019	0000240	Hunt & Sons Inc	2,308.52
052640	3/25/2019	0000277	Kimball Midwest	355.52
052641	3/25/2019	0000299	Luken Benjamin Associates	3,625.00
052642	3/25/2019	0000354	Omni Bags Inc	7,200.00
052643	3/25/2019	0000367	PG & E	1,864.56
052644	3/25/2019	0000399	Ryan Herco Products Corp	25.27
052645	3/25/2019	0000461	Stericycle Inc	77.20
052646	3/25/2019	0001238	Tree Tech Services	4,875.00
052647	3/26/2019	0000286	Leading Edge Associates Inc	18,600.00
052648	3/31/2019	0000043	Benefit Coordinators Corporation	3,402.56
052649	3/31/2019	0000084	CA State Disbursement Unit	350.00
052650	3/31/2019	0000084	CA State Disbursement Unit	350.00
052651	3/31/2019	0000234	Henry Estrada	344.00
052652	3/31/2019	0000339	Nationwide Retirement Solutions	1,300.00
052653	3/31/2019	0000339	Nationwide Retirement Solutions	5,775.00
052654	3/31/2019	0001035	Operating Engineers Local Union No. 3	1,260.00
052655	3/31/2019	0000357	P & A Administrative Services Inc	103.50
W00076	3/31/2019	0000086	CalPERS 457 Plan	22,289.91
W00077	3/31/2019	0000087	CalPERS Financial Reporting & Accounting	73,605.47
W00078	3/31/2019	0000176	EDD	14,272.14
W00079	3/31/2019	0000561	United States Treasury	51,800.79
<b>Bank U Total:</b>				<u>4,417,479.72</u>
<b>Report Total:</b>				<u><u>4,417,479.72</u></u>

I hereby authorize the use of my signature plate on  
the above-listed warrants, 052578-052655, and EFTs W00076-W00079

---

 Signature

---

 Date

Raymond LaTorre, President of the Board

S.Y.M.V.C.D  
FY 2018-2019 Budget Update  
March 2019

	Account #	Account Description	9 Months Ended March 31, 2019	Annual Budget	Unused
T	4000	REVENUE	\$ -	\$ -	\$ -
T	5000	SALARIES/BENEFITS/WC	\$ 9,959,454.89	\$ 8,056,523.70	\$ (1,902,931.19)
T	5200	OPERATIONAL	\$ 4,124,048.22	\$ 5,433,364.00	\$ 1,309,315.78
T	5210	LIABILITY INSURANCE	\$ 131,970.00	\$ 136,922.00	\$ 4,952.00
T	5250	AUDITING/FISCAL	\$ 17,750.00	\$ 15,500.00	\$ (2,250.00)
T	5270	COMMUNICATIONS	\$ 52,483.41	\$ 79,500.00	\$ 27,016.59
T	5310	PUBLIC INFORMATION	\$ 215,476.61	\$ 434,800.00	\$ 219,323.39
T	5340	STRUCTURE & GROUNDS	\$ 44,389.51	\$ 65,000.00	\$ 20,610.49
T	5370	MEMBER/TRAINING	\$ 74,418.36	\$ 113,000.00	\$ 38,581.64
T	5390	DISTRICT OFFICE EXPENSES	\$ 10,707.86	\$ 15,000.00	\$ 4,292.14
T	5430	PROFESSIONAL SERVICES	\$ 106,013.66	\$ 139,200.00	\$ 33,186.34
T	5440	MATERIALS & SUPPLIES	\$ 6,576.35	\$ 10,000.00	\$ 3,423.65
T	5450	RENTS & LEASES	\$ 7,475.72	\$ 8,750.00	\$ 1,274.28
T	5470	SAFETY PROGRAM	\$ 1,782.45	\$ 5,000.00	\$ 3,217.55
T	5480	UTILITIES	\$ 66,810.67	\$ 100,000.00	\$ 33,189.33
T	6120	AIRCRAFT SERVICES	\$ 697,630.62	\$ 809,297.00	\$ 111,666.38
T	6140	ECOLOGICAL MANAGEMENT	\$ 2,504.43	\$ 17,600.00	\$ 15,095.57
T	6160	MICROBIAL	\$ 986,509.37	\$ 1,336,000.00	\$ 349,490.63
T	6170	BIORATIONALS (Formerly IGR)	\$ 498,346.10	\$ 902,620.00	\$ 404,273.90
T	6180	INSECTICIDES	\$ 922,644.08	\$ 765,000.00	\$ (157,644.08)
T	6220	FISHERIES	\$ 10,247.71	\$ 24,990.00	\$ 14,742.29
T	6280	GEOGRAPHIC INFO SYSTEMS	\$ 3,456.75	\$ 6,925.00	\$ 3,468.25
T	6320	INFORMATION TECHNOLOGY	\$ 16,587.56	\$ 31,450.00	\$ 14,862.44
T	6350	CONTROL OPERATIONS	\$ 8,237.31	\$ 28,710.00	\$ 20,472.69
T	6370	SHOP	\$ 75,869.16	\$ 88,000.00	\$ 12,130.84
T	6420	LAB SERVICES	\$ 83,081.51	\$ 156,600.00	\$ 73,518.49
T	6450	GAS & PETROLEUM	\$ 83,079.02	\$ 143,500.00	\$ 60,420.98
T	7000	CAPITAL ACCOUNTS	\$ 116,839.67	\$ 414,000.00	\$ 297,160.33
T	7011/1510	Capital Outlay/Construction In Progress	\$ 116,839.67	\$ 204,000.00	\$ 87,160.33
T	7030	Research Fund	\$ -	\$ 50,000.00	\$ 50,000.00
T	7035	Building Improvement	\$ -	\$ 160,000.00	\$ 160,000.00
T		<b>TOTALS</b>			
T		Salaries/Benefits	\$ 9,959,454.89	\$ 8,056,523.70	\$ (1,902,931.19)
T		Operational	\$ 4,124,048.22	\$ 5,433,364.00	\$ 1,309,315.78
T		Capital Accounts	\$ 116,839.67	\$ 414,000.00	\$ 297,160.33
T		Total Budget	\$ 14,200,342.78	\$ 13,903,887.70	\$ (296,455.08)

**Resolution No. 04-17-19**

**A RESOLUTION OF THE BOARD OF TRUSTEES OF THE  
SACRAMENTO-YOLO MOSQUITO AND VECTOR CONTROL DISTRICT  
HONORING *FREDERICK GOETHEL*  
FOR HIS 10 YEARS OF SERVICE**

**WHEREAS, FREDERICK GOETHEL** is vacating the position of Trustee of the Sacramento-Yolo Mosquito and Vector Control District as of May 1, 2019 after 10 years of dedicated service; and

**WHEREAS,** the Sacramento-Yolo Mosquito and Vector Control District (“District”), responsible for controlling mosquitoes and other vectors to prevent mosquito-borne disease and promote quality of life for the residents of Sacramento and Yolo County(s), desire to acknowledge and recognize his leadership in public health; and

**WHEREAS, FREDERICK GOETHEL** was appointed by the Galt City Council to the Board of the Sacramento-Yolo Mosquito and Vector Control District in 2009; and

**WHEREAS, FREDERICK GOETHEL** has provided expertise and guidance during his tenure as a Trustee to the District. He served as Secretary (2010), Vice-President (2011) and President of the Board in 2012.

**NOW, THEREFORE, BE IT RESOLVED** by the Sacramento–Yolo Mosquito and Vector Control District Board of Trustees the desire to honor **FREDERICK GOETHEL** for his exemplary public service and dedication to public health.

**PASSED AND ADOPTED** by the Board of Trustees of the Sacramento-Yolo Mosquito and Vector Control District on the 17th day of April 2019 by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

By: \_\_\_\_\_  
Raymond LaTorre, Board President



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

## **April 17, 2019 Board Meeting**

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

- a. Manager's Report**
- b. Reports from MVCAC Legislative Day**
- c. Reports from District Departments**
  - **Lab/Surveillance (Marcia Reed)**
  - **Ecological Management (Marty Scholl)**
  - **Biological Control (Tony Hedley)**
  - **Larval and Adult Control (Steve Ramos)**
  - **Public Outreach (Luz Maria Robles)**

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

The season is picking up as our surveillance is showing an increase of mosquitoes in the field with the warm weather. Control crews are becoming more active as the recent rains have filled up some of our spring sources.

Mosquito and West Nile Virus Awareness week is April 21-27 and we have a number of events planned. We will be hosting a media day to educate the public on how we protect public health as well as distributing repellent to the homeless shelters, announcing the Fight the Bite contest winners, participating in an Earth Day celebration, attending Youth day in Winters.

The MVCAC Legislative day was held on April 3<sup>rd</sup> and Sean Denny, Samer Elkashef and I visited our local offices. Our main talking points were the Calsurv Gateway legislation (AB 310) along with updates on our unmanned aerial systems and a status update on invasive species. We have included copies of our position papers.

The District hosted attendees from the International Visitor Leadership Program in coordination with the Northern California World Trade Center and the U.S. Department of State. We presented our program to them and answered questions on vector control in California.

The District is working on compiling the annual budget for FY 19-20. A draft version will be presented at the May meeting.

Samer Elkashef and Marcia Reed will be conducting another CDC/AMCA Train the Trainer Program for the AMCA South Pacific Region.

The AMCA Legislative Day will be held on May 13-16.

- b. Reports from MVCAC Legislative Day**
- c. District Departments**
  - **Lab/Surveillance (Marcia Reed)**
  - **Ecological Management (Marty Scholl)**
  - **Biological Control (Tony Hedley)**
  - **Larval and Adult Control (Steve Ramos)**
  - **Public Outreach (Luz Maria Robles)**





# Supporting Mosquito Surveillance and Research: AB 320 & Ongoing State Budget Support

## CALSURV GATEWAY

The California Vectorborne Disease Surveillance Gateway, known as the CalSurv Gateway, was started in 2006 through a partnership of the University of California, Davis, more than 60 mosquito and vector control agencies, and the California Department of Public Health.

The CalSurv Gateway is critical for public health and vector control programs in California because it provides tools for real-time data collection, visualization, and analysis that allow agencies to make informed decisions on interventions. The system tracks disease-spreading mosquitoes – where they are, where they've been, where they may be heading, and where new diseases might be emerging.

Since 2011, mosquito control professionals in California have been working to slow the spread of two invasive mosquito species, *Aedes aegypti* and *Aedes albopictus*. These species are significant public health concerns, as they can transmit tropical viruses such as Zika, dengue, and chikungunya that frequently are introduced into California by international travelers.

At the same time, California continues to combat West Nile and St. Louis encephalitis viruses. West Nile virus activity was detected in 41 counties in California in 2018 and over the last 10 years, more than 4,000 human disease cases were reported, including 211 deaths. There are no vaccines for any of these viruses, which are costly to treat and can have long-term health and financial consequences.

Since its launch in 2006, the CalSurv Gateway has been sustained through a series of short-term research grants to faculty at UC Davis, which are not adequate or reliable enough to meet the growing needs of such a mission-critical resource for our state.

AB 320 (Quirk) would identify the CalSurv Gateway in statute as the statewide surveillance database that enables public health and vector control agencies to track and predict the emergence of invasive species and mosquito-borne diseases and to facilitate efficient response. **The Mosquito and Vector Control Association of California urges you to support this important program by voting Yes on AB 320.**

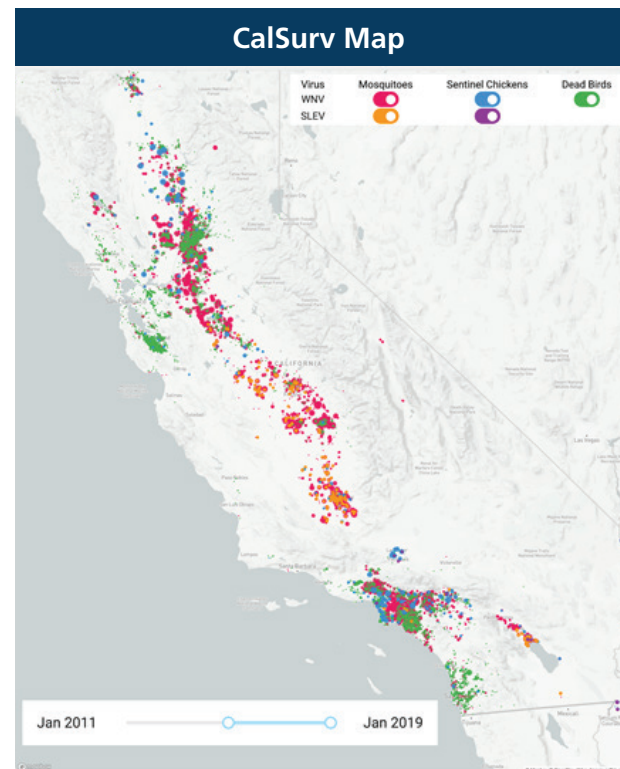


Figure 1. CalSurv map showing mosquito-borne virus activity detected by surveillance, 2011-2018.

### STATE BUDGET

MVCAC is urging support for a statewide mosquito and disease prevention program that specifically would:

- Work in tandem with AB 320 (Quirk) to officially recognize the CalSurv Gateway in statute.
- Establish a reasonable funding level to sustain the CalSurv Gateway and allow for development of new capabilities as an essential research and surveillance tool for California.

As evidence of the impact of this support, last year's one-time funding for 2018-2019 has enabled hiring of new staff and development of the following new features:

- Interactive maps and graphs of mosquito and virus activity
- Improved statewide tracking of insecticide resistance
- Scalable software services that allow local agencies to interact with data and define custom reports

### SURVEILLANCE CAN HELP COMBAT THE SPREAD OF DISEASE

It is time for the state to support the CalSurv Gateway and reinvest in public health. Mosquito control and public health professionals need the tools to proactively manage both native and invasive species through reliably funded and enhanced surveillance that gives everyone a better view of statewide data.

**The Mosquito and Vector Control Association of California encourages your support of this important bill and measure.**



One Capitol Mall, Suite 800, Sacramento, CA 95814

**p** (916) 440-0826    **e** [mvcac@mvcac.org](mailto:mvcac@mvcac.org)



## Taking Flight: Unmanned Aircraft Vehicles (Drones) in Vector Control

California's mosquito and vector control agencies have a vested duty to protect the public from existing and emerging health threats caused by mosquitoes. For years, agencies have sought and implemented safer alternatives and best management practices that go beyond traditional methods to reduce the threat of mosquito-borne diseases. One example is the evaluation of emerging technology using small unmanned aircraft vehicles (UAVs) or drones, which are operated by a pilot on the ground using a remote transmitter.

Agencies are currently utilizing UAVs to improve their operations in a number of ways:

- UAVs are being used to visually inspect potential mosquito sources faster and more efficiently than traditional on-site inspections. One agency estimates inspections occur more than one acre per minute using a single UAV, a rate that would take a team of several technicians to achieve on the ground.
- UAVs are being used to inspect environmentally-sensitive areas while minimizing potential impacts to the local environment.
- UAVs are being used to inspect remote and difficult-to-reach mosquito sources such as wetlands and rice fields, improving employee safety by reducing the need to access such sources through rough terrain. Used to determine the presence of water in remote areas, a UAV can survey 400 acres in a single minute.
- Utilizing a specialized camera, a vector control agency was able to observe quarter-inch long mosquito larvae at a height of 45 feet. Further development of this technology may allow agencies to collect detailed larval surveillance information to help guide their operations.
- Initial evaluations of pesticide applications by UAVs have been shown to be considerably faster than ground treatment of equivalent sources and UAVs allow for treatment of areas where traditional aerial applications are not possible (e.g., under high voltage power lines).
- UAVs permit more precise pesticide applications than traditional aircraft. Where a fixed-wing aircraft may have to treat large swaths of a mosquito-producing rice field, a UAV could focus treatments on the mosquito-dense sections, saving time and materials while achieving the same results.
- UAVs have been used to aid other components of vector control programs including reading of atmospheric conditions at various altitudes to aid adult mosquito spraying. Use of UAVs for land surveying permits vector control agencies to more efficiently work with landowners to prevent accumulation of standing water.

While ongoing federal rules provide some guidance on how to safely use UAVs in commercial settings, any future legislation concerning this subject must recognize the legitimate use of UAVs to protect public health and safety and not overly restrict the ability to utilize this new technology.

Continued

Due to the ongoing challenge of West Nile virus and emerging diseases such as Zika virus, allowing flexibility on the use of drones will bring public safety benefits. The use of UAVs will make vector control activities safer and more efficient with less insecticide drift, improved safety for employees, and reduced costs. Promoting public acceptance of UAVs by demonstrating their safe, effective, and responsible use will help guide the Department of Pesticide Regulation’s (DPR) governance of UAVs for both short-term and long-term benefits to public health. MVCAC supports these regulatory efforts and is working with DPR to speed up the use of drones for pesticide applications as an effective tool in helping to protect public health.



# Invasive Mosquito Species in California: A Growing Challenge

California has been severely impacted by the arrival of two problematic mosquito species. *Aedes albopictus* was discovered in 2011 in Los Angeles County and *Aedes aegypti* was detected in the cities of Madera, Clovis, and San Mateo in 2013. These mosquitoes have continued to spread, with *Aedes aegypti* now established in 12 counties in the Central Valley and Southern California. They pose a unique challenge to vector control agencies and a potential threat to the health of California residents and visitors.

## A PATHWAY FOR PATHOGENS

Invasive *Aedes* mosquitoes are vectors of Zika, dengue, chikungunya, and yellow fever viruses. With thousands of international travelers arriving or returning to California each year from areas where these viruses regularly occur, the potential for local transmission of imported diseases in the state is increasing. The arrival of a single traveler with an active infection into an area with invasive mosquitoes opens the door for these diseases to be spread here at home.

## A COSTLY ARRIVAL

In addition to the disease risk, invasive mosquitoes are a terrible nuisance. The females will bite throughout the day, resulting in numerous irritating bites, and will follow people indoors. As a result, many local vector control agencies have seen their requests for service double. These mosquitoes require unique surveillance and control methods which put a significant burden on local vector control agencies. For example, a Southern California district's operational expenses increased by 34% to deal with these invasive mosquitoes. All agencies with invasive *Aedes* detections have had to increase staff, equipment, traps, and develop additional outreach efforts and materials.

## THE NEED FOR NEW SOLUTIONS

Traditional vector control techniques have limited effectiveness against these invasive mosquitoes. Their ability to exploit small, often cryptic, water sources to develop their offspring makes reducing local populations a time-consuming and labor-intensive task.

This challenge has caused vector control agencies to seek innovative solutions to reduce or eliminate this new threat. Some have used intensive outreach campaigns (media and door-to-door) promoting resident-driven mosquito source prevention and elimination in the hope of establishing long-term control through behavior change. Others are refining techniques for wide-area larval control from air and ground vehicles, which have shown some initial success but are costly and difficult to sustain. In an ongoing project by Verily Life Sciences, MosquitoMate, and Consolidated Mosquito Abatement District in Fresno County, male *Aedes aegypti* mosquitoes carrying a naturally-occurring bacterium called *Wolbachia* are released to mate with the biting female mosquitoes. Male mosquitoes cannot bite and resulting eggs will not hatch. Recent results have shown a significant (95%) reduction in female *Aedes aegypti* numbers in areas where males were released.

While these techniques show promise, effective use will require wide-scale, multi-agency implementation throughout regions of the state, which may be difficult or impossible for local agencies to achieve alone. Understanding how these mosquitoes invade and thrive in California, as well as research, development, and implementation of new prevention and control strategies, will allow us to respond to the threat from invasive mosquitoes. Across the state, local agencies and their academic and private industry partners are working towards new solutions. State support and investment are vital to the success of these efforts.

## LABORATORY

### Monthly Report for April 2019 Board Meeting

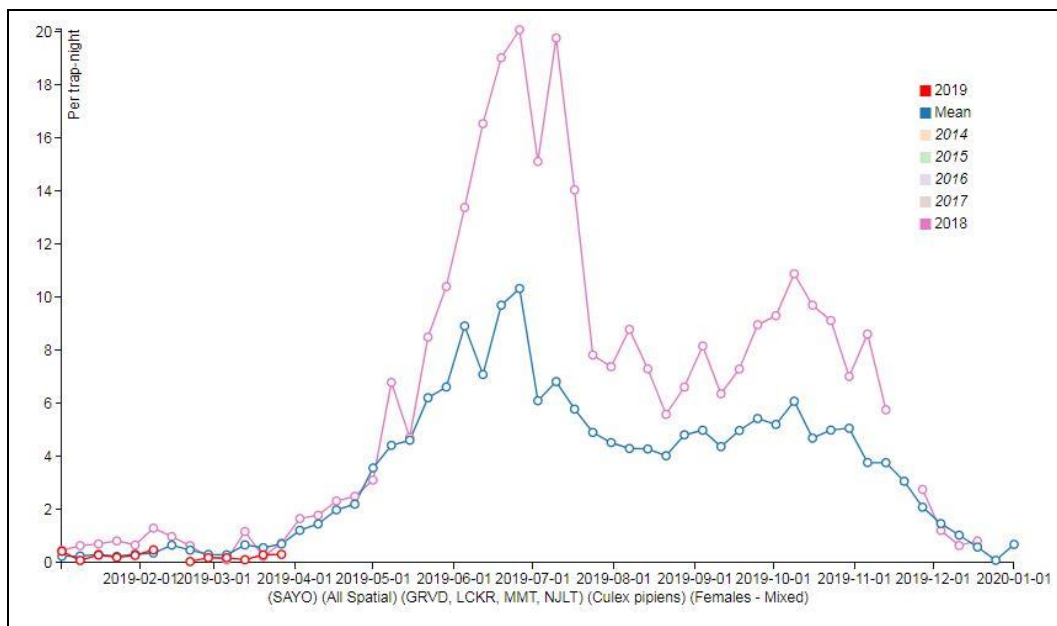
#### Insectary:

Colonies maintained: *Culex tarsalis* Bakersfield from CDC (susceptible)  
*Culex tarsalis* Kern National Wildlife (susceptible)  
*Culex quinquefasciatus* Cq1 (susceptible)  
*Culex pipiens* Woodland (resistant)  
*Culisita incidens* wild - Sacramento County  
*Aedes sierrensis* wild  
*Culex tarsalis* Conaway Ranch - wild

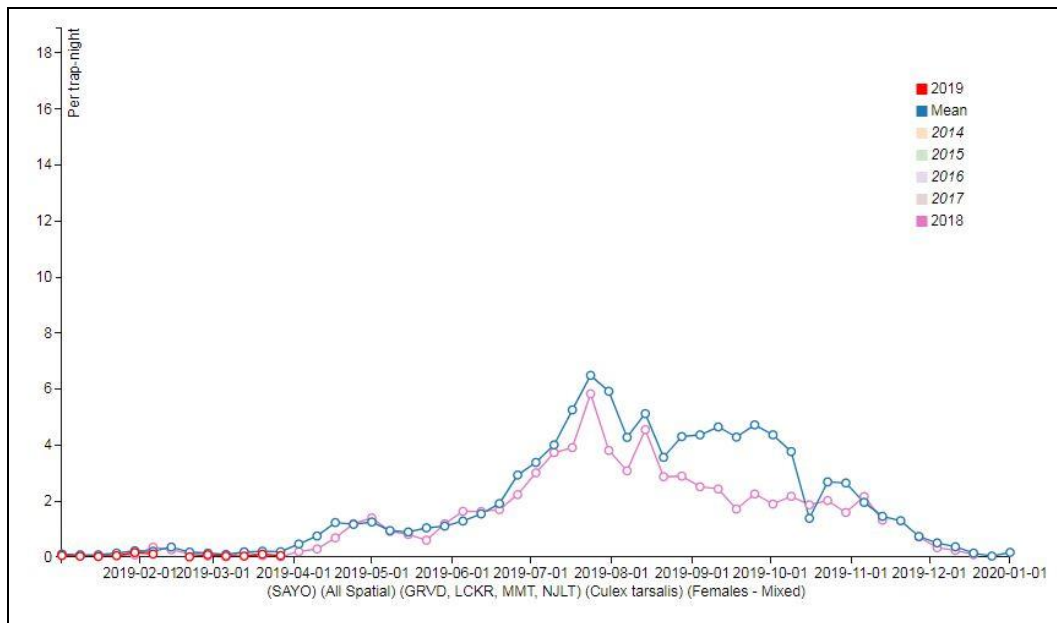
#### Surveillance:

- **Weekly collections** – New Jersey Light traps (NJLTs), Mosquito Magnet traps (MMTs), Locker CO<sub>2</sub> Traps (LCKRs) and Gravid traps (GTs) results are presented in the graphs below. *Culex pipiens*, *Culex tarsalis* and *Anopheles freeborni* mosquito activity is still low. There was a very slight increase in *An. freeborni* activity over one week, this may be our usual winter peak. Also included is a graph of *Aedes sierrensis* mosquito activity, we are expecting to see trap counts increase for this mosquito very soon.

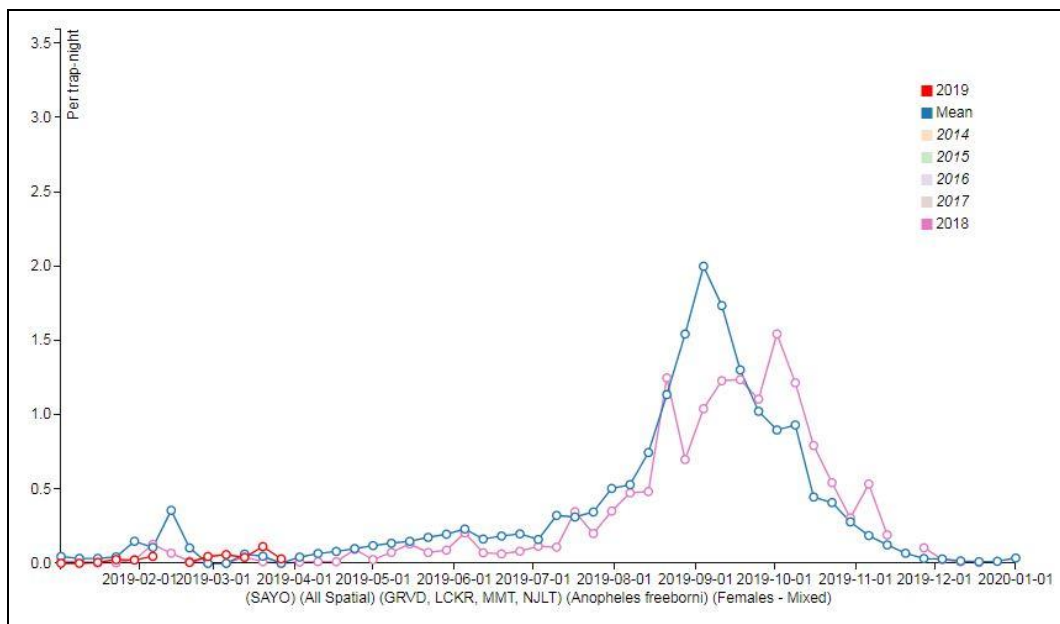
*Culex pipiens* on abundance traps (NJLT, MMT, LCKR, GT):



*Culex tarsalis* on abundance traps (NJLT, MMT, LCKR, GT):

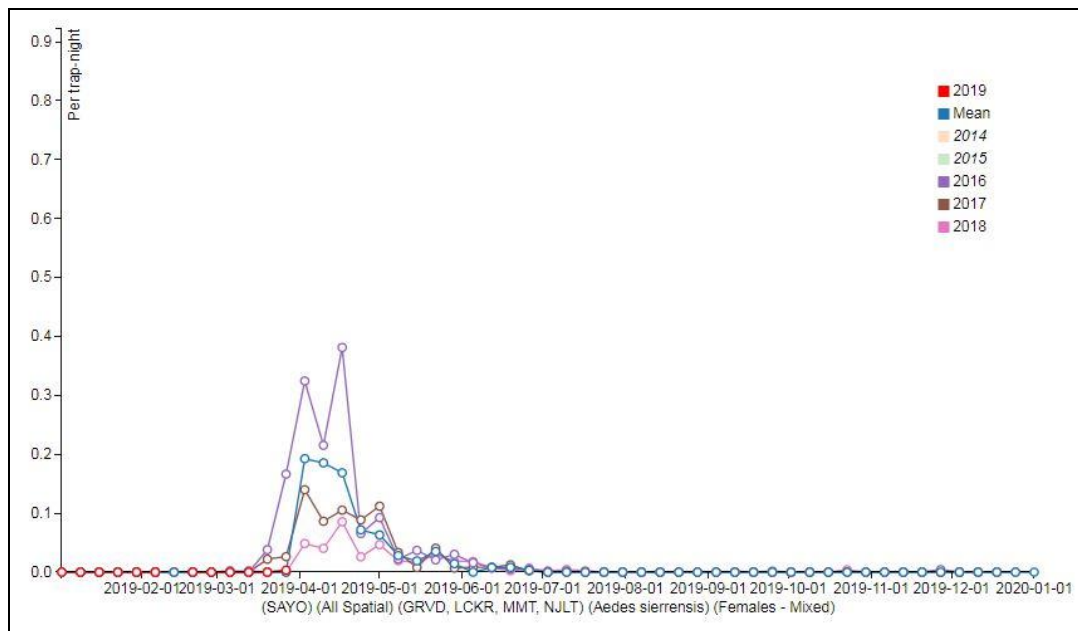


*Anopheles freeborni* on abundance traps (NJLT, MMT, LCKR, GT):





*Aedes sirriensis* on abundance traps (NJLT, MMT, LCKR, GT):



**Encephalitis virus surveillance (EVS) – Mosquitoes** – We are beginning trapping at some sites utilizing the EVS traps (carbon dioxide can traps as well as gravid traps) that were requested by the field supervisors. This trapping is being done for abundance determination. We will begin testing the mosquitoes for the presence of virus’ mid-May.

**Encephalitis virus surveillance (EVS) – Sentinel Chickens** – The sentinel chickens were picked up on April 4<sup>th</sup> in Modesto. Baseline bleeds on the chickens were done and they have been distributed to their flock sites. The sites for this year are: Isleton, Rancho Murieta and Gibson Ranch in Sacramento County and Dunnigan and Knights Landing in Yolo County.

**Encephalitis virus surveillance (EVS) – Dead Birds** –The dead bird hotline opens on April 15<sup>th</sup>. We will be accepting all dead birds, with the exception of pigeons and chickens.

**Exotic/Invasive Species Surveillance** –We are implementing the use of BG Sentinel traps for our invasive species surveillance program this season as a part of our routine EVS surveillance trap runs.

**Tick and Lyme disease surveillance** – Tick flagging for *Ixodes pacificus* ticks is continuing, although the rainy weather is interfering. We were unable to tick flag at all 20 sites in March. Our Cache Creek sites in Yolo County were still inaccessible and although the other sites did not have access issues, we were unable to flag due to the lack of clear non-rainy mornings. We hope to be able to flag at all of our sites in April. We did collect 53 pools in March from the sites we were able to sample.



**BG Counter Traps** – We have received the additional traps we purchased for this season and are developing our plan as to where to place these traps for this season. We will be deploying 20 BG Counter traps this season.

**Mosquito Resistance Testing** – We are continuing to run assays as we have colony mosquitoes available to do so. We are ramping up our colonies to prepare for the seasons testing as well as the bottle bioassay workshop that we will host in May.

**Non-WNV Disease Response Surveillance** – We were not notified of any cases of non-WNV diseases this month.

#### **District Studies –**

**WDG WALs study** – We will be continuing to work with control in evaluating this treatment method in our urban/suburban areas for Culex mosquito control.

**Product Trials** – We plan on performing product trials utilizing the new Merus 3.0 and DeltaGard adulticides this season. In addition, we will be assisting with the Sumilarv evaluation and an evaluation of new yellow jacket bait stations.

#### **Collaborations –**

**Bottle Bioassay Workshop and Testing** – Dr Anton Cornel's staff will be running a workshop on May 22 through the 24<sup>th</sup> at the District. Several other mosquito control districts will be here to participate. This is being done as part of Dr. Cornel's Center of Excellence work.

**Catch Basin Residue and Resistance study** – The MVAC Research Committee discussed this proposal at the spring meeting in Sacramento. We will be working with Dr. Gan from UC Riverside determining resistance in mosquito populations with relation to the pesticide residues found in catch basins. We will be working with other mosquito control districts as well as Dr. Cornell's staff on this study.

**Rice Residue study** – We have completed this study. Dr. Gan and his staff are working on the publication of it.

**Biogents REMOSIS Project (Now BGI)** – We are looking forward to working on this new trap this season.

**Biogents new module trap** – A proposal of this study is being sent to Biogents to elicit their comments and approval. They will be providing the traps for us to test alongside our usual traps.

**Sugar Bait Project** - We will be working with Dr. Lark Coffey of UC Davis on a sugar bait study. We will be deploying sugar bait wicks which we will then test for the presence of WNV, WEE and SLE viruses.

**California Arbovirus Surveillance Bulletin #1** Week 14 Friday, April 5, 2019

2018 & 2019 YTD West Nile Virus Comparisons		
	2018	2019
Total # Dead Bird Reports	567	643
# Positive Counties	2	2
# Human Cases	0	0
# Positive Dead Birds / # Tested	4 / 99	1 / 141
# Positive Mosquito Pools / # Tested	0 / 880	1 / 945
# Seroconversions / # Tested	0 / 70	0 / 78

YTD WNV Activity by Element and County, 2019				
County	Humans	Dead Birds	Mosquito Pools	Sentinel Chickens
Orange			1	
San Diego		1		
<b>Totals</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>0</b>

**ECOLOGICAL MANAGEMENT DEPARTMENT**  
**Monthly Report for the April 2019 Board Meeting**

**Storm Water / Drainages Program**

Cordova Creek: Staff has been contacted by the County of Sacramento Parks and Recreation to assist with the management of beaver dams within the newly created restoration area. Staff will monitor the flows and will assist where necessary.

**Wetland Program**

California Department of Fish and Wildlife (CDFW): Staff has had communication with CDFW in an effort to gain access to the Phoenix Field Ecological Reserve, located north of Sunset Ave in Citrus Heights. The site is a flooded mitigated vernal pool habitat surrounded by residential homes. Staff will pursue a collaborative mosquito management agreement with CDFW.



Spring Meetings: Staff has started scheduling spring wetland meetings with all large managed wetland property managers.

**Planning Program**

Staff has received numerous housing development projects for review located in Sacramento County. Staff submitted comments for the Toll Brothers Regency at Folsom Ranch Development; Northborough Development located in Northern Sacramento County, as well as approved the Vector Control Plan for the White Rock Springs Ranch Project.

Two additional development projects were submitted, both of which are entering into the CEQA process and do not require immediate comments at this time. These projects include the Simmerhorn Ranch subdivision located in South Eastern Galt and the City of Elk Grove's Sports Complex.

**Pool Program**

The department received fifteen pool second notices at time of this report, with two enforcement letters being sent. Staff has developed a new inspection and mailing form to be utilized with this year's aerial pool surveys.

## **UAS Program**

Stone Lakes NWR: Staff conducted an early season flight with the Refuge Manager, surveying birds and standing water North of the Refuge headquarters. Staff intends to map numerous ponds and wetlands within Stone Lakes this summer to help determine future ground and UAS treatment areas. Stone Lakes as applied for approval for use of UAS treatment options.



## BIOLOGICAL CONTROL

### Monthly Report for April 2019 Board Meeting

The month of March proved to be very busy with all of our continuous projects. The Fisheries Department continues to monitor water quality in all ponds as well as crayfish collection, DO monitoring and pond dye evaluation. We began the fish distribution process moving mosquitofish from our predatory exclusion ponds to our open grow out ponds. The goal is to seine the netted ponds and distribute them evenly into unnetted ponds. We call this process “seeding” and we anticipate the grow out ponds to produce 3-4 fold of what they were seeded with. The Fisheries Department also continues to conduct maintenance around the facility including cleaning and organizing work trucks, utility vehicles and herbiciding as needed.

3,585 pounds of fish were used in the month of March. Field technicians have begun to visit their known dirty pools and historic spring sources and fish usage will continue to increase as we move into summer. Daily activities such as water quality testing, medical treatments and tank cleaning were also performed to maintain high quality fish.

#### Log of Treatment Applied

<u>Material</u>	<u>AMT</u>	<u>Area Treated</u>	<u>Applic Rate</u>	<u>Treatments</u>
Mosquitofish	54.16 lbs	275.62Acres	.19lb/acre	471
Guppies	0 lb	0 Sqft	lb/acre	0

#### Fish Plants by Crew

Fisheries-0 lbs, North Sac-39.4 lbs, South Sac-11.6 lbs, Yolo-3.16 lbs

#### Fisheries Budget

<u>Total</u>	<u>Spent</u>	<u>Remaining</u>	<u>% Spent</u>
24,990.00	11,658.01	13,331.99	47%

#### Running total of fish usage for 2019

Fisheries-4.05 lbs, North Sac- 44.9 lbs, South Sac-13.65 lbs, Yolo-27 lbs, Eco-lbs

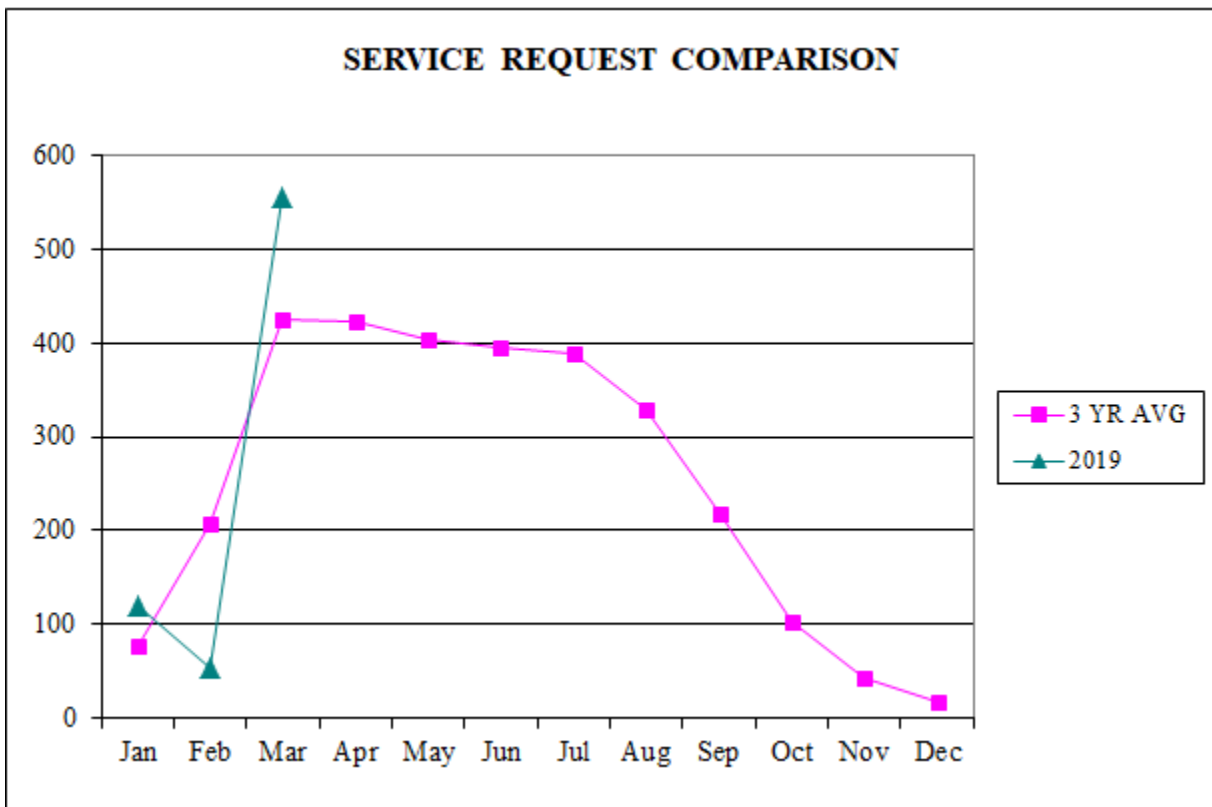


Example of crayfish problems and the process of counting fish as seen in the right photo.

## CONTROL OPERATIONS

### Monthly Report for April 2019 Board Meeting

Technicians have been very busy responding to service requests for fish plants and adult mosquito concerns. Crews have been going through their zones checking known green pools and making contact with homeowners when possible. Catch basins in both counties have been continuously flushed with inconsistent rains resulting in no significant breeding as of yet. Staff has been reallocated to assist with the swimming pool program as rural areas remain inaccessible due to the late rains. Fogging trucks are in the process of getting ready for the upcoming season with calibration scheduled for when warmer weather arrives.



<b>Larvicide Applications thru March 31<sup>st</sup></b>				
	<u>2019</u>		<u>2018</u>	
<u>Locations/Roles</u>	<u>Treatments</u>	<u>Acres</u>	<u>Treatments</u>	<u>Acres</u>
Sacramento County	296	247	317	115.5
Sac County Aerial	Orders	0	1 Orders, 5 Sources	710
Yolo County	13	9	60	92.6
Yolo County Aerial	0 Orders	0	0 Orders	0
CB Treated	0	--	782	--
CB Inspected -not treated	0	--	457	--

<b>Aerial Adulticide Summary thru March 31<sup>st</sup></b>				
	<u>2019</u>		<u>2018</u>	
<u>County</u>	<u># Applications</u>	<u>Acres</u>	<u># Applications</u>	<u>Acres</u>
Sacramento Ag	0	0	0	0
Sacramento Urban	0	0	0	0
Yolo Ag	0	0	0	0
Yolo Urban	0	0	0	0
Totals		0		0

**VDCI Summary through March 31<sup>st</sup>, 2019**

**compared to: 2018**

Contract Acres (our portion) =	530,000	530,000
Acres used =	0	0
Acres remaining =	(530,000)	(530,000)
% Acres used =	0%	0%
% Acres remaining =	100%	100 %

San Joaquin County MVCD has used 0 acres of their 190,000 acre contract commitment.

Placer MVCD has used 0 acres of their 100,000 acre commitment.

Turlock MAD has used 0 acres of their 180,000 acre commitment.



## **PUBLIC INFORMATION AND EDUCATION**

### **Monthly Report for April Board Meeting**

#### **Mosquito Awareness Week**

Mosquito Awareness Week and the official launch of our public information and education campaign is April 21-27. During this week we will host our annual events which include media day, awarding our fight the bite contest winners, repellent distribution to the homeless and participation in a variety of educational community events such as Youth Day and Earth Day.

#### **Fight the Bite Contest**

The deadline for the 2019 annual Fight the Bite Contest was on April 3<sup>rd</sup>. Entries were sorted by grade and winners selected by outside judges. Winners will be awarded during Mosquito Awareness Week. The three first place winners will receive a surprise visit in their classroom to receive their prize and framed artwork. All participants will receive a certificate and winning entries will be posted online. Many of the notable contest entries will also be featured on social media.

#### **Events:**

April is a very busy event month and we will participate in a total of four large community events. Picnic Day in Davis is one of the busiest events of the season and it is held on the UC Davis campus. Throughout the day we educate and inform hundreds of people that stop by the booth. Another large event is Creek Week at Carmichael Park. Volunteers that participate in clean ups of area creeks and many other residents receive free repellent and other valuable mosquito prevention information. Other events include Youth Day in Winters and Earth Day at Southside Park in Sacramento.

#### **Advertising**

The 2019 advertising campaign will kick off during Mosquito Awareness Week and we will have commercials on both radio and television. The media plan that includes a wide mix of advertising outlets is being finalized and contracts are being negotiated by our consultant Gary Benjamin. Media account executives have submitted media plans for the season and we have set up meetings to discuss goals and objectives of the advertising campaign.

#### **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 to be given by Gary Goodman. Upcoming dates include:

April 16: Woodland  
April 23: Sacramento County  
April 23: Yolo County  
May 8: Elk Grove  
May 23: Citrus Heights  
June 5: West Sacramento



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

## **April 17, 2019 Board Meeting**

### **4. Board Review and Consideration for Renewal of Farm Air Contract for Aerial Larviciding Services**

#### **Staff Report:**

The District has been using Farm Air for its larviciding applications for a number of years. Staff finds them to be very effective and flexible to District needs. The District signed a new contract with Farm Air in 2017 that expires in April 2019. I have included a letter from Farm Air requesting a four year term with a price increase from \$1175 per hour to \$1250 per hour. A copy of the current contract is also included.

Staff believes this is a reasonable price increase due to Farm Air's increase in operating costs as outlined in the enclosed letter.

#### **Recommendation:**

**Approve the Aerial Larviciding Contract with Farm Air**

***Farm Air Flying Service, LLC.***

4425 West Riego Rd.  
Sacramento, CA 95836  
(916) 922-9063  
(916) 922-7323 FAX  
[farmairllc@gmail.com](mailto:farmairllc@gmail.com)

April 5<sup>th</sup>, 2019

To Sacramento Yolo Mosquito & Vector Control,

Subject: Aerial larviciding contract renewal.

Farm Air Flying Service is proposing a contract that would be good through December 31<sup>st</sup> of 2022. With the changes as follows.

\*\*An hourly larviciding rate of \$1250.00

\*\*Fuel Surcharge: For every 11 cents above \$2.00 a gallon, a surcharge of 1%  
(ex: fuel= \$2.22 per gallon, 2% of 1250 additional>> total \$1275.00

\*\*\* Aircraft pattern testing,  
>> Odd years: Liquid  
>> Even years: Dry

We plan to have rotary atomizers (AU5000) ready for the use of VectoBac 12AS applications by May 5<sup>th</sup>, 2019

Also, Farm Air will do the research and development of future 2.5# granular applications, additional costs of low rate application equipment, may be asked to be covered by SYMVC.

With that, we would like to continue doing business and providing on time applications for SYMVC, and it has been a pleasure thus far.

Thank You  
Justin Staas  
Farm Air Flying Service LLC.

## AERIAL PESTICIDE APPLICATION AGREEMENT

In consideration of the mutual obligations set forth herein, Sacramento-Yolo Mosquito & Vector Control District (DISTRICT) and Farm Air Flying Service, LLC, a California limited liability company (CONTRACTOR) agree as follows:

1. This Agreement supersedes the earlier agreement between DISTRICT and Farm Air Flying Service, Inc., CONTRACTOR's predecessor in interest, dated April 8, 2019. This Agreement shall be effective on \_\_May 1<sup>st</sup> 2019\_\_ and continue until \_\_December 31<sup>st</sup> 2022\_\_, unless sooner terminated by either party by giving written notice of termination to the other party at least 30 days prior to termination. Such notice shall be sent to:

If notice to DISTRICT:

Sacramento-Yolo Mosquito and Vector Control District  
8631 Bond Road  
Elk Grove, CA 95624

If notice to CONTRACTOR:

Farm Air Flying Service, LLC  
4425 W. Riego Road  
Sacramento, CA 95836

Upon termination, CONTRACTOR shall be fairly compensated for all work performed to the date of termination as calculated by DISTRICT based on the fee and payment provisions below. Such compensation will not include any termination-related expenses, cancellation or demobilization charges, or lost expected or anticipated profit. The parties also may agree in writing to extend the term of this Agreement.

2. DISTRICT shall, from time to time, engage CONTRACTOR to spray pesticides from aircraft operated by CONTRACTOR for purposes of mosquito abatement and control. CONTRACTOR shall accept such engagements in accordance with this Agreement. The type and location of pesticides to be applied and the general time of the pesticide application will be determined by DISTRICT and DISTRICT will supply the pesticide material to CONTRACTOR. CONTRACTOR shall provide all labor, services, equipment, tools, material and supplies required or necessary to properly, competently and completely perform the services under this Agreement. CONTRACTOR shall determine the method, details and means of doing the work consistent with the location and instructions provided by DISTRICT.
3. CONTRACTOR agrees to utilize pilots maintaining valid FAA certified Commercial or more advanced pilot certificates who have flown a minimum pilot in command time of 2000 hours, of which no fewer than 2000 hours shall have been flown while engaged in aerial applications in aircraft having either fixed wing or rotor wing, and no fewer than 100 hours shall have been conducted in the make and model aircraft being flown to perform the services required under this Agreement.

4. CONTRACTOR agrees to file with the appropriate agencies within the County where the work is to be performed, maintain the certification K or other certification or licenses necessary for the permission to perform aerial application.
5. After delivery of the pesticide material by DISTRICT to CONTRACTOR, the application, handling and storage of pesticides by CONTRACTOR shall be in strict conformity with all applicable Federal, State and Local laws, regulations, and requirements and including the requirements and limitations of the applicable pesticide label and Material Safety Data Sheet. CONTRACTOR shall at all times be properly licensed and certified by appropriate agencies for the application, handling and storage of pesticides under this Agreement and for the operation of aircraft used in such application. CONTRACTOR shall provide appropriate County with monthly pesticide reports in a timely manner. In accordance with California Code of Regulations title 13, section 2022.1, CONTRACTOR shall comply with all federal, state and local air pollution control laws and regulations applicable to the CONTRACTOR and its work.
6. The locations and timing of the application of pesticides by CONTRACTOR shall be at the discretion and direction of DISTRICT. CONTRACTOR will perform its work consistent with the directions provided by DISTRICT.
7. Pesticides to be applied shall be only those approved by the State Department of Public Health and controlled under the Cooperative Agreement of the Environmental Management Branch (EMB) offices of the State Department of Public Health. Application shall be by aerial spraying in accordance with specifications, calibrations, and application rates specified by DISTRICT and the pesticide manufacturer. CONTRACTOR shall strictly adhere to the specifications and application rates, location and timing provided by DISTRICT. In the event that, as a result of improper application techniques or misplacement of pesticide, mosquito populations are not reduced to a level determined to be acceptable by DISTRICT, CONTRACTOR shall not be entitled to compensation for such application. Such compensation may be withheld from any funds due or to become due from DISTRICT.
8. DISTRICT'S representative may inspect and monitor all pesticide storage, handling, and application procedures used by CONTRACTOR. However, any inspection or monitoring by DISTRICT shall not affect the duties or responsibilities of CONTRACTOR as described in this Agreement.
9. CONTRACTOR shall maintain and permit DISTRICT to inspect records showing date, location, type of pesticide, quantity used, and number of acres treated on its behalf. CONTRACTOR shall provide District with digital map and records of each mission showing type of pesticide, quantity used and number of acres treated.
10. CONTRACTOR shall provide current written calibration records for all pesticide application equipment used on the DISTRICT'S behalf at the beginning of each application season. Aircraft pattern testing will include liquid product on odd years (2019, 2021) and granular products on even years (2020, 2022).

11. CONTRACTOR shall be compensated for its services and expenses as provided in Appendix A of this Agreement. Each invoice submitted to DISTRICT by CONTRACTOR for payment shall be accompanied by a copy of the applicable records, together with the exact times of application if requested by DISTRICT. If requested, an annual summary shall be provided to DISTRICT by CONTRACTOR of the annual hours of aerial time utilized and charges incurred.
12. CONTRACTOR shall provide spraying and surveillance services for the entire geographical area within DISTRICT'S jurisdiction, and shall cooperate and assist DISTRICT in obtaining any grants of permission necessary to permit the spraying of pesticides. Spray services shall be performed generally when requested by DISTRICT, weather and flying safety factors permitting.
13. CONTRACTOR's relationship to DISTRICT is that of an independent contractor. All persons hired by CONTRACTOR and performing the Work shall be CONTRACTOR's employees or agents. CONTRACTOR and its officers, employees and agents are not DISTRICT employees, and they are not entitled to DISTRICT employment salary, wages or benefits. CONTRACTOR shall pay, and DISTRICT shall not be responsible in any way for, the salary, wages, workers' compensation, unemployment insurance, disability insurance, tax withholding, and benefits to and on behalf of CONTRACTOR's employees. CONTRACTOR shall, to the fullest extent permitted by law, indemnify DISTRICT, and its officers, employees, volunteers and agents from and against any and all liability, penalties, expenses and costs resulting from any adverse determination by the federal Internal Revenue Service, California Franchise Tax Board, other federal or state agency, or court concerning CONTRACTOR's independent contractor status or employment-related liability.
14. CONTRACTOR shall keep and maintain all ledgers, books of account, invoices, vouchers, and other records and documents evidencing or relating to charges for services, expenditures and disbursements charged to DISTRICT for a minimum period of three years (or for any longer period required by law) from the date of final payment to CONTRACTOR under this Agreement. DISTRICT may inspect and audit such books and records, including source documents, to verify all charges, payments and reimbursable costs under this Agreement.
15. HOLD HARMLESS AND INDEMNITY:  
  
CONTRACTOR agrees to indemnify, defend, protect, and hold harmless DISTRICT, and its officers, employees, volunteers and agents from and against any and all liability, losses, claims, damages, expenses, demands, and costs (including, but not limited to, attorney, expert witness and consultant fees, and litigation costs) of every nature arising out of CONTRACTOR'S performance of the services and caused by any negligent act or omission, willful misconduct or violation of law of or by CONTRACTOR or its employees, agents and subcontractors, except where caused by the active negligence, sole negligence or willful misconduct of DISTRICT or as otherwise provided or limited by law.

CONTRACTOR'S obligations under this indemnification provision shall survive the termination of, or completion of services under, the contract.

16. INSURANCE REQUIREMENTS:

CONTRACTOR shall procure and maintain, at its own expense, for the duration of the contract, insurance against claims for injuries to person or damages to property which may arise from or in connection with the performance of the work hereunder by CONTRACTOR, its agents, representatives, or employees. Certified copies of such policies, including endorsements and renewals, shall be given to DISTRICT prior to the effective date of the policies, endorsements or renewals.

A. Minimum Scope of Insurance

Coverage provided by CONTRACTOR shall include the following:

1. Automobile Liability coverage that is at least as broad as CA 00 01 covering Automobile Liability, code 1 (any auto).
2. Workers' Compensation insurance as required by the State of California and Employer's Liability insurance.
3. Aviation Liability insurance including Chemical Coverage Endorsements, on a form acceptable to DISTRICT.

B. Minimum Limits of Insurance

1. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
2. Workers' Compensation: Benefits as per California statutory requirements.
3. Employer's Liability: \$1,000,000 per accident for bodily injury or disease.
4. Aviation Liability Insurance: \$1,000,000 per occurrence. Any Chemical Coverage sub-limits shall be at least \$1,000,000/\$300,000/\$100,000 for bodily injury per person, bodily injury per accident & property damage.

C. Other Insurance Provisions

The Automobile Liability and Aviation Liability policies are to contain, or be endorsed to contain, the following provisions:

1. The DISTRICT, its officers, officials, employees, agents, and volunteers are to be named as additional insured as respects liability arising out of the operations of the CONTRACTOR including automobiles owned, leased, hired or borrowed by CONTRACTOR.

2. Each insurance policy required shall be endorsed to state that DISTRICT will be notified of any material change to the policies, and that coverage shall not be suspended, voided, canceled by either party, or reduced in coverage or in limits, except the reduction of aggregate limits by payments of claims, without thirty (30) days prior written notice by certified mail, return receipt requested, being given to DISTRICT.
3. Only to the extent required in Sections 15 (Hold Harmless and Indemnity) and Section 16.C.1 (Insurance Requirements, Other Insurance Provisions), the CONTRACTOR'S insurance coverage shall be primary insurance as respects DISTRICT, its officers, officials, employees, agents, or volunteers. Any insurance or self-insurance maintained by DISTRICT, its officers, officials, employees, agents, or volunteers shall be excess of CONTRACTOR'S insurance and shall not contribute with it to the extent the CONTRACTOR'S policies apply.
4. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the DISTRICT.
5. CONTRACTOR'S insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

**D. Deductibles and Self-Insured Retentions**

Any deductibles or self-insured retentions must be declared to and approved by DISTRICT. At the option of DISTRICT, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects DISTRICT, its officers, officials, employees, agents, and volunteers; or CONTRACTOR shall provide a financial guarantee satisfactory to DISTRICT guaranteeing payment of losses and related investigations, claim administration and defense expenses.

**E. Acceptability of Insurers**

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII unless otherwise acceptable to DISTRICT

**F. Verification of Coverage**

CONTRACTOR shall furnish DISTRICT with certified copies of the insurance policies, including all endorsements and renewals. All policies and endorsements are to be received and approved by DISTRICT prior to commencement of performance under this Agreement.

**G. Subcontractors**

CONTRACTOR agrees not to enter into any subcontracting agreements for work contemplated under the Agreement without first obtaining the prior written approval from the DISTRICT. Any approved subcontractor must comply with the same indemnity and insurance requirements and shall be subject to the same provisions as CONTRACTOR. CONTRACTOR shall be fully responsible for the performance of any subcontractor. CONTRACTOR shall act as the single principal for all service in this contract and will specify a single point of contact representing the CONTRACTOR. Subject to the foregoing, this Agreement will bind and inure to the benefit of the successors of the parties

17. DISTRICT'S duties and responsibilities shall include the following:

1. DISTRICT shall not unreasonably request services from CONTRACTOR and shall assist, where possible, in coordinating the timing of services to be performed.
2. DISTRICT shall be responsible to pay all invoices within 30 days of receipt if the work has been satisfactorily completed and the invoice is accurately computed, properly documented and not in dispute.
3. DISTRICT shall identify in Appendix B, the geographical areas that may be treated with pesticides, including any towns, or cities that may exposed to the applied pesticides.
4. DISTRICT from time to time shall provide to CONTRACTOR a list of the pesticides that may be used in aerial application and their labels and Material Data Safety Sheets.
5. DISTRICT shall provide the pesticides for application at a location and time upon which DISTRICT and CONTRACTOR agree.

18. State Audit Contingency. In accordance with California Government Code section 8546.7, the parties acknowledge that this Agreement, and performance and payments under it, are subject to examination and audit by the State Auditor General for three years following final payment under the Agreement.

19. CONTRACTOR represents that it is specially trained and experienced, and possesses the skill, ability, knowledge and certification, to competently perform the work provided by this Agreement. DISTRICT has relied upon CONTRACTOR's training, experience, skill, ability, knowledge and certification as a material inducement to enter into this Agreement. All work performed by CONTRACTOR shall be in accordance with applicable legal requirements and meet the standard of care and quality ordinarily to be expected of competent professionals in CONTRACTOR's field.

20. CONTRACTOR shall perform its work and services in compliance with all applicable federal, state and local laws and regulations. CONTRACTOR also shall possess, maintain and comply with all federal, state and local permits, licenses and certificates that may be required for it to perform the work.



21. Any waiver at any time by either party of its rights as to a breach or default of this Agreement shall not be deemed to be a waiver as to any other breach or default. No payment by DISTRICT to CONTRACTOR shall be considered or construed to be an approval or acceptance of any work or a waiver of any breach or default.
22. This Agreement will be governed by and construed in accordance with the laws of the State of California. The county and federal district court where DISTRICT's office is located shall be venue for any state and federal court litigation concerning the enforcement or construction of this Agreement.

SACRAMENTO-YOLO MOSQUITO AND  
VECTOR CONTROL DISTRICT

FARM AIR FLYING SERVICE, LLC

By: \_\_\_\_\_  
Gary Goodman, Manager

By: \_\_\_\_\_  
Justin Staas  
Its: \_\_\_\_\_

## **APPENDIX A**

### **COMPENSATION**

Compensation for aerial spraying by Farm Air Flying Service, LLC for the Sacramento-Yolo Mosquito and Vector Control District shall be at the rate of:

Larviciding rate: \$1,250.00 per hour

In addition, whenever the price of aviation fuel exceeds \$2.00 per gallon, Farm Air Flying Service, LLC shall impose a surcharge of one percent of the larviciding rate for every \$0.11 over \$2.00 of such fuel costs.

## **APPENDIX B**

The geographic areas to be treated with chemical may include any area located within Sacramento or Yolo counties. The majority of aerial spraying will consist of agricultural, wildlife areas, wetlands, and other similar habitats. Towns, cities, or other populated areas will generally not be included in aerial spraying; however, in the event of emergency conditions which could result in transmission of vector-borne diseases, aerial spraying of populated areas may occur.



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

## **April 17, 2019 Board Meeting**

### **5. Board Review and Consideration for Renewal of Leading Edge Contract for Aerial Larviciding Services by UAS**

#### **Staff Report:**

The District has been working with Leading Edge for larviciding applications by UAS (unmanned aerial system) for the last three years. Leading Edge treated nearly 750 acres in 2018 by UAS and showed that the treatments can be both effective and efficient. The District will soon be making our own applications via UAS once the California Department of Pesticide Regulation modifies their current program to allow for treatments to be made without the requirement of being a certified pilot. We anticipate that CDPR will have their internal documents and regulations in place sometime in the summer of 2019. The District would like to continue to utilize the services of Leading Edge for the upcoming season. The contract would be for a three year period and the District would decide each year if we will utilize their services. The approval of the contract for the 2019 season would commit the District to a minimum of \$72,000 expenditure for services. We anticipate that the average cost of treatment would be about \$20 per acre. A copy of the current proposal is included.

#### **Recommendation:**

**Authorize the Manager to sign a 3 year contract with Leading Edge for UAS Services.**

## **AERIAL PESTICIDE APPLICATION AGREEMENT**

In consideration of the mutual obligations set forth herein, Sacramento-Yolo Mosquito & Vector Control District (DISTRICT) and Leading Edge Aerial Technologies, Inc., a North Carolina corporation (CONTRACTOR), agree as follows:

1. CONTRACTOR shall perform the aerial application of pesticides using Small Unmanned Aerial Systems (sUAS) owned and operated by CONTRACTOR and render other related services described in the attached Appendix A. The type and location of pesticides to be applied and the general time of the pesticide application will be determined by DISTRICT and DISTRICT will supply the pesticide material to CONTRACTOR. CONTRACTOR shall provide all labor, services, equipment, tools, material and supplies required or necessary to properly, competently and completely perform the services under this Agreement. CONTRACTOR shall determine the method, details and means of doing the work consistent with the location and instructions provided by DISTRICT.
2. This Agreement shall be effective on April 17, 2019 and continue until October 31, 2021, unless sooner terminated by either party by giving written notice of termination to the other party at least 30 days prior to termination. Such notice shall be sent to:

If notice to DISTRICT:

Sacramento-Yolo Mosquito and Vector Control District  
8631 Bond Road  
Elk Grove, CA 95624

If notice to CONTRACTOR:

Leading Edge Aerial Technologies, Inc.  
675 S. Hayward Street  
Waynesville, NC 28786

Upon termination, CONTRACTOR shall be fairly compensated for all work performed to the date of termination as calculated by DISTRICT based on the fee and payment provisions below. Such compensation will not include any termination-related expenses, cancellation or demobilization charges, or lost expected or anticipated profit. The parties also may agree in writing to extend the term of this Agreement.

3. CONTRACTOR agrees to utilize sUAS pilots maintaining valid FAA remote pilot certificates or more advanced pilot certificates. The certificates and licenses required to perform the services under this Agreement are more particularly described in Appendix A.
4. CONTRACTOR agrees to file with the appropriate agencies within the County where the work is to be performed and maintain all certifications or licenses necessary for the permission to perform sUAS aerial application.

5. After delivery of the pesticide material by DISTRICT to CONTRACTOR, the application, handling and storage of pesticides by CONTRACTOR shall be in strict conformity with all applicable federal, state and local laws, regulations, and requirements and including the requirements and limitations of the applicable pesticide label and Material Safety Data Sheet. CONTRACTOR shall at all times be properly licensed and certified by appropriate agencies for the application, handling and storage of pesticides under this Agreement and for the operation of sUAS used in such application. CONTRACTOR shall provide appropriate County with monthly pesticide reports in a timely manner. In accordance with California Code of Regulations title 13, section 2022.1, CONTRACTOR shall comply with all federal, state and local air pollution control laws and regulations applicable to the CONTRACTOR and its work.
6. The locations and timing of the application of pesticides by CONTRACTOR shall be at the discretion and direction of DISTRICT. CONTRACTOR will perform its work consistent with the directions provided by DISTRICT.
7. Pesticides to be applied shall be only those approved by the State Department of Public Health and controlled under the Cooperative Agreement of the Environmental Management Branch (EMB) offices of the State Department of Public Health. Application shall be by aerial spraying in accordance with specifications, calibrations, and application rates specified by DISTRICT and the pesticide manufacturer. CONTRACTOR shall strictly adhere to the specifications and application rates, location and timing provided by DISTRICT. In the event that, as a result of improper application techniques or misplacement of pesticide, mosquito populations are not reduced to a level determined to be acceptable by DISTRICT, CONTRACTOR shall not be entitled to compensation for such application. Such compensation may be withheld from any funds due or to become due from DISTRICT.
8. DISTRICT'S representative may inspect and monitor all pesticide storage, handling, and application procedures used by CONTRACTOR. However, any inspection or monitoring by DISTRICT shall not affect the duties or responsibilities of CONTRACTOR as described in this Agreement.
9. CONTRACTOR shall maintain and permit DISTRICT to inspect records showing date, location, type of pesticide, quantity used, and number of acres treated on its behalf. CONTRACTOR shall provide District with digital map and records of each mission showing type of pesticide, quantity used and number of acres treated.
10. CONTRACTOR shall provide current written calibration records for all pesticide application equipment used on the DISTRICT'S behalf at the beginning of each application season.
11. CONTRACTOR shall be compensated for its services and expenses as provided in Appendix A of this Agreement. Each invoice submitted to DISTRICT by CONTRACTOR for payment shall be accompanied by a copy of the applicable records, together with the exact times of application if requested by DISTRICT.

12. CONTRACTOR shall provide spraying, surveillance and imagery services for the entire geographical area within DISTRICT'S jurisdiction and shall cooperate and assist DISTRICT in obtaining any grants of permission necessary to permit the spraying of pesticides using sUAS. Spray services shall be performed generally when requested by DISTRICT, weather and flying safety factors permitting.
13. CONTRACTOR's relationship to DISTRICT is that of an independent contractor. All persons hired by CONTRACTOR and performing the Work shall be CONTRACTOR's employees or agents. CONTRACTOR and its officers, employees and agents are not DISTRICT employees, and they are not entitled to DISTRICT employment salary, wages or benefits. CONTRACTOR shall pay, and DISTRICT shall not be responsible in any way for, the salary, wages, workers' compensation, unemployment insurance, disability insurance, tax withholding, and benefits to and on behalf of CONTRACTOR's employees. CONTRACTOR shall, to the fullest extent permitted by law, indemnify DISTRICT, and its officers, employees, volunteers and agents from and against any and all liability, penalties, expenses and costs resulting from any adverse determination by the federal Internal Revenue Service, California Franchise Tax Board, other federal or state agency, or court concerning CONTRACTOR's independent contractor status or employment-related liability.
14. CONTRACTOR shall keep and maintain all ledgers, books of account, invoices, vouchers, and other records and documents evidencing or relating to charges for services, expenditures and disbursements charged to DISTRICT for a minimum period of three years (or for any longer period required by law) from the date of final payment to CONTRACTOR under this Agreement. DISTRICT may inspect and audit such books and records, including source documents, to verify all charges, payments and reimbursable costs under this Agreement.
15. HOLD HARMLESS AND INDEMNITY:

CONTRACTOR agrees to indemnify, defend, protect, and hold harmless DISTRICT, and its officers, employees, volunteers and agents from and against any and all liability, losses, claims, damages, expenses, demands, and costs (including, but not limited to, attorney, expert witness and consultant fees, and litigation costs) of every nature arising out of CONTRACTOR'S performance of the services and caused by any negligent act or omission, willful misconduct or violation of law of or by CONTRACTOR or its employees, agents and subcontractors, except where caused by the active negligence, sole negligence or willful misconduct of DISTRICT or as otherwise provided or limited by law. CONTRACTOR'S obligations under this indemnification provision shall survive the termination of, or completion of services under, the contract.
16. INSURANCE REQUIREMENTS:

CONTRACTOR shall procure and maintain, at its own expense, for the duration of the contract, insurance against claims for injuries to person or damages to property which may arise from or in connection with the performance of the work hereunder by



CONTRACTOR, its agents, representatives, or employees. Certified copies of such policies, including endorsements and renewals, shall be given to DISTRICT prior to the effective date of the policies, endorsements or renewals.

A. Minimum Scope of Insurance

Coverage provided by CONTRACTOR shall include the following:

1. Automobile Liability coverage that is at least as broad as CA 00 01 covering Automobile Liability, code 1 (any auto).
2. Workers' Compensation insurance as required by the State of California and Employer's Liability insurance.
3. Aviation Liability insurance including Chemical Coverage Endorsements, on a form acceptable to DISTRICT.

B. Minimum Limits of Insurance

1. Automobile Liability: \$1,000,000 per accident for bodily injury and property damage.
2. Workers' Compensation: Benefits as per California statutory requirements.
3. Employer's Liability: \$1,000,000 per accident for bodily injury or disease.
4. Aviation Liability Insurance: \$1,000,000 per occurrence. Any Chemical Coverage sub-limits shall be at least \$1000,000/\$300,000/\$100,000 for bodily injury per person, bodily injury per accident & property damage.

C. Other Insurance Provisions

The Automobile Liability and Aviation Liability policies are to contain, or be endorsed to contain, the following provisions:

1. The DISTRICT, its officers, officials, employees, agents, and volunteers are to be named as additional insured as respects liability arising out of the operations of the CONTRACTOR including automobiles owned, leased, hired or borrowed by CONTRACTOR.
2. Each insurance policy required shall be endorsed to state that DISTRICT will be notified of any material change to the policies, and that coverage shall not be suspended, voided, canceled by either party, or reduced in coverage or in limits, except the reduction of aggregate limits by payments of claims, without thirty (30) days prior written notice by certified mail, return receipt requested, being given to DISTRICT.

3. Only to the extent required in Sections 15 (Hold Harmless and Indemnity) and Section 16.C.1 (Insurance Requirements, Other Insurance Provisions), the CONTRACTOR'S insurance coverage shall be primary insurance as respects DISTRICT, its officers, officials, employees, agents, or volunteers. Any insurance or self-insurance maintained by DISTRICT, its officers, officials, employees, agents, or volunteers shall be excess of CONTRACTOR'S insurance and shall not contribute with it to the extent the CONTRACTOR'S policies apply.
4. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be canceled by either party, except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the DISTRICT.
5. CONTRACTOR'S insurance shall apply separately to each insured against whom a claim is made or suit is brought, except with respect to the limits of the insurer's liability.

D. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by DISTRICT. At the option of DISTRICT, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects DISTRICT, its officers, officials, employees, agents, and volunteers; or CONTRACTOR shall provide a financial guarantee satisfactory to DISTRICT guaranteeing payment of losses and related investigations, claim administration and defense expenses.

E. Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII unless otherwise acceptable to DISTRICT

F. Verification of Coverage

CONTRACTOR shall furnish DISTRICT with certified copies of the insurance policies, including all endorsements and renewals. All policies and endorsements are to be received and approved by DISTRICT prior to commencement of performance under this Agreement.

G. Subcontractors

CONTRACTOR agrees not to enter into any subcontracting agreements for work contemplated under the Agreement without first obtaining the prior written approval from the DISTRICT. Any approved subcontractor must comply with the same indemnity and insurance requirements and shall be subject to the same provisions as CONTRACTOR. CONTRACTOR shall be fully responsible for the performance of any subcontractor. CONTRACTOR shall act as the single principal for all service in this contract and will specify a single point of contact representing the CONTRACTOR. Subject to the foregoing, this Agreement will bind and inure to the benefit of the successors of the parties

17. DISTRICT'S duties and responsibilities shall include the following:
  - A. DISTRICT shall not unreasonably request services from CONTRACTOR and shall assist, where possible, in coordinating the timing of services to be performed.
  - B. DISTRICT shall be responsible to pay all invoices within 30 days of receipt if the work has been satisfactorily completed and the invoice is accurately computed, properly documented and not in dispute.
  - C. DISTRICT shall identify, in Appendix B, the geographical areas that may be treated with pesticides, including any towns, or cities that may be exposed to the applied pesticides.
  - D. DISTRICT from time to time shall provide to CONTRACTOR a list of the pesticides that may be used in aerial application and their labels and Material Data Safety Sheets.
  - E. DISTRICT shall provide the pesticides for application at a location and time upon which DISTRICT and CONTRACTOR agree.
18. State Audit Contingency. In accordance with California Government Code section 8546.7, the parties acknowledge that this Agreement, and performance and payments under it, are subject to examination and audit by the State Auditor General for three years following final payment under the Agreement.
19. CONTRACTOR represents that it is specially trained and experienced, and possesses the skill, ability, knowledge and certification, to competently perform the work provided by this Agreement. DISTRICT has relied upon CONTRACTOR's training, experience, skill, ability, knowledge and certification as a material inducement to enter into this Agreement. All work performed by CONTRACTOR shall be in accordance with applicable legal requirements and meet the standard of care and quality ordinarily to be expected of competent professionals in CONTRACTOR's field.
20. CONTRACTOR shall perform its work and services in compliance with all applicable federal, state and local laws and regulations. CONTRACTOR also shall possess, maintain and comply with all federal, state and local permits, licenses and certificates that may be required for it to perform the work.
21. Any waiver at any time by either party of its rights as to a breach or default of this Agreement shall not be deemed to be a waiver as to any other breach or default. No payment by DISTRICT to CONTRACTOR shall be considered or construed to be an approval or acceptance of any work or a waiver of any breach or default.
22. This Agreement will be governed by and construed in accordance with the laws of the State of California. The county and federal district court where DISTRICT's office is located shall be venue for any state and federal court litigation concerning the enforcement or construction of this Agreement.

SACRAMENTO-YOLO MOSQUITO  
AND VECTOR CONTROL DISTRICT

LEADING EDGE AERIAL  
TECHNOLOGIES, INC

By: \_\_\_\_\_  
Gary Goodman, Manager

By: \_\_\_\_\_  
William Reynolds

## **APPENDIX A**

### **DESCRIPTION OF SERVICES AND COMPENSATION**

#### Services

Leading Edge Aerial Technologies, Inc. (LEAT) shall provide the following services to Sacramento-Yolo Mosquito & Vector Control District (District):

- Provide contract aerial pesticide application services using sUAS. These services consist of:
  - Dedicated instrument licensed pilots with more than 4,680 hours of sUAS and full-scale aircraft logged flight hours;
  - FAA Part 137 Certificate;
  - FAA Part 107 pilot licenses;
  - sUAS aircraft insurance;
  - FAA 333 Exemption for the use of Precision Vision RPA for imagery, remote sensing and aerial application of agricultural and public health products;
  - FAA 333 Exemption amendment for the use of the Yamaha RMAX RPA;
  - Yamaha USA certified training for the operation of the Yamaha RMAX RPA;
  - Certified required training of staff as FAA Visual Observers (VO);
  - Two dedicated sUAS RPA systems for use under the Agreement;
  - The capacity to treat up to 200-250 acres per day (granular materials at 5 pounds per acre), inclusive of areas untreatable by conventional ground methods, and the ability to treat near sensitive habitats, organic crops, duck clubs, and conventional habitats treated by full-scale aircraft.
- Provide custom Remote Pilot Aircraft (RPA) systems for sale and integration assistance for performing in-house imagery and surveillance functions and utilizing RPAs for aerial pesticide applications.
- The specific equipment and personnel dedicated for use under the Agreement are detailed in the next page.

[Insert pages 3 and 4, entitled “Detailed Services Provided to SacYolo MVCD, Remote Piloted Aircraft and Personnel,” of Leading Edge Aerial Technologies, Inc.’s proposal here.]

## Compensation

The District agrees that a minimum payment of \$72,000.00 is required for the term of the Agreement for the following. The DISTRICT can exceed the \$72,000.00 if additional acres are required to be treated by the CONTRACTOR. The chart below provides a minimum and maximum range of acres to be treated based on historical data and provides an estimate of liquid and granular treatments.

### Larviciding Pricing:

The CONTRACTOR'S pricing will be based on an \$18.00/acre rate for granular material applied at 5 pounds per acre. If the acres for a single day are less than 60 acres, the per day rate will be a fixed cost of \$1,250.00. Liquid larviciding would be charged at a rate of \$1250.00 per day.

### Adulticiding Pricing:

The CONTRACTOR can provide the DISTRICT UAS aerial ULV adulticiding services. The number of acres treated per evening or morning is 1,800. The per acre rate is \$1.20 per acre. At present time, the CONTRACTOR can fly over rural/unpopulated areas. Flight times are required to be completed 30 minutes after sunset or up until light conditions prevent visual contact with the UAS. Or 30 minutes after sun-rise.

## **APPENDIX B**

The geographic areas to be treated with insecticides may include any area located within Sacramento or Yolo counties or a neighboring County. The majority of aerial spraying utilizing sUAS will consist of agricultural, wildlife areas, wetlands, and other similar habitats. Towns, cities, or other populated areas will generally not be included in aerial spraying; however, in the event of emergency conditions which could result in transmission of vector-borne diseases, aerial spraying near populated areas may occur.





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

## **April 17, 2019 Board Meeting**

### **6. Board Review and Consideration for Purchase of 1000 Gallons of Deltagard from Adapco**

#### **Staff Report:**

The District is always looking to enhance its adult mosquito control program. A new product, Deltagard, which active ingredient is Deltamethrin is now available for mosquito control use in California. Staff has conducted both bottle bioassay trials and field trials and we would like to use the product more frequently this season. The product is not labeled for aerial use at the moment so we would be restricted to ground operations only. We have worked with the distributor, Adapco, on formulating a price reduction for bulk volume. They will provide free product to us if we purchase 1000 gallons of the product and for every 250 gallons above 1000. Staff feels that we will use at least 1000 gallons of the product this season. Adapco is asking for a signed commitment letter of the 1000 gallons per year for three years to secure this agreement.

#### **Recommendation:**

**Authorize the Manager to sign a letter of acceptance of the 3 year program with Adapco.**



creating value,  
growing together



April 1, 2019

Sacramento-Yolo MVCD  
8631 Bond Rd.  
Elk Grove, CA 95624  
Re: DeltaGard Purchase Proposal

ADAPCO is pleased to offer the following Purchase Proposal to Sacramento-Yolo Mosquito and Vector Control District for DeltaGard ULV. The proposal includes Product Package Size, Minimum Quantities, Price, Terms and Conditions.

ADAPCO proposes a multi-year contract for DeltaGard ULV to be firm from January 1, 2019 through December 31, 2020. The district would commit to purchasing a minimum of 1000 gallon of Deltagard each calendar year for the term of the contract. A calendar year is from January 1 through December 31 each year, and ADAPCO would agree to hold the pricing and free goods rebate in place for the term of the contract.

**DeltaGard, 30 gallon drums and 250 gallon totes.**

**Price and Free Goods Rebate Schedule for calendar years 2019 & 2020:**

Purchases (Gallons)	Additional Fee Goods (Gallons)	Price/Gallon	Subtotal	Cumulative Subtotal	Total Gallons	Ave. Price/Gal.
1,000	150	\$ 183.00	\$ 183,000.00	\$ 183,000.00	1,150	\$ 159.13
250	35	\$ 181.00	\$ 45,250.00	\$ 228,250.00	1,435	\$ 159.06
250	35	\$ 181.00	\$ 45,250.00	\$ 273,500.00	1,720	\$ 159.01

Pricing/Rebate schedule beyond the quantities shown would be negotiated.

Payment terms are net 30 Days. Freight is Prepaid to Sacramento-Yolo MVCD.

Thank you for your consideration of this proposal. Please provide a letter of acceptance and agreement to this proposal within 14 days if you decide to agree to its terms and conditions. I am happy to discuss this with you at your convenience and address any questions or concerns that you may have. I appreciate the opportunity to serve you.

Best regards,

*Dennis Candito*

**Territory Manager**

# Sacramento-Yolo Mosquito and Vector Control District

## April 17, 2019 Board Meeting

### 7. Board Review and Discussion of District Projects and Collaborations for 2019 Season

#### Staff Report:

The Laboratory staff has a variety of research projects planned for this season. Some are collaborative with industry and/or university entities while others are independent Sac-Yolo District projects. Two of the projects are in conjunction with the new Pacific Southwest Regional Center of Excellence in Vector-Borne Diseases.

**Catch Basin Pesticide Residue:** The first Regional Center of Excellence project is in collaboration with Dr. Jay Gan from the University of California, Riverside. We worked with Dr. Gan last season on the rice residue study. We will work with him to evaluate pesticide residue levels in catch basins. We will be performing bottle bioassay assays on mosquitoes from the same habitat.

**Sugar Bait Virus Detection:** We will be working with Dr. Lark Coffey with the University of California at Davis. She is also a Regional Center of Excellence researcher. We will be deploying sugar baits at locations with positive West Nile virus dead birds reported, and will compare the results of testing these sugar wicks against our usual EVS traps.

***Culex pipiens f. molestus* vs. *Culex pipiens f. pipiens*:** The lab will be working to provide samples of these two forms of the pipiens complex to the Princeton University PipPop Project. Their goal is to conduct whole genome sequencing and analysis on 1000+ individuals from 39 target regions across the global range of the species. The significance of the different behavior and habitat of the two forms can be important in determining West Nile virus risk.

**Biogents I Trap:** This project is a continuation of the Biogents REMOSIS trap development. We will again be involved in the machine learning of different wing beat frequencies by introducing various species of mosquitoes to the trap. Ultimately, a trap that can identify which mosquito species was just captured remotely would be very useful.

**Wide-area Larvicide Spraying (WALS) Vectobac WDG Application:** We will be continuing the evaluation of the utility of this kind of spraying of Vectobac WDG in a suburban habitat for controlling *Culex pipiens* in response to West Nile virus activity.

**Residual Adulticide Treatments:** We will be continuing our evaluation of residual adulticide products. Last year we evaluated the impact of application on local mosquito populations and West Nile activity utilizing Suspend Polyzone. This year we will be evaluated a few new products, One Guard and Mavrik specifically. The One Guard product has the addition of a larvicide to the formulation. We are currently determining the best means to evaluate these products.

**Rice Habitat Adulticide Product Evaluation:** The lab will be working with the Program Coordinator in conducting sentinel cage and droplet efficacy trials of all of the adulticide products used in our adult mosquito control program in the rice areas. We will also be continuing to routinely monitoring resistance in adult mosquito populations.

**Larvicide Product Evaluation:** We will also be evaluating larvicide products used in a variety of habitats, specifically the dairy sump habitat. We will be working with the Program Coordinator to determine available options and set up study designs to determine the best material to be used for larval control.

**Efficacy of Mosquito Control in the Rice Field Habitat:** How to evaluate overall effect of control measures is difficult in the rice field areas. Recruitment and the overall acreage involved confound evaluations. The lab staff was trained in age grading mosquitoes. We intend to select one large area of District rice habitat and with increase deployment of traps as well as age grading determination of female mosquitoes, hope to be able to definitively evaluate our control effects.

**Recommendation:**  
**Information Only**

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

## **April 17, 2019 Board Meeting**

8. **Closed Session- Provide Instruction to Designated Labor  
Representatives (Gov. Code s. 54957.6-Labor Negotiations)  
Agency Designated Representatives : [Gary Goodman, Janna  
McLeod, Samer Elkashef, Chris Voight]  
Employee Organization: [Operating Engineers Local Union #3]**

