



**Coachella Valley Mosquito and Vector Control District**

**43420 Trader Place, Indio, CA 92201 | (760) 342-8287 | [cvmosquito.org](http://cvmosquito.org)**

**Board of Trustees Meeting Via Zoom**

**Tuesday, July 13, 2021**

**6:00 p.m.**

**AGENDA**

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The Board of Trustees will take action on all items on the agenda.

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Materials related to an agenda item that are submitted to the Board of Trustees after distribution of the agenda packets are available for public inspection in the Clerk of the Board's office during normal business hours and on the District's website.

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In the interest of maintaining appropriate social distancing and to comply with orders issued by Governor Newsom, the Board encourages the public to participate in this meeting via Zoom by calling 1-888-475-4499 (toll-free), Meeting ID: 847 0020 7863 or click this link to join:

<https://us02web.zoom.us/j/84700207863>. If you would like to comment on the agenda item or subject matter within the jurisdiction of the Board, please send an email to the Clerk of the Board by 2:30 p.m. on July 13, 2021, at [mtallion@cvmosquito.org](mailto:mtallion@cvmosquito.org).

Assistance for those with disabilities: If you have a disability and need an accommodation to participate in the meeting, please call the Clerk of the Board at (760) 342-8287 for assistance so the necessary arrangements can be made.

**1. Call to Order** – Benjamin Guitron, President

**2. Pledge of Allegiance**

### 3. Roll Call

### 4. Confirmation of Agenda

### 5. Public Hearing for Benefit Assessment

- A. Open Public Hearing – **Benjamin Guitron, President**
  
- B. Public Comments – Public Hearing for Benefit Assessment
  
- C. Approval of Resolution 2021-08 Approving Engineer’s Report, Confirming Diagram and Assessment, and Ordering the Levy of Assessments for the Fiscal Year 2021-22 for the Coachella Valley Mosquito and Vector Control District Mosquito, Fire Ant and Disease Control Assessment – **David l’Anson, MPA, MBA/ACC., Administrative Finance Manager (Pg. 11)**
  
- D. Close Public Hearing – **Benjamin Guitron, President**

### 6. Public Comments

Those wishing to address the Board should send an email to the Clerk of the Board by 2:30 p.m. on July 13, 2021, at [mtallion@cvmosquito.org](mailto:mtallion@cvmosquito.org) or appear at the meeting to provide public comments. Please note that, as stated above, the meeting will be conducted remotely.

A. **PUBLIC Comments — AGENDA ITEMS:** Persons wishing to address the Board on agenda items are requested to do so at this time. When addressing the Board, please state your name and address for the record. In order to conduct a timely meeting, a three-minute time limit per person per item has been established.

B. **PUBLIC Comments — NON-AGENDA ITEMS:** Persons wishing to address the Board on items not appearing on the agenda are requested to do so at this time. When addressing the Board, please state your name and address for the record. In order to conduct a timely meeting, a three-minute time limit per person has been established.

### 7. Board Reports

- A. President’s Report – **Benjamin Guitron, President**  
Executive Committee oral report and Executive Committee minutes from June 23, 2021 (**Pg. 14**)

B. Finance Committee – **Clive Weightman, Treasurer**

Finance Committee oral report and Finance Committee minutes from June 8, 2021 (**Pg. 18**)

**8. Staff Informational Reports**

A. Live Reports

- General Manager’s Report – **Jeremy Wittie, M.S., General Manager**
- Arbovirus Surveillance and Response update (as necessary) - **IVM Staff**

*Questions and/or comments from Trustees regarding the reports*

**9. Items of General Consent**

The following items are routine in nature and may be approved by one blanket motion upon unanimous consent. The President or any member of the Board of Trustees may request an item be pulled from Items of General Consent for a separate discussion.

A. Minutes for June 8, 2021, Board Meeting (**Pg. 29**)

B. Approval of expenditures for June 4, 2021-July 8, 2021 (**Pg. 39**)

C. Review and Approval of the District’s Professional Development Calendar for FY2021-2022 and Resolution 2021-09 - **Jeremy Wittie, M.S., General Manager (Pg. 40)**

D. Informational Items:

- Financials – **David l’Anson, MPA, MBA/ACC., Administrative Finance Manager (Pg. 47)**
- Board Business Log (**Pg. 58**)
- Correspondence (**Pg. 61**)
- Semi-annual research reports from the University of California, Davis, University of California, Riverside, Mount Sinai School of Medicine, and the USDA for 2021-**Jennifer A. Henke, M.S., Laboratory Manager (Pg. 63)**

**10. Old Business**

A. Continued discussion regarding return to in-person meetings – **Jeremy Wittie, M.S., General Manager (Pg. 94)**

**11. New Business**

A. Discussion regarding the development and timeline for the District’s 2022 Strategic Plan - **Jeremy Wittie, M.S., General Manager (Pg. 96)**

- B. Discussion regarding the Sterile Insect September workshop and dates for the workshop  
- **Jennifer A. Henke, M.S., Laboratory Manager (Pg. 99)**
  
- C. Approval to enter into an agreement for The Market Research Project in an amount not to exceed \$60,000 from Professional Fees fund – **Budgeted, Funds Available - Tammy Gordon, MA, Public Information Officer and David I'Anson, MPA, MBA/ACC., Administrative Finance Manager (Pg. 100)**
  
- D. Discussion and/or approval to purchase chemical control products in an amount not to exceed \$530,940.79 from fund 7800.01.500.028, 7850.01.501.028, and 7850.01.502.028 Field Chemical Control – **Budgeted, Funds Available – Gregorio Alvarado, Acting Operations Manager (Pg. 102)**
  
- E. Accept the resignation of Trustee Doug Hassett - **Jeremy Wittie MS, General Manager (Pg. 104)**

## **12. Closed Session Public Comments**

Persons wishing to address the Board on closed session items are requested to do so at this time. When addressing the Board, please state your name and address for the record. In order to conduct a timely meeting, a three-minute time limit per person per item has been established.

### **Closed Session (s):**

#### **A. Conference with Labor Negotiators pursuant to Government Code Section 54957.6**

Agency Designated Representatives: Lena D. Wade, Crystal Moreno, and David I' Anson.

Employee Organizations: California School Employees Association and Teamsters Local 911.

## **13. Comments by General Counsel**

#### **14. Trustee Comments, Requests for Future Agendas Items, Travel, and/ or Staff Actions**

The Board may not legally take action on any item presented at this time other than to direct staff to investigate a complaint or place an item on a future agenda unless (1) by a majority vote, the Board determines that an emergency exists, as defined by Government Code Section 54956.5, or (2) by a two-thirds vote, the board determines that the need for action arose subsequent to the agenda being posted as required by Government Code Section 54954.2(a). Each presentation is limited to no more than three minutes.

#### **15. Adjournment**

At the discretion of the Board, all items appearing on this agenda, whether or not expressly listed for action, may be deliberated and may be subject to action by the Board.



**Certification of Posting**

I certify that on July 9, 2021, I posted a copy of the foregoing agenda near the regular meeting place of the Board of Trustees of the Coachella Valley Mosquito & Vector Control District and on the District’s website, said time being at least 72 hours in advance of the meeting of the Board of Trustees (Government Code Section 54954.2)

Executed at Indio, California, on July 9, 2021.

\_\_\_\_\_  
Melissa Tallion, Clerk of the Board



# **PUBLIC HEARING**

COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT



**Coachella Valley Mosquito and  
Vector Control District**

**July 13, 2021**

**Staff Report**

**Agenda Item:** Public Hearing

Resolution 2021-08 approving Engineer's Report, Confirming Diagram and Assessment, and Ordering the Levy of Assessments for fiscal year 2021-22 for the Coachella Valley Mosquito and Vector Control District Mosquito, Fire Ant and Disease Control Assessment – **David l'Anson, Administrative Finance Manager**

**Background:**

Resolution No. 2021-07, accepted by the Board of Trustees on June 08, 2021, approved the intention to levy assessments for fiscal year 2021-22, preliminarily approving the engineer's report, and providing for notice of hearing for the CVMVCD Mosquito, Fire Ant, and Disease Control Assessment.

***Resolution No. 2021-08 approves the Engineer's Report and orders the levy of the assessment at the rate of \$14.39.***

In 2005, Coachella Valley property owners approved a yearly fee of \$16.00 per residential unit for the Mosquito, Fire Ant, and Disease Control Assessment by 74.19%, the highest approval rating for a similar measure in the State of California that year. Included in the voter approval was an inflation escalator allowing for a 3% per year inflationary increase to the assessment. State law requires the District to renew the base assessment and any inflationary increase each year through a public hearing process.

The District's Board is now conducting a public hearing to consider the assessments for the 2021-22 fiscal year to fund its programs and services. The District provides services and programs for disease and vector surveillance, disease prevention, control of vectors using integrated vector control management (IVM) methods, and quality assessment. The mosquito abatement, vector control, and disease prevention projects and programs include, but are not limited to, source reduction, ground and aerial surveillance and control applications, disease monitoring, public education, quality control and applied research as well as maintenance of buildings, grounds and



equipment, and operating expenses. The District's services encompass approximately 2,400 square miles and are provided to properties accommodating over 400,000 permanent residents with a seasonal influx of over 100,000 people.

The majority of the District's funding is generated by a percentage of the 1% property tax collected from Coachella Valley property owners. Any property owner who feels that the assessment levied on the subject property is in error, may file a written appeal with the General Manager of the Coachella Valley Mosquito and Vector Control District or his or her designee.

In each subsequent year for which an assessment will be levied, the Board must;

- Preliminarily approve at a public meeting a budget for the upcoming fiscal year's costs and services;
- Preliminarily approve at a public meeting an updated annual Engineer's Report, and;
- Provide an updated assessment roll listing all parcels and their proposed assessments for the upcoming fiscal year and;
- Call for the publication in a local newspaper of a legal notice of the intent to continue the assessments for the next fiscal year and set the date for the noticed public hearing. At the annual public hearing, members of the public can provide input to the Board prior to the Board's decision on continuing the services and assessments for the next fiscal year.

The yearly assessment is subject to an annual adjustment tied to the Consumer Price Index-U for the Los Angeles-Riverside-Orange County Area as of December of each succeeding year (the "CPI"), with a maximum annual adjustment not to exceed 3%. The yearly assessment rate per single-family equivalent benefit unit for the Mosquito, Fire Ant and Disease Control Assessment may increase in future years by an amount equal to the annual change in the CPI, not to exceed 3% per year. In the event that the annual change in the CPI exceeds 3%, any percentage change in excess of 3% can be cumulatively reserved and can be added to the annual change in the CPI for years in which the CPI change is less than 3%.

The fiscal year 2021-2022 assessment budget includes:

- Outlays for West Nile Virus
- Surveillance and mosquito control

- RIFA control
- Capital equipment
- Supplies
- Disease testing programs
- Other vector programs

The annual CPI change for the Riverside-San Bernardino - Ontario Area from January 2020 to January 2021 is 2.24%, plus an excess cumulative reserve of 0.688 from Fiscal year 2018/2019 through Fiscal year 2020/2021 bringing the total CPI to 2.935%. The maximum authorized assessment rate for fiscal year 2021-22 is \$24.13 per single-family equivalent benefit unit. The proposed fiscal year 2021-22 assessment rate per single-family equivalent benefit unit for the Mosquito, Fire Ant, and Disease Control Assessment is \$14.39 which is less than the maximum allowable rate.

Since property owners in the assessment ballot proceeding conducted in 2005 approved the initial assessment including the CPI adjustment schedule, the assessment may be levied annually and may be adjusted by up to the maximum annual CPI adjustment without any additional assessment ballot proceeding.

**OPTIONS TO CONSIDER:**

1. To accept and adopt Resolution 2021-08, setting the annual benefit assessment amount to \$14.39 per single-family equivalent family unit, to properly finalize and adopt the assessment proceedings accordingly defined in Proposition 218.

**Staff Recommendation:**

- That the Board of Trustees take whatever action it deems necessary.

**Fiscal Impact:**

The financial impact of setting the rate to \$14.39 per parcel in Benefit Assessment revenue for FY 2021-22 is \$2,276,498.71.

**Attachments:**

- Resolution 2021-08
- Engineer’s Report:  
<https://www.cvmosquito.org/sites/g/files/vyhlf4551/f/uploads/2021-22.pdf>

**RESOLUTION NO. 2021-08**

**A RESOLUTION OF THE BOARD OF TRUSTEES OF THE  
COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT**

**A RESOLUTION  
APPROVING ENGINEER'S REPORT, CONFIRMING DIAGRAM AND ASSESSMENT, AND  
ORDERING THE LEVY OF ASSESSMENTS  
FOR FISCAL YEAR 2021-22  
FOR THE COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT  
MOSQUITO, FIRE ANT AND DISEASE CONTROL ASSESSMENT**

**WHEREAS**, the Coachella Valley Mosquito and Vector Control District ("District") was established in 1928 as an independent special district by the Riverside County Board of Supervisors; and

**WHEREAS**, the mission of the District is to reduce the risk of disease transmission by mosquitoes and other vectors for the residents and visitors of the Coachella Valley; and

**WHEREAS**, the Coachella Valley Mosquito and Vector Control District is authorized, pursuant to the authority provided in Health and Safety Code Section 2082 and Article XIID of the California Constitution, to levy assessments for mosquito, vector and disease control services; and

**WHEREAS**, the District provides vector control services which includes a system of public improvements and services intended to provide for the surveillance, prevention, abatement and control of vectors as provided under Proposition 228 ("Services"); and such vector surveillance and control services provide tangible public health benefits, reduced nuisance benefits and other special benefits to the public and properties with the areas of service; and

**WHEREAS**, an assessment for mosquito, fire ant, vector and disease control projects and services has been given the distinctive designation of the "Mosquito, Fire Ant, and Disease Control Assessment" ("Assessment"), and is primarily described as encompassing the District jurisdictional boundaries, which covers nine incorporated cities along the I-10 Freeway (Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage), and the unincorporated areas in the greater Coachella Valley from the San Bernardino County line to the north to the Imperial and San Diego County lines to the south; and

**WHEREAS**, the Assessment was authorized by an assessment ballot proceeding conducted in 2005 and approved by 74.19% of the weighted ballots returned by property owners, and such assessments were levied by the Board of Trustees of the Coachella Valley Mosquito and Vector Control District by Resolution No. 2005-04 passed on July 26, 2005;

**NOW, THEREFORE, BE IT RESOLVED** by the Board of Trustees of the Coachella Valley Mosquito and Vector Control District that:

SECTION 1. Willdan Financial Services, the Engineer of Work, prepared an engineer's report (the "Report") in accordance with Article XIID of the California Constitution and Section 2082, et seq., of

the Health and Safety Code for the Assessment. The Report have been made, filed with the secretary of the board and duly considered by the Board and are hereby deemed sufficient and preliminarily approved. The Report shall stand as the Engineer's Report for all subsequent proceedings under and pursuant to the foregoing resolution.

SECTION 2. On June 8, 2021, this Board adopted Resolution No. 2021-07 to continue to levy and collect Assessments for fiscal year 2021-22, preliminarily approving the Engineer's Report, and providing for notice of hearing on July 13, 2021, at the hour of six o'clock (6:00) p.m. at the meeting chamber of the Coachella Valley Mosquito and Vector Control District headquarters located at 43-420 Trader Place, Indio, California, 92201.

SECTION 3. At the appointed time and place the hearing was duly and regularly held, and all persons interested and desiring to be heard were given an opportunity to be heard, and all matters and things pertaining to the levy of Assessment were fully heard and considered by this Board, and all oral statements and all written protests or communications were duly heard, considered and overruled, and this Board thereby acquired jurisdiction to order the levy of assessment prepared by and made a part of the Engineer's Report to pay the costs and expenses thereof.

SECTION 4. The above recitals are true and correct

SECTION 5. The public interest, convenience and necessity require that the levy be made.

SECTION 6. The Engineer's Report for the Assessment together with the proposed assessment roll for fiscal year 2021-22 is hereby confirmed and approved.

SECTION 7. That based on the oral and documentary evidence, including the Engineer's Report offered and received at the public hearing, the Board expressly finds and determines that: (a) each of the several lots and parcels of land subject to the Assessment will be specially benefited by the services to be financed by the assessment proceeds in at least the amount of the assessment apportioned against such lots and parcels of land, respectively; (b) that the Assessment is levied without regard to property valuation; and (c) that there is substantial evidence to support , and the weight of the evidence preponderates in favor of, said finding and determination as to special benefit to property from the mosquito, fire ant, vector and disease control services to be financed with assessment proceeds.

SECTION 8. That assessments for fiscal year 2021-22 shall be levied at the rate of fourteen dollars and thirty-nine cents (\$14.39) per single-family equivalent benefit unit in Zone A and seven dollars and nineteen cents (\$7.19) per single-family equivalent benefit unit in Zone B per single-family equivalent benefit unit as specified in the Engineer's Report for fiscal year 2021-22 with estimated total annual assessment revenues as set forth in the Engineer's Report; and

SECTION 9. That the mosquito, fire ant and disease control services to be financed with assessment proceeds described in the Engineer's Report are hereby ordered.

SECTION 10. No later than August 10<sup>th</sup> following such adoption, assessments and a copy of this resolution will be uploaded to the Auditor Controller's of the County of Riverside ("County Auditor"). Upon such upload, the County Auditor shall enter on the County assessment roll opposite each lot

or parcel of land the amount of assessment thereupon as shown in the assessment. The assessments shall be collected at the same time and in the same manner as County taxes are collected and all the laws providing for collection and enforcement shall apply to the collection and enforcement of the assessments. After collection by the County, the net amount of the assessments, after deduction of any compensation due the County for collection, shall be paid to the Mosquito, Fire Ant and Disease Control Assessment.

SECTION 11. All revenues from Assessments shall be deposited in a separate fund established under the distinctive designation of the Coachella Valley Mosquito and Vector Control District, Mosquito, Fire Ant and Disease Control Assessment.

SECTION 12. The Assessment, as it applies to any parcel, may be corrected, cancelled or a refund granted as appropriate, by order of the Board of Trustees of the District. Any such corrections, cancellations or refunds shall be limited to the current fiscal year.

The foregoing Resolution was PASSED and ADOPTED by the Board of Trustees of the Coachella Valley Mosquito and Vector Control District at a regular meeting thereof held on July 13, 2021, at the Coachella Valley Mosquito and Vector Control District headquarters located at 43-420 Trader Place, Indio, California, 92201.

AYES:

NOES:

ABSTAINED:

ABSENT:

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President, Board of Trustees  
Coachella Valley Mosquito & Vector Control District

ATTEST:

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Secretary/Treasurer, Board of Trustees  
Coachella Valley Mosquito & Vector Control District



# **BOARD REPORTS**

**Coachella Valley Mosquito and Vector Control District**  
**Executive Committee Meeting Via Zoom**  
**Minutes**

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**TIME AND DATE:** 3:30 p.m. Wednesday, June 23, 2021

**LOCATION:** 43420 Trader Place, Indio, CA 92201

**TRUSTEES PRESENT:**

Indio	Benjamin Guitron, President
Palm Desert	Doug Walker, Vice President
County at Large	Bito Larson, Secretary
Indian Wells	Clive Weightman, Treasurer

**ABSENT:**

None

Members of the Public present: Yes

**OTHERS PRESENT:**

Jeremy Wittie, M.S., General Manger  
Melissa Tallion, Clerk of the Board

- 1. Call to Order:** *President Guitron called the meeting to order at 3:31 p.m.*
- 2. Roll Call:** *Roll call indicated all four Committee members were present.*
- 3. Confirmation of Agenda:** *There was a consensus to approve the agenda as presented.*
- 4. Public Comments:**

**A. AGENDA ITEMS** - None

**B. NON-AGENDA ITEMS** – *Mr. Anderson sent an email, to The Clerk of the Board at 10:45 a.m. The email was sent to the Executive Committee and Legal Counsel. A copy of the email from Mr. Anderson will be attached to the minutes. For the record, the public has all of the materials that the Trustees have for the Executive Committee members.*

## **5. Review of July 13, 2021, draft Board meeting agenda**

*The draft June Board meeting agenda was reviewed by the Committee. Trustee Walker recommended that Jeremy or Melissa verify the order of item 5 (public hearing). It was recommended that the Public Hearing agenda item be moved after item 6 (public comments) to allow the public to comment on the public hearing. The other option that was discussed was to add item 5C (public comments) and then 5D (close public hearing). Melissa informed the Committee that the dates were wrong on items 7A and 7B. The correct dates will be reflected on the July 13 Board Agenda. A discussion ensued regarding item 9C (strategic plan) and possibly holding the strategic planning workshop later this fall. Jeremy felt that it is necessary to continue moving forward with the planning process. This is a crucial document especially for budgeting, so moving forward is best. The timeline for completion is Jan/Feb 2022 which will wrap up the 2018 Plan. Trustee Weighman said that the Strategic Plan is best discussed in person. Staff would like to add an item to the Board agenda 9B (SIT workshop discussion). The Committee agreed that it would be a good idea to get input from the entire Board to aid in the planning process. Trustee Hassett's term expires on June 30, 2021. The La Quinta City Council is meeting on June 23<sup>rd</sup>. The City Clerk will notify Melissa of their decision no later than June 25<sup>th</sup>. A discussion ensued about mid-year terms and if that was allowed. Jeremy and Melissa will verify the information with Legal Counsel and the By-laws and report back to the Committee.*

## **6. Old Business**

- a. Update on Cal/OSHA requirements for the workplace and discussion return to physical Board meetings.

*A discussion ensued about the return to in-person Board meetings. The current Executive Order for the Brown Act expires on September 30<sup>th</sup> which means that October is the first time that a physical meeting is required for Public Agencies. Cal/OSHA updated the Emergency Standards for the workplace on June 17<sup>th</sup>. Jeremy has been working with HR and the District's safety officer and now to the Unions to meet and confer to adjust the procedures at the District office. The most significant change is to vaccinated / un-vaccinated staff. Vaccinated staff will need to show proof of vaccination will be allowed to not wear a mask indoors or outdoors while un-vaccinated will have to wear a mask while indoors (with some exceptions). Visitors/vendors will be required to wear a mask while in our facilities. The staff recommends that the same guidelines that are being used at the District continue to be followed at the Board meetings. Trustee Walker is comfortable coming back in September but would suggest a hybrid meeting based on comfort level. Trustee Weightman agrees with Trustee Walker. Trustee Larson agrees that the hybrid model works for September. President Guitron agrees with the Executive Committee but would like to put forward a recommendation to the full Board. President Guitron asked about the public attending the Board meetings and how that will be handled. The same question was asked about how the Trustees come back. Will*



*Trustees follow the Cal/OSHA guidelines? How will the District conduct business moving forward? Jeremy and Lena had a conversation and proposed that Board of Trustees follow District policy for staff and visitors. President Guitron asked for a one-page document or report with a recommendation from the Executive Committee to be presented to the Board at the July 2021 meeting.*

**Recommendation:** *Trustee Walker moved that the Executive Committee recommends to the full Board to proceed in September with a hybrid meeting model and that those physically present follow Cal/OSHA guidelines and then moving forward the Board determine what the State's official guideline is for October and after.*

*On a motion from Trustee Walker seconded by Trustee Larson, and passed by the following roll call votes, the Executive Committee approved the recommendation to the Board of Trustees.*

*Ayes: President Guitron; Trustees, Larson, Walker, and Weightman*

*Noes: None.*

*Abstained: None*

*Absent: None*

*Trustee Larson has conditions of the recommendation. He would like to caution the District on making Trustees show proof of vaccination. Does the Board fall under Cal/OSHA?*

**7. Trustee/staff comments**

*None*

**8. Confirmation of next meeting**

The next meeting was scheduled for Thursday, September 2, 2021, at 3:30 p.m.

**9. Adjournment**

The meeting was adjourned by President Guitron at 4:25 p.m.

# COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT

## Finance Committee Meeting Via Zoom Minutes

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**TIME:** 4:30 p.m. **DATE:** June 8, 2021

**LOCATION:** 43420 Trader Place Indio, CA 92201

### **COMMITTEE MEMBERS PRESENT:**

Indian Wells	Clive Weightman
Rancho Mirage	Isaiah Hagerman
County at Large	Bito Larson

### **STAFF PRESENT:**

Jeremy Wittie, M.S., General Manager  
David l'Anson, Administrative Finance Manager  
Graciela Morales, Human Resources Specialist  
Melissa Tallion, Executive Assistant/Clerk of the Board

### **MEMBERS OF THE PUBLIC PRESENT:**

*None.*

**1. Call to Order:** *Treasurer Weightman called the meeting to order at 4:31 p.m.*

**2. Roll Call:** *Roll call indicated three (3) Committee members out of three (3) were present.*

**3. Confirmation of Agenda:** *The agenda was confirmed as presented.*

**4. Public Comments:** *None.*

### **5. Items of General Consent:**

Approval of Minutes from May 11, 2021, Finance Committee Meeting

*On a motion from Trustee Hagerman seconded by Trustee Larson, and passed by the following roll call votes, the Committee approved the minutes as presented.*

Ayes: Treasurer Weightman, Trustees Hagerman, and Larson.

Noes: None.

Abstained: None.

Absent: None.

## **6. Discussion and/or Review:**

- A. Review of Check Report from Abila MIP for the period of May 7, 2021, to June 3, 2021.

*The check report was reviewed by Committee members and staff. Treasurer Weightman and Trustee Larson inquired about some check payments. David l'Anson, Administrative Finance Manager, provided more information.*

- B. CalCard Charges – April 23, 2021, to May 22, 2021

*The CalCard monthly statement was reviewed by Committee members and staff. Committee members asked questions regarding specific charges. Treasurer Weightman asked if the CalCard report by user name/activity could be provided because it is easier to follow.*

- C. Review of May 2021 Financials and Treasurers Report

*The Committee and staff reviewed the Financials and Treasurers Report. A discussion ensued regarding the Budget year-to-date figures. Treasurer Weightman asked about any changes to investments and asked that the issue date be bolded because it is easier to follow. Treasurer Weightman inquired about the monthly investment transaction report. He made mention to the Resolution (2021-01) which states "The Administrative Finance Manager shall make a monthly report to the Board of all investment transactions. Such report shall be presented first to the Finance committee for review along with all documentation to support and substantiate the report." This report will be included in the July meeting.*

## **7. Old Business:**

- A. None.

## **8. New Business**

- A. Review of finance-related items on Board Agenda

*The finance-related items were reviewed by the Committee. The Committee thanked the staff for a great job putting the budget together. Treasurer Weightman reminded staff to speak about the \$1M pre-payment to CalPERS when discussing the FY 2021-22 budget during the Board Meeting. Staff mentioned that for FY 2021-22 the Benefit Assessment remains the same at \$14.39 per single-family resident.*

**9. Schedule Next Meeting:** *The next Finance Committee meeting was scheduled via Zoom for Tuesday, July 13, 2021, at 4:30 p.m.*

**10. Trustee and/or Staff Comments/Future Agenda Items:** *Treasurer Weightman thanked Trustee Hagerman for filling in during the 6:00 p.m. Board Meeting.*

**11. Adjournment:** *The meeting was adjourned by Treasurer Weightman at 5:02 p.m.*

## Melissa Tallion

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**From:** Brad Anderson <ba4612442@gmail.com>  
**Sent:** Tuesday, June 8, 2021 2:30 PM  
**To:** Edward Prendez; Melissa Tallion  
**Subject:** Public Comment - CVMVCD Board Meeting 6/8/21 - 6:PM

June 8, 2021

Coachella Valley Mosquito and Vector Control District (CVMVCD)  
43420 Trader Pl.  
Indio, CA. 92201  
(888) 343-9399  
Attn: Clerk of the Board

Re: Written letter to be entered in to the Public record for the June 8, 2021 CVMVCD Board of Trustees meeting - Agenda Item: 4B (non-agenda)

Dear un-elected officials,

It appears to be crystal clear that the CVMVCD has taken unprecedented actions to curbe Residents of the Coachella Valley from activity participating in CVMVCD public meetings. At a prior CVMVCD Executive committee meeting the current meeting chair and Board President ensured a resident (myself) that the CVMVCD would reach out to me in regards to my Public testimony during that Public meeting. No one from the CVMVCD administration had made contact with me to date.

To enlighten the CVMVCD Board of Trustees and members of the Public of my concerns of being denied the opportunity to fully participate in that and other meetings held by the CVMVCD - I will detail those actions.

The CVMVCD administration staff without Board approval changed the long established guideline for Public testimony on agenda Items at all of their open Public meetings. The new agenda perserved the Non-agenda Item but moved all public participation (public comments) on agenda items to "Only one" Item towards the beginning of each Public meeting. That action denied the speaker the opportunity to witness the motions of the board and of course to see and hear any staff reports or presentations prior to speaking on each agenda Item if desired.

And most importantly the chair refused to allow for prior knowledge of the written documentation before speaking. I was not allowed to have or see the Information that was supplied to each of the committee members and Administration staff at that meeting.

It would've of been reasonable to allow for the pontenal of public testimony on each agenda Item when the Item was brought for consideration by the board. But as you are aware, my reasonable request was denied by the chair of that board.

Best practices would be not to violate the "Brown Act" and to accommodate for non-decriminalization in regards to every operations of the CVMVCD.

Public comment should still be made available at the begining of each Public meeting (Non-agenda and agenda Items). With the oppportunity of Public comment at the time that the board would consider each Item.

This simple well known and demonstrated method of conducting California Public meetings (Best practices) have been proven to work. The unusual and sinister actions to limit California citizens the ability to participate and voice their protected rights during CVMVCD public meetings is wrong and a abusive form of discrimination/Intermediation.

Please stop the unlawful actions of Identifying (printing Names of citizens on government agency public documents) that choose to monitor CVMVCD Open Public meetings. That action is considered a "Brown Act violation".

Sincerely,

Brad Anderson | Rancho Mirage, CA.

## Melissa Tallion

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**From:** Melissa Tallion  
**Sent:** Friday, May 21, 2021 9:39 AM  
**To:** Melissa Tallion  
**Subject:** Public Comment - CVMVCD Executive committee meeting

**From:** Brad Anderson [mailto:ba4612442@gmail.com]  
**Sent:** Friday, May 21, 2021 5:43 AM  
**To:** Melissa Tallion <MTallion@cvmvcd.org>; Edward Prendez <EPrendez@cvmvcd.org>  
**Subject:** Public Comment - CVMVCD Executive committee meeting

May 21, 2021

Coachella Valley Mosquito and Vector Control District (CVMVCD)  
43420 Trader Pl.  
Indio, CA. 92201  
(760) 342-8287  
Attn: Clerk of the Board (Melissa Tallion)

Re: Written letter to be entered in to the Public record for the May 21, 2021 CVMVCD Executive committee meeting, Item: Non-Agenda Public comment

Dear CVMVCD appointed member's,

I had the opportunity to address this committee at your last scheduled meeting, where I was denied a reasonable and equitable access for the opportunity to participate in and review the same documentation and have the same ability to listen to verbal Information (staff reports) when committee members would be presented those agenda Items.

As you are aware, the Executive committee chairman Mr. Benjamin Guitron was Inform of the CVMVCD website notice of that meeting and the email that was sent to my address lacking documents (complete agenda packet) that was Issued prior to the meeting to committee members but not available to the Public. But Mr. Guitron still refused to allow for potential public testimony on agenda Items that had incomplete Information during the time when members would be considering those agenda Items with verbal staff reports.

Please be advised that due to the CVMVCD self declared State of Emergency, public meeting documents should be available prior to All scheduled meetings in a safe and easily accessible matter (website).

The CVMVCD Executive committee Chairman also ensured me that the CVMVCD staff would contact me in regards to the boards decision to restrict only my public participation in the people's business. But, as you maybe aware, the CVMVCD administration has not made any attempts to follow the Chairman request to reach out to me?

Please consider allowing citizens the opportunity to participate in the CVMVCD meeting in a equitable matter with out discrimination of any race or creed. The actions to restrict public participation by puposely disallowing complete agenda topics to be shared prior to any comment period by the Public would clearly Illustrates a potential political aspect of a "Chilling effect" on free speech.

Sincerely,

## Melissa Tallion

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**From:** Brad Anderson <ba4612442@gmail.com>  
**Sent:** Wednesday, June 23, 2021 10:45 AM  
**To:** Melissa Tallion; Edward Prendez  
**Subject:** Public Comment - CVMVCD Executive Committee 6/23/2021

June 23, 2021

Coachella Valley Mosquito and Vector Control District (CVMVCD)  
43420 Trader Pl.  
Indio, CA. 92201  
(760) 342-8287  
Attn: Clerk of the Board

Re: Written letter to be entered in to the Public record for the June 23, 2021 CVMVCD Executive committee meeting in regards to Non-Agenda Public comment

Dear CVMVCD Executive committee,

On the date of June 17, 2021 I received a letter (USPS) from the legal firm of Slovak, Baron, Empey, Murphy and Pinkney (SBEMP) representing the Coachella Valley Mosquito and Vector Control District (CVMVCD). That letter which was signed by Lena Wade, Esq stated that she "felt compelled" to address my Public comments of June 8, 2021 which were e-mailed to the CVMVCD Clerk of the board for an agenda Item of the Non-Agenda Public comment for the CVMVCD Board of Trustees meeting held that day.

It's critical that the CVMVCD administration review the letter that I received from Ms. Lena Wade (SBEMP) She took great liberties with detailing matters that never happen and other radical interpretations of Issues that were misinterpreted by her and potentially allowing her biased opinions to cloud her ability to perform and uphold creditable and ethical standards that should be demanded from such positions in government agencies that are entrusted with the Public trust.

As you are aware, CVMVCD General Manager Mr. Jeremy Wittie Instructed the current CVMVCD general counsel Ms. Lena Wade (SBEMP) to construct and deliver a similar letter to my Home. That letter made unclear and nonsensical demands (constructed as an cease and desist demand) that still remain unanswered from the CVMVCD administration in regards to its clarity? That letter appeared to be ONLY an Instrument to attempt to Intimidate and potentially cause financial distress to this Resident of the Coachella Valley for my Involvement in monitoring Public meetings of the CVMVCD and community actitives?

Please discontinue having the general counsel (SBEMP - Ms. Lena Wade) of the CVMVCD (Special District) contacting me at my private residence with unfounded and clearly misconstrued statements in regards to my Public participation in the People's business.

Sincerely,

Brad Anderson | Rancho Mirage, CA.



## Melissa Tallion

---

**From:** Brad Anderson <ba4612442@gmail.com>  
**Sent:** Wednesday, June 23, 2021 1:23 AM  
**To:** Melissa Tallion; Edward Prendez  
**Subject:** Request for all documents that encompasses agendas and have or will be offered to board members

June 23, 2021

Coachella Valley Mosquito and Vector Control District (CVMVCD)  
43420 Trader Pl.  
Indio, CA. 92201  
760.342.8287  
Attn: Clerk of the Board

Re: request for all documents that are available and or offered for review by the CVMVCD Board of Trustees for the June 23, 2021 Executive Committee Meeting

Dear CVMVCD Clerk of the Board,

Please make available all the documents and or exhibits that will be made available to the CVMVCD Executive committee members during their Open to the Public meeting which was posted by agenda prior to the schedule June 23, 2021 meeting date. Please send the documents and or other Items by email - see address at bottom of letter.

As you are aware, the CVMVCD administration have chosen to not easily make complete "Board packets" available to the general public during the CVMVCD self declared State of Emergency.

I look forward to seeing the exact same Information that is available to the trustees prior to Public meetings of that special District.

Thank you in advance,

Brad Anderson | Rancho Mirage, CA. | [ba4612442@gmail.com](mailto:ba4612442@gmail.com)

## Melissa Tallion

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**From:** Brad Anderson <ba4612442@gmail.com>  
**Sent:** Wednesday, June 23, 2021 10:45 AM  
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**Subject:** Public Comment - CVMVCD Executive Committee 6/23/2021

June 23, 2021

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Please discontinue having the general counsel (SBEMP - Ms. Lena Wade) of the CVMVCD (Special District) contacting me at my private residence with unfounded and clearly misconstrued statements in regards to my Public participation in the People's business.

Sincerely,

Brad Anderson | Rancho Mirage, CA.

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**Sent:** Wednesday, June 23, 2021 1:23 AM  
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June 23, 2021

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43420 Trader Pl.  
Indio, CA. 92201  
760.342.8287  
Attn: Clerk of the Board

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Dear CVMVCD Clerk of the Board,

Please make available all the documents and or exhibits that will be made available to the CVMVCD Executive committee members during their Open to the Public meeting which was posted by agenda prior to the schedule June 23, 2021 meeting date. Please send the documents and or other Items by email - see address at bottom of letter.

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I look forward to seeing the exact same Information that is available to the trustees prior to Public meetings of that special District.

Thank you in advance,

Brad Anderson | Rancho Mirage, CA. | [ba4612442@gmail.com](mailto:ba4612442@gmail.com)



# **GENERAL CONSENT**

**COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT**

**Board of Trustees Meeting Via Zoom  
Minutes**

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MEETING TIME: 6:00 p.m. Tuesday, June 8, 2021

LOCATION: 43420 Trader Place, Indio, CA 92201- Via Zoom

**TRUSTEES PRESENT**

PRESIDENT: Ben Guitron	Indio
VICE PRESIDENT: Doug Walker	Palm Desert
SECRETARY: Bito Larson	County at Large
Mark Carnevale	Cathedral City
Denise Delgado	Coachella
Gary Gardner	Desert Hot Springs
Isaiah Hagerman	Rancho Mirage
Doug Hassett	La Quinta
Dr. Doug Kunz	Palm Springs
Janell Percy	County at Large

**TRUSTEES ABSENT**

TREASURER: Clive Weightman	Indian Wells
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**STAFF AND GENERAL COUNSEL PRESENT**

Jeremy Wittie, General Manager  
Lena Wade, Legal Counsel, SBEMP  
Crystal Moreno, Human Resources Manager  
David I'Anson, Administrative Finance Manager  
Edward Prendez, Information Technology Manager  
Jennifer Henke, Laboratory Manager  
Roberta (Bobbye) Dieckmann, Operations Manager  
Tammy Gordon, Public Information Officer  
Graciela Morales, Human Resources Specialist  
Melissa Tallion, Executive Assistant/Clerk of the Board

*Other staff members joined the zoom meeting as well.*

**MEMBERS OF THE PUBLIC PRESENT**

Mr. Brad Anderson

1. **Call to Order** *President Guitron called the meeting to order at 6:05 p.m.*

**2. Moment of Silence in remembrance of Fernando Fregoso** *President Guitron invited those in attendance to join in a moment of silence.*

**3. Pledge of Allegiance** *Trustee Isaiah Hagerman led the Pledge of Allegiance.*

**4. Roll Call** *At roll call, ten (10) Trustees out of eleven (11) were present.*

**5. Confirmation of Agenda**

*President Guitron inquired if there were any agenda items to be shifted. Upon no objections by Board Trustees, the agenda was confirmed.*

**6. Public Comments**

*One written public comment was received from Mr. Brad Anderson. His email was distributed to Trustees and is attached for the record. Mr. Anderson was in attendance.*

**7. Recognition**

A. Proclamation of the Board of Trustees in recognition of Jess Lucia for his 20 years of service to the District

*Jeremy thanked Jess for his service. Jess gave a speech. President Guitron thanked Jess for his service on behalf of the Board of Trustees.*

**8. Board Reports**

President's Report:

*President Guitron stated the Executive Committee had held its meeting prior to the Board meeting and had reviewed the draft agenda and the Committee revised it as needed.*

Treasurer's Report:

*Trustee Isaiah Hagerman reported the Finance Committee had held its meeting before the Board meeting to review the check report, CalCard charges, and financials for the period ending May 2021.*

**9. Staff Information Reports**

A. Live Reports

- Microsoft Office Migration update- **Edward Prendez, IT Manager**

*Edward Prendez gave an update and stated that the migration to Microsoft 365 would begin at 7 a.m. EST on Friday, June 11, 2021. Edward stated that he and the IT team will be busy on Friday.*

- Arbovirus Surveillance and Response update (as necessary) - **IVM Staff**

*Jeremy Wittie said that there is nothing to report.*

B. Prerecorded Reports

- General Manager's Report – **Jeremy Wittie, M.S., General Manager**

- Emerging Arbovirus Threats – **Jennifer Henke, M.S., Laboratory Manager**

*President Guitron said that the staff did a nice job with the prerecord reports.*

## **10. Items of General Consent**

The following items are routine in nature and may be approved by one blanket motion upon unanimous consent. Any member of the Board may request an item be pulled from Items of General Consent for a separate discussion.

A. Minutes for May 11, 2021 Board Meeting

B. Approval of expenditures for May 13, 2021, to June 3, 2021

C. Informational Items:

- Financials – **David I’Anson, MPA, MBA/ACC., Administrative Finance Manager**
- Board Business Log
- Correspondence
- Departmental Reports: Human Resources; Finance; Information Technology; Laboratory & Surveillance Control; Operations; and Public Outreach

On a motion from Trustee Hagerman seconded by Trustee Gardner, and passed by the following roll call votes, the Board of Trustees approved items all items of General Consent.

Ayes: President Guitron; Trustees, Carnevale, Delgado, Gardner, Hagerman, Hassett, Kunz, Percy, Larson, and Walker

Noes: None.

Abstained: None

Absent: Treasurer Weightman

## **11. Old Business**

*None*

## **12. New Business**

A. Approval to enter into an agreement for the upgrade and replacement of the District’s electronic door access, security alarm, and CCTV systems in an amount not to exceed \$110,000 from Capital Facility Replacement Fund - **Budgeted, funds available-** **Edward Prendez, IT Manager, and David I’Anson, Administrative Finance Manager**

*The replacement and upgrade of the District's Electronic Card Access System, Motion Security Alarm System, and CCTV is necessary to ensure the safety of the District's Employees and facilities and is identified in the District's Reserve Study for replacement. The current systems were installed in 2001 and use obsolete technology which is degrading in quality and experiencing an increase in technical issues requiring more frequent repairs that compromise District safety and security while awaiting service and parts for repair. The new system will use the latest technology, will improve the security of the District facility, reduce false alarm notifications and most importantly improve safety for District staff.*

*An oral presentation citing the benefits to each of the proposed systems was given during the Board meeting.*

On a motion from Trustee Walker seconded by Trustee Hassett, and passed by the following roll call votes, the Board of Trustees approved to agree to the upgrade and replacement of the District's electronic door access, security alarm, and CCTV systems.

Ayes: President Guitron; Trustees, Carnevale, Delgado, Gardner, Hagerman, Hassett, Kunz, Percy, Larson, and Walker

Noes: None.

Abstained: None

Absent: Treasurer Weightman

**B. Discussion and/or approval of Resolution 2021-06 Adopting FY 2021-22 Budget-  
Jeremy Wittie, M.S., General Manager, and David l'Anson, Administrative  
Finance Manager**

*Jeremy Wittie, General Manager shared a summary of the proposed Budget for Fiscal Year 2021-22. The District's mission is to enhance the quality of life for our community by providing effective and environmentally sound vector control and vector-borne disease prevention services. Guided by our strategic plan and mission-focused, District staff worked diligently to develop this Fiscal Year (FY) 2021-22 budget. An increase in staffing to meet our ever-changing vector threats, making certain long-term pension obligations are met, preservation of both capital and emergency reserves for public health emergencies all while ensuring taxpayer value are key components of the District's FY 21-22 budget. This year's budget also continues to support the day-to-day needs of our dedicated staff to deliver essential services throughout the District as we strive towards our vision of a Coachella Valley free of vector-borne diseases. The FY 2021-22 budget is divided into two sections; Operating Expenses and Capital Expenditures. The total of the two is \$13.7 million.*



On a motion from Trustee Hagerman seconded by Trustee Gardner, and passed by the following roll call votes, the Board of Trustees approved and adopted Resolution 2021-06.

Ayes: President Guitron; Trustees, Carnevale, Delgado, Gardner, Hagerman, Hassett, Kunz, Percy, Larson, and Walker

Noes: None.

Abstained: None

Absent: Treasurer Weightman

C. Discussion and/or approval of Resolution 2021-07 intention to levy assessments for the fiscal year 2021-22, preliminary approval of engineer's report, and providing for notice of hearing for the CVMVCD mosquito, fire ant, and disease surveillance and vector control assessment- **David I'Anson, Administrative Finance Manager** *The "Mosquito, Fire Ant and Disease Control Assessment" was authorized by an assessment ballot proceeding conducted in 2005 and approved by 74.19% of the weighted ballots returned by property owners. The assessment is subject to an adjustment tied to the CPI. The maximum authorized assessment rate for zone A is \$24.13 per single-family equivalent. The FY 2021-22 budget rate is \$14.39. The financial impact of setting the rate to \$14.39 per parcel in Benefit Assessment revenue for FY 2021-22 is \$2.3 Million (19% of total revenue). Staff recommends proceeding with the approval of the preliminary Engineer's Report and Resolution 2021-07 setting the rate to \$14.39 per parcel and providing notice for a public hearing on July 13, 2021.*

On a motion from Trustee Walker seconded by Trustee Hassett, and passed by the following roll call votes, the Board of Trustees approved Resolution 2021-07.

Ayes: President Guitron; Trustees, Carnevale, Delgado, Gardner, Hagerman, Hassett, Kunz, Percy, Larson, and Walker

Noes: None.

Abstained: None

Absent: Treasurer Weightman

### 13. Closed Session Public Comments

**Closed Session (s):**

**A. Conference with Labor Negotiators pursuant to Government Code Section 54957.6**

Agency Designated Representatives: Lena D. Wade, Crystal Moreno, and David I' Anson.

Employee Organizations: California School Employees Association and Teamsters Local 911.

*There were no public comments for Closed Session items.*

**14. Comments by General Counsel**

*Upon return from closed session, Ms. Wade informed those in attendance there was no reportable action. Lena Wade, General Counsel added that the agenda for the meeting is consistent with the Brown Act requirements. If there are any questions please contact Lena Wade. Documents provided are also consistent with the Brown Act requirements. Documents are provided at the time that the agenda is posted and any documents that come out afterward are then posted on the District's website and made available to the public.*

**15. Trustee Comments, Requests for Future Agendas Items, Travel, and/ or Staff Actions**

The Board may not legally take action on any item presented at this time other than to direct staff to investigate a complaint or place an item on a future agenda unless (1) by a majority vote, the Board determines that an emergency exists, as defined by Government Code Section 54956.5, or (2) by a two-thirds vote, the board determines that the need for action arose subsequent to the agenda being posted as required by Government Code Section 54954.2(a). Each presentation is limited to no more than three minutes.

*President Guitron thanked those members of the community who sent in compliments for the service of the District employees. The following employees received compliments from members of the community: Marco Medel, Jess Lucia, Marissa Kelling, Rene Delgado, and Jonathan Leung.*

**16. Adjournment** *President Guitron adjourned the meeting at 7:53 p.m.*

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Benjamin Guitron  
President

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Bitto Larson  
Secretary

## Melissa Tallion

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**From:** Brad Anderson <ba4612442@gmail.com>  
**Sent:** Tuesday, June 8, 2021 2:30 PM  
**To:** Edward Prendez; Melissa Tallion  
**Subject:** Public Comment - CVMVCD Board Meeting 6/8/21 - 6:PM

June 8, 2021

Coachella Valley Mosquito and Vector Control District (CVMVCD)  
43420 Trader Pl.  
Indio, CA. 92201  
(888) 343-9399  
Attn: Clerk of the Board

Re: Written letter to be entered in to the Public record for the June 8, 2021 CVMVCD Board of Trustees meeting - Agenda Item: 4B (non-agenda)

Dear un-elected officials,

It appears to be crystal clear that the CVMVCD has taken unprecedented actions to curbe Residents of the Coachella Valley from activity participating in CVMVCD public meetings. At a prior CVMVCD Executive committee meeting the current meeting chair and Board President ensured a resident (myself) that the CVMVCD would reach out to me in regards to my Public testimony during that Public meeting. No one from the CVMVCD administration had made contact with me to date.

To enlighten the CVMVCD Board of Trustees and members of the Public of my concerns of being denied the opportunity to fully participate in that and other meetings held by the CVMVCD - I will detail those actions.

The CVMVCD administration staff without Board approval changed the long established guideline for Public testimony on agenda Items at all of their open Public meetings. The new agenda perserved the Non-agenda Item but moved all public participation (public comments) on agenda items to "Only one" Item towards the beginning of each Public meeting. That action denied the speaker the opportunity to witness the motions of the board and of course to see and hear any staff reports or presentations prior to speaking on each agenda Item if desired.

And most importantly the chair refused to allow for prior knowledge of the written documentation before speaking. I was not allowed to have or see the Information that was supplied to each of the committee members and Administration staff at that meeting. It would've of been reasonable to allow for the pontenal of public testimony on each agenda Item when the Item was brought for consideration by the board. But as you are aware, my reasonable request was denied by the chair of that board.

Best practices would be not to violate the "Brown Act" and to accommodate for non-decriminalization in regards to every operations of the CVMVCD. Public comment should still be made available at the begining of each Public meeting (Non-agenda and agenda Items). With the oppportunity of Public comment at the time that the board would consider each Item.

This simple well known and demonstrated method of conducting California Public meetings (Best practices) have been proven to work. The unusual and sinister actions to limit California citizens the ability to participate and voice their protected rights during CVMVCD public meetings is wrong and a abusive form of discrimination/Intermediation.

Please stop the unlawful actions of Identifying (printing Names of citizens on government agency public documents) that choose to monitor CVMVCD Open Public meetings. That action is considered a "Brown Act violation".

Sincerely,

Brad Anderson | Rancho Mirage, CA.

**COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT**

**Finance Committee Meeting Via Zoom  
Minutes**

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**TIME:** 4:30 p.m. **DATE:** June 8, 2021

**LOCATION:** 43420 Trader Place Indio, CA 92201

**COMMITTEE MEMBERS PRESENT:**

Indian Wells	Clive Weightman
Rancho Mirage	Isaiah Hagerman
County at Large	Bito Larson

**STAFF PRESENT:**

Jeremy Wittie, M.S., General Manager  
David l'Anson, Administrative Finance Manager  
Graciela Morales, Human Resources Specialist  
Melissa Tallion, Executive Assistant/Clerk of the Board

**MEMBERS OF THE PUBLIC PRESENT:**

*None.*

**1. Call to Order:** *Treasurer Weightman called the meeting to order at 4:31 p.m.*

**2. Roll Call:** *Roll call indicated three (3) Committee members out of three (3) were present.*

**3. Confirmation of Agenda:** *The agenda was confirmed as presented.*

**4. Public Comments:** *None.*

**5. Items of General Consent:**

Approval of Minutes from May 11, 2021, Finance Committee Meeting

*On a motion from Trustee Hagerman seconded by Trustee Larson, and passed by the following roll call votes, the Committee approved the minutes as presented.*

Ayes: Treasurer Weightman, Trustees Hagerman, and Larson.

Noes: None.

Abstained: None.

Absent: None.

## **6. Discussion and/or Review:**

- A. Review of Check Report from Abila MIP for the period of May 7, 2021, to June 3, 2021.

*The check report was reviewed by Committee members and staff. Treasurer Weightman and Trustee Larson inquired about some check payments. David l'Anson, Administrative Finance Manager, provided more information.*

- B. CalCard Charges – April 23, 2021, to May 22, 2021

*The CalCard monthly statement was reviewed by Committee members and staff. Committee members asked questions regarding specific charges. Treasurer Weightman asked if the CalCard report by user name/activity could be provided because it is easier to follow.*

- C. Review of May 2021 Financials and Treasurers Report

*The Committee and staff reviewed the Financials and Treasurers Report. A discussion ensued regarding the Budget year-to-date figures. Treasurer Weightman asked about any changes to investments and asked that the issue date be bolded because it is easier to follow. Treasurer Weightman inquired about the monthly investment transaction report. He made mention to the Resolution (2021-01) which states "The Administrative Finance Manager shall make a monthly report to the Board of all investment transactions. Such report shall be presented first to the Finance committee for review along with all documentation to support and substantiate the report." This report will be included in the July meeting.*

## **7. Old Business:**

- A. None.

## **8. New Business**

- A. Review of finance-related items on Board Agenda

*The finance-related items were reviewed by the Committee. The Committee thanked the staff for a great job putting the budget together. Treasurer Weightman reminded staff to speak about the \$1M pre-payment to CalPERS when discussing the FY 2021-22 budget during the Board Meeting. Staff mentioned that for FY 2021-22 the Benefit Assessment remains the same at \$14.39 per single-family resident.*

**9. Schedule Next Meeting:** *The next Finance Committee meeting was scheduled via Zoom for Tuesday, July 13, 2021, at 4:30 p.m.*

**10. Trustee and/or Staff Comments/Future Agenda Items:** *Treasurer Weightman thanked Trustee Hagerman for filling in during the 6:00 p.m. Board Meeting.*

**11. Adjournment:** *The meeting was adjourned by Treasurer Weightman at 5:02 p.m.*

**Coachella Valley Mosquito and Vector Control District**


Checks Issued for the Period of:

June 4 - July 8, 2021

Check No	Payable To	Description	Check Amount	Total Amount
	Payroll Disbursement	June 11, 2021	237,969.46	
	Payroll Disbursement	June 25, 2021	200,090.13	
				<b>438,059.59</b>
<b>Pre-Approved Expenditures Utilities/Benefits:</b>				
43516	CalPERS Healthcare Acct	Healthcare Retired/Active 7/2021	81,581.25	
43543	Principal Life Insurance Co.	Dental/Life Insurance 7/2021	10,202.09	
43548	Standard Insurance Company	LTD Premium 7/2021	3,207.20	
43554	Vision Service Plan (CA)	Vision Care Plan 7/2021	974.50	
				<b>95,965.04</b>
<b>Pre-Approved Expenditures less than \$10,000.00:</b>				
43510	Abila	Maintenance Contract	832.25	
43511	Advance Imaging Systems	Contract Services	697.71	
43513	Airgas Dry Ice	Dry Ice	204.11	
43515	Burrtec Waste Industries	Landfill Disposal Services	23.92	
43518	CarQuest Auto Parts	Specialty Vehicle Parts & Supplies	459.17	
43520	Cintas Corporation #3	Safety Equipment	4,168.88	
43521	Clairemont Equipment	Equipment Rental	125.76	
43522	CleanExcel	Janitorial Services	6,891.00	
43524	C&R Wellness Works	Employee Assistance Services	607.50	
43525	CSI Ceja Security International	Security Patrol Services	2,150.00	
43526	Desert Sun Publishing Co	Recruitment/Advertising	880.00	
43527	Dudek & Associates	Civil Engineering	4,925.00	
43528	Employee Relations Inc.	Recruitment/Advertising	456.35	
43529	Equipment Direct, Inc.	Safety Expense	3,143.46	
43530	Fedak & Brown, LLP	Professional Services	2,545.00	
43531	High Tech Irrigation, Inc.	Repair & Maintenance	7.79	
43533	Indio Emergency Medical Group	Physician Fees	305.00	
43534	Jernigan's Sporting Goods, Inc.	Safety Expense	267.68	
43535	Liebert Cassidy Whitmore	HR Risk Management	5,365.00	
43536	Marlin Business Bank	Contract Services	705.79	
43538	NAPA Auto & Truck Parts	Vehicle Parts & Supplies	821.72	
43539	Nextdoor, Inc.	Cloud Computing Services	2,337.88	
43540	nfpAccounting Technologies, Inc.	Maintenance Contract	3,357.00	
43541	Pentair Aquatic Eco-Systems, Inc.	Equipment Parts and Supplies	333.59	
43542	Praxair Distribution, Inc.	Cylinder Rentals	58.61	
43544	Riverside LAFCO	Lafco Dues	2,242.98	
43546	Society For Human Resource Mgmt	Dues & Memberships	219.00	
43549	Sunline Transit Agency	Advertising	2,550.00	
43550	Veolia ES Technical Solutions, LLC	Operating Supplies	559.30	
43551	Total Compensation Systems, Inc.	GASB 74/75 Actuarial Valuation	1,800.00	
43552	UPS	Postage	180.85	
<b>Cash - California Bank &amp; Trust Checking</b>				<b>49,222.30</b>
<b>Cash - California Bank &amp; Trust Checking</b>				
43512	Aerial Services	Aerial Pool Surveillance	18,965.94	
43514	American Engraving Co.	Reproduction & Printing	10,771.38	
43517	CalPERS - Retirement Acct	PEPRA Unfunded Liability	1,350,948.00	
43523	Cooperative Personnel Services dba CPS HR Consulting	Professional Fees	10,680.00	
43532	Hypertec USA Inc	Capital Equipment Replacement	32,631.04	
43537	MVCAC Committee Assignments Expense	MVCAC Corporate Membership Dues	11,500.00	
43545	Slovak Baron Empey Murphey & Pinkney LLP	Attorney Fees	12,106.25	
43547	SC Commercial LLC dba SC Fuels	Motor, Fuel & Oil	11,878.04	
43553	Vector Control Joint Powers Agency	Property & Liability Insurance	460,921.00	
43555	U.S. Bank	CalCard	57,293.62	
<b>Cash - California Bank &amp; Trust Check Run Total to be Approved</b>				<b>1,977,695.27</b>
<b>Total Expenditures: June 4 - July 8, 2021</b>				<b>2,560,942.20</b>

Ben Guitron, President

Clive Weightman, Treasurer

	<p><b>Coachella Valley Mosquito and Vector Control District</b></p> <p><b>Staff Report</b></p>	<p><b>July 13, 2021</b></p>
<p><b>Agenda Item:</b> Items of General Consent</p> <p>Approval of Resolution 2021-09 Authorizing Attendance of Professional Development Conferences and Meetings by Members of the Board of Trustees and Employees of the District for Fiscal Year 2021-2022 – <b>Jeremy Wittie, M.S., General Manager</b></p>		
<p><b>Background:</b></p> <p>In 2009, an ad hoc travel committee comprised of the Board of Trustees directed staff to develop a travel resolution for Board adoption of the types of travel by Board members and employees to be authorized on an as-needed basis. Resolution 2009-05, Authorizing Attendance of Professional Development Conferences and Meetings by Members of the Board of Trustees and Employees of the District for Fiscal Year 2009-2010, was approved at the May 2009 Board Meeting and accomplished this purpose.</p> <p>Resolution 2021-09 would authorize attendance at conferences and meetings for Fiscal Year 2021-2022. Schedule “A” of Resolution 2021-09 contains a list of professional conferences and meetings that staff and/or Board members would be authorized to attend, based on need, between July 1, 2021, and June 30, 2022, and also designates which staff and Board members would be authorized to attend each conference or meeting.</p> <p>Resolution 2021-09 would also limit Board members to a maximum of two (2) conferences or meetings that involve overnight travel and would limit staff to a maximum of two (2) conferences or meetings per function performed by the employee. An exception to this limitation would be made for meetings and conferences where it is necessary to carry out a committee assignment for the Mosquito and Vector Control Association of California.</p>		
<p><b>Staff Recommendation:</b></p> <ul style="list-style-type: none"> <li>• Staff recommends that the Board approve Resolution 2021-09.</li> </ul>		
<p><b>Exhibits:</b></p> <ul style="list-style-type: none"> <li>• Resolution 2021-09</li> <li>• 2021-2022 Professional Development Conferences &amp; Meetings</li> </ul>		



**PROFESSIONAL DEVELOPMENT**

**JULY 1, 2021 – JUNE 30, 2022**

<b>Conference or Meeting (including subcommittees)</b>	<b>Attendance Authorized For</b>	<b>Date</b>	<b>Place</b>
Abila MIP Fund Accounting Training	Administrative Finance Manager, Accounting Technician I, Accounting Technician II	December/July	San Diego, CA
American Mosquito Control Association	General Manager, Public Information Officer, Laboratory Manager, Vector Ecologist (2), Laboratory Staff (1), Operations Manager, Field Supervisors (2), Trustees	February 28 - March 4, 2022	Jacksonville, Florida
California Special District Association Annual Conference	General Manager, Administrative Finance Manager, Laboratory Manager, Trustees	August 30 - September 2, 2021	Monterey, CA
California Special District Association General Manager Leadership Summit, Various Seminars, Clerk of the Board Conference and Webinars	General Manager, Clerk of the Board, Staff and Trustees	TBA	TBA
CALPELRA Conference	Human Resources Manager, Human Resources Specialist	TBA	TBA
CalPERS Educational Forum	Administrative Finance Manager, Accounting Technician II	October 2021	Not Known
CAPIO Annual Conference	Public Information Officer	November 1-5, 2021	Olympic Valley, CA
California Specialized Training Institute – Emergency Management	Public Information Officer	TBD	San Luis Obispo, CA
Entomological Society of America Annual Conference	Laboratory Manager, Vector Ecologist	October 30 – November 3, 2021	Denver, Colorado
Environmental Systems Research Institute Annual Conference	Information Technology Manager		
Homeland Security Exercise and Evaluation Program	Public Information Officer	July 11-14, 2021	Emmitsburg, MD
Liebert Cassidy Whitmore Conference	General Manager, Administrative Finance Manager, Human Resources Manager, Human Resources Specialist	TBA	TBA
Local Agency Investment Fund Annual Conference	General Manager, Administrative Finance Manager	November 2021	Not Known
Master Public Information Officer Program	Public Information Officer	TBD	Emmitsburg, MD

**PROFESSIONAL DEVELOPMENT**

**JULY 1, 2021 – JUNE 30, 2022**

<b>Conference or Meeting (including subcommittees)</b>	<b>Attendance Authorized For</b>	<b>Date</b>	<b>Place</b>
Municipal Information Systems Association of California	Information Technology Manager	TBA	TBA
Mosquito & Vector Control Association of California	General Manager, Administrative Finance Manager, Information Technology Manager, Public Information Officer, Laboratory Manager, Vector Ecologist (2), Laboratory Staff (2) with a talk or poster, Operations Manager, Field Supervisor (2), Lead Technician (1), Vector Control Technician (1), Trustees	February 7-9, 2022	Sacramento, CA
Mosquito & Vector Control Association of California Quarterly Meetings	General Manager, Administrative Finance Manager, Information Technology Manager, Laboratory Manager, Vector Ecologist, Operations Manager, Public Information Officer, Trustee Representative	TBA	TBA
Mosquito & Vector Control Association of California Legislative Day	General Manager, Public Information Officer, Trustee Representative(s)	TBA	TBA
Mosquito & Vector Control Association of California Planning Session	General Manager, Administrative Finance Manager, Laboratory Manager, Trustee Representative	TBA	TBA
National Association of Government Communicators Communication School	Public Information Officer	August 29-September 2, 2021	Clearwater, FL
National Conference on Urban Entomology and Invasive and Pest Ant Conference	Operations Manager or designee, Field Supervisor (1)	TBA	TBA
Pacific Branch – Entomological Society of America Meeting	Laboratory Manager	April 10-13, 2022	Waikoloa Beach, HI
Society of Vector Ecology Annual Conference	Laboratory Manager, Vector Ecologist,	September 16-17, 2021	Online
Vector Control Joint Powers Agency Annual Workshop	General Manager or designee	TBA	TBA

**PROFESSIONAL DEVELOPMENT  
JULY 1, 2021 – JUNE 30, 2022**

<b>Conference or Meeting (including subcommittees)</b>	<b>Attendance Authorized For</b>	<b>Date</b>	<b>Place</b>
Western Region International Public Management Association for Human Resources Annual Conference	Human Resources Manager	TBA	TBA

**RESOLUTION NO. 2021-09**

**A RESOLUTION OF THE BOARD OF TRUSTEES OF THE COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT AUTHORIZING ATTENDANCE OF PROFESSIONAL DEVELOPMENT CONFERENCES AND MEETINGS BY MEMBERS OF THE BOARD OF TRUSTEES AND EMPLOYEES OF THE DISTRICT FOR FISCAL YEAR 2021-22**

**WHEREAS**, the Coachella Valley Mosquito and Vector Control District (“District”) is a political subdivision of the State of California, created and operating under the authority and provisions of California Health and Safety Code Section 2000 *et. seq.*, and is also a “local agency” within the meaning of Section 53600 of the California Government Code; and

**WHEREAS**, pursuant to Health and Safety Code Section 2051 and the District's adopted Travel and Expense Policy, the Board of Trustees (“Board”) of the District may authorize members of the Board and District employees to attend professional, educational, or vocational meetings, and cause the District to pay their actual and necessary traveling expenses while on official business.

**NOW, THEREFORE, THE BOARD OF TRUSTEES OF THE COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT DOES HEREBY RESOLVE AS FOLLOWS:**

**Section 1. Recitals.**

The recitals set forth above are true and correct.

**Section 2. Authorization and Approval for Attendance.**

Subject to Section 3 hereof, the Board hereby authorizes and approves the conference and meeting list attached hereto and incorporated herein by this reference as Exhibit “A,” for the fiscal year 2021-22, for attendance by Board members and/or employees of the District as designated therein. The Board finds that the list of conferences and meetings satisfies the criteria set forth in Health and Safety Code Section 2051 and the District’s Travel and Expense Policy, and that the proposed attendance at the conferences and meetings on the list will result in a benefit to the District.

**Section 3. Limitations.**

In order to preserve the District's finances, Board members shall attend no more than two conferences or meetings per fiscal year which involve overnight travel. Employees shall attend no more than two conferences or meetings per function performed by the employee. These limitations shall not apply where attendance at a meeting or conference is necessary to carry out a committee assignment, such as in the case of at the Mosquito and Vector Control Association of California committee assignment.

**Section 4. Severability.**

The Board declares that, should any provision, section, paragraph, sentence or word of this Resolution be rendered or declared invalid by any final court action in a court of competent jurisdiction or by reason of any preemptive legislation, the remaining provisions, sections, paragraphs, sentences or words of this Resolution as hereby adopted shall remain in full force and effect.

**Section 5. Repeal of Conflicting Provisions.**

All the provisions of any resolution or policy as heretofore adopted by the District or the Board that are in conflict with the provisions of this Resolution are hereby repealed.

**Section 6. Effective Date.**

This Resolution shall take effect upon its adoption.

**Section 7. Certification.**

The Clerk of the Board shall certify as to the adoption of this Resolution and shall cause the same to be processed in the manner required by law.

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**PASSED, ADOPTED AND APPROVED, this 13th day of July 2021.**

\_\_\_\_\_  
**Benjamin Guitron, IV, President  
Board of Trustees**

**ATTEST:**

\_\_\_\_\_  
**Melissa Tallion, Clerk of the Board**

**APPROVED AS TO FORM:**

\_\_\_\_\_  
**Lena D. Wade, General Counsel**

**REVIEWED:**

\_\_\_\_\_  
**Jeremy Wittie, M.S., General Manager**



# FINANCE REPORTS

Coachella Valley Mosquito and Vector Control District  
**FINANCES AT A GLANCE**  
**ALL FUNDS COMBINED**  
For the Month Ended June 30, 2021  
**PRELIMINARY**

	Beginning of the Month	Change During the Month	End of the Month
INVESTMENTS	12,398,478	2,913,195	15,311,673
CASH	251,437	(103,076)	148,360
INVESTMENTS & CASH	12,649,915	2,810,118	15,460,033
CURRENT ASSETS	2,278,421	(994,278)	1,284,143
FIXED ASSETS	10,177,671	-	10,177,671
OTHER ASSETS	5,511,357	-	5,511,357
TOTAL ASSETS	30,617,364	1,815,841	32,433,204
TOTAL LIABILITIES	5,882,569	(290,860)	5,591,709
TOTAL DISTRICT EQUITY	24,734,795	2,106,700	26,841,495
TOTAL LIABILITIES & EQUITY	30,617,364	1,815,841	32,433,204
RECEIPTS			
		\$ 3,983,195	
CASH DISBURSEMENTS			
Payroll	\$ 438,060		
General Admin	\$ 734,735		
Total Cash Disbursements		\$ (1,172,795)	
NON-CASH ENTRIES:			
Accrual Modifications - Changes in A/P, A/R & Pre-paid insurance		\$ (994,560)	
Change during Month - Excess of Cash over Receipts & Non-Cash Adjustments		\$ 1,815,841	



**CVMVCD**  
Cash Journal - deposits  
From 6/1/2021 Through 6/30/2021

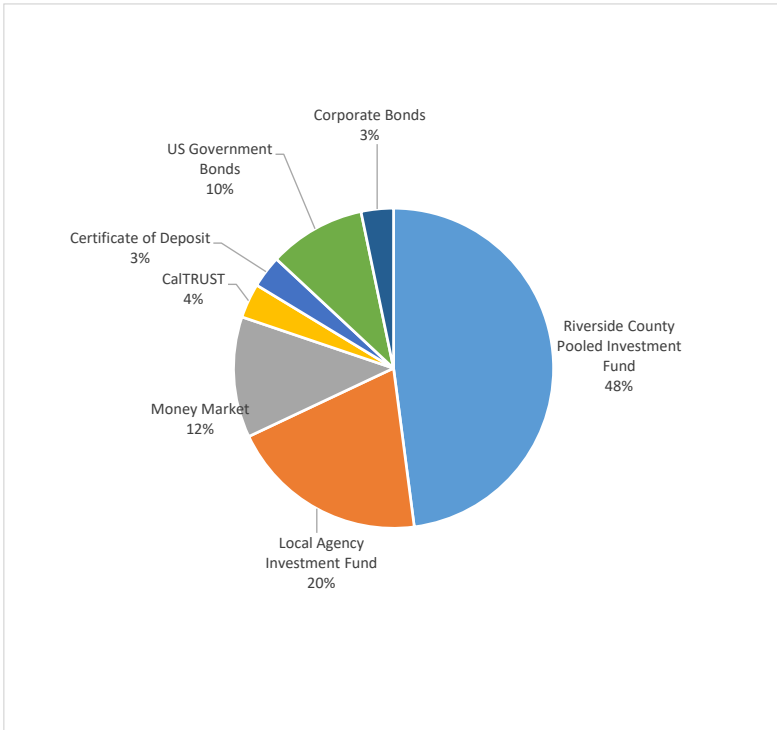
Effective ...	Transaction Description	Deposits	Payee/Recipient Name
6/1/2021	Benefit Assessment	946,153.98	Riverside County
6/1/2021	June Receipts - CalCard rebate	2,276.51	US Bank
6/1/2021	June Receipts - Tax Increment	3,024,139.12	Riverside County
6/22/2021	June Receipts	5,654.44	Riverside County
6/30/2021	June Receipts	24.45	California Bank & Trust
6/30/2021	June Receipts	1,819.64	CalTRUST
6/30/2021	June Receipts - Fund 51105	337.52	Riverside County
6/30/2021	June Receipts - Fund 51115	2,737.61	Riverside County
6/30/2021	June Receipts - US F&W	<u>51.43</u>	Riverside County
Report Total		<u><u>3,983,194.70</u></u>	

**COACHELLA VALLEY MOSQUITO AND VECTOR CONTROL DISTRICT  
INVESTMENT FUND BALANCES AS OF JUNE 30, 2021**

Preliminary 1

INSTITUTION	IDENTIFICATION	Issue Date	Maturity Date	YIELD	General Fund	Thermal Capital Fund	Capital Equipment Replacement Fund	Capital Facility Replacement Fund	BALANCE
LAIF	Common Investments			0.26%	2,840,749	18,060	31,304	180,960	\$ 3,071,074
Riverside County	Funds 51105 & 51115			0.28%	6,788,625	43,160	74,809	432,445	\$ 7,339,039
CalTRUST	Medium Term Fund			0.19%	494,848	3,146	5,453	31,523	\$ 534,970
CA Bank & Trust	Market Rate			0.09%	1,728,452	10,989	19,047	110,105	\$ 1,868,593
BMW Bank	Certificate of Deposit	11/20/2020	11/20/2025	0.50%			59,760	189,240	\$ 249,000
State BK of India	Certificate of Deposit	11/23/2020	11/24/2025	0.55%			59,760	189,240	\$ 249,000
Federal Home Ln	US Government Bonds	11/24/2020	11/24/2025	0.63%			180,000	570,000	\$ 750,000
Federal Natl Mtg Assn	US Government Bonds	11/25/2020	11/25/2025	0.63%			180,000	570,000	\$ 750,000
Bank Amer Corp	Corporate Bonds	11/25/2020	11/25/2025	0.65%			120,000	380,000	\$ 500,000
<b>Total Investments</b>					11,852,675	75,355	730,134	2,653,512	<b>\$ 15,311,676</b>

**PORTFOLIO COMPOSITION AS OF JUNE 30, 2021  
WEIGHTED YIELD 0.30%**



In compliance with the California Code Section 53646; the Finance Administrator of the Coachella Valley Mosquito and Vector Control District hereby certifies that sufficient liquidity and anticipated revenue are available to meet the District's budgeted expenditure requirements for the next six months.

Investments in the report meet the requirements of the Coachella Valley Mosquito and Vector Control District's adopted investment policy

Respectfully submitted

NOTED AND APPROVED

CVMVCD  
Statement of Revenue and Expenditures  
June 30, 2021

	Annual Budget	YTD Budget	YTD Actual	YTD Budget Variance	Current Period Budget	Current Period Actual	Current Period Variance	Annual Budget Variance	Percent Annual Budget
<b>Revenues</b>									
400C Property Tax - Current Secured	4,094,440	4,094,440	<b>3,902,998</b>	(191,441)	180,019	<b>51</b>	(179,968)	(191,441)	(5)%
401C Property Tax - Curr. Supplmntl	31,160	31,160	<b>60,848</b>	29,688	31,160	<b>0</b>	(31,160)	29,688	95 %
402C Property Tax - Curr. Unsecured	167,217	167,217	<b>163,867</b>	(3,350)	4,934	<b>0</b>	(4,934)	(3,350)	(2)%
403C Homeowners Tax Relief	37,173	37,173	<b>37,696</b>	523	0	<b>5,654</b>	5,654	523	1 %
407C Property Tax - Prior Supp.	27,926	27,926	<b>30,692</b>	2,766	27,926	<b>0</b>	(27,926)	2,766	10 %
408C Property Tax - Prior Unsecured	8,891	8,891	<b>0</b>	(8,891)	8,891	<b>0</b>	(8,891)	(8,891)	(100)%
409C Redevelopment Pass-Thru	4,659,669	4,659,669	<b>5,796,224</b>	1,136,555	2,309,798	<b>3,024,139</b>	714,341	1,136,555	24 %
452C Interest Income - LAIF/CDs	120,000	120,000	<b>30,932</b>	(89,068)	30,000	<b>4,919</b>	(25,081)	(89,068)	(74)%
453C Other Miscellaneous Receipts	63,000	63,000	<b>31,664</b>	(31,336)	5,250	<b>2,297</b>	(2,953)	(31,336)	(50)%
4551 Benefit Assessment Income	2,299,810	2,299,810	<b>2,185,001</b>	(114,809)	103,320	<b>0</b>	(103,320)	(114,809)	(5)%
<b>Total Revenues</b>	<b>11,509,286</b>	<b>11,509,286</b>	<b>12,239,924</b>	<b>730,638</b>	<b>2,701,300</b>	<b>3,037,061</b>	<b>335,761</b>	<b>730,638</b>	<b>6 %</b>
<b>Expenditures</b>									
<b>Payroll Expenses</b>									
5101 Payroll - FT	5,000,402	5,000,402	<b>4,813,599</b>	186,803	416,700	<b>417,945</b>	(1,245)	186,803	4 %
5102 Payroll Seasonal	233,140	233,140	<b>148,927</b>	84,213	19,428	<b>2,037</b>	17,391	84,213	36 %
5103 Temporary Services	6,900	6,900	<b>6,900</b>	0	0	<b>0</b>	0	0	0 %
5105 Payroll - Overtime Expense	44,120	44,120	<b>23,862</b>	20,258	3,677	<b>991</b>	2,685	20,258	46 %
511C FFCRA Wage Credit	0	0	<b>(57,026)</b>	57,026	0	<b>0</b>	0	57,026	0 %
515C CalPERS State Retirement	838,526	838,526	<b>703,582</b>	134,944	42,788	<b>123,587</b>	(80,799)	134,944	16 %
515E Social Security Expense	317,326	317,326	<b>308,161</b>	9,165	26,444	<b>26,828</b>	(384)	9,165	3 %
516E Medicare Expense	74,213	74,213	<b>74,351</b>	(138)	6,184	<b>6,274</b>	(90)	(138)	(0)%
516E FFCRA Medi Credit	0	0	<b>(827)</b>	827	0	<b>0</b>	0	827	0 %
517C Cafeteria Plan	1,082,168	1,082,168	<b>1,114,631</b>	(32,463)	90,181	<b>95,066</b>	(4,885)	(32,463)	(4)%
5172 Retiree Healthcare	372,588	372,588	<b>358,313</b>	14,275	31,049	<b>31,962</b>	(913)	14,275	4 %
518C Deferred Compensation	109,134	109,134	<b>71,286</b>	37,848	9,095	<b>27,988</b>	(18,893)	37,848	35 %
519E Unemployment Insurance	32,066	32,066	<b>35,364</b>	(3,297)	2,672	<b>355</b>	2,318	(3,297)	(10)%
<b>Total Payroll Expenses</b>	<b>8,110,583</b>	<b>8,110,583</b>	<b>7,601,123</b>	<b>509,460</b>	<b>648,218</b>	<b>733,033</b>	<b>(84,815)</b>	<b>509,460</b>	<b>6 %</b>

CVMVCD  
Statement of Revenue and Expenditures  
June 30, 2021

	Annual Budget	YTD Budget	YTD Actual	YTD Budget Variance	Current Period Budget	Current Period Actual	Current Period Variance	Annual Budget Variance	Percent Annual Budget
<b>Administrative Expenses</b>									
525C Tuition Reimbursement	20,000	20,000	24,410	(4,410)	1,667	0	1,667	(4,410)	(22)%
530C Employee Incentive	14,175	14,175	5,997	8,178	794	179	615	8,178	58 %
5301 Employee Support	0	0	1,028	(1,028)	0	5	(5)	(1,028)	0 %
5302 Wellness	600	600	103	497	0	0	0	497	83 %
5305 Employee Assistance Program	3,200	3,200	3,830	(630)	267	608	(341)	(630)	(20)%
600C Property & Liability Insurance	135,395	135,395	155,733	(20,338)	13,366	14,102	(736)	(20,338)	(15)%
6001 Workers' Compensation Insurance	184,697	184,697	159,164	25,533	19,558	19,493	65	25,533	14 %
605C Dues & Memberships	41,605	41,605	37,659	3,946	1,383	312	1,071	3,946	9 %
606C Reproduction & Printing	28,550	28,550	24,641	3,909	6,758	10,827	(4,069)	3,909	14 %
6065 Recruitment/Advertising	8,500	8,500	4,889	3,611	708	1,032	(323)	3,611	42 %
607C Office Supplies	18,556	18,556	14,130	4,426	1,533	2,623	(1,090)	4,426	24 %
6075 Postage	5,750	5,750	664	5,086	479	16	463	5,086	88 %
608C Computer & Network Systems	5,200	5,200	4,350	850	433	32	402	850	16 %
6085 Bank Service Charges	120	120	936	(816)	10	302	(292)	(816)	(680)%
609C Local Agency Formation Comm.	2,400	2,400	2,164	236	0	0	0	236	10 %
6095 Professional Fees	78,699	78,699	43,080	35,619	5,874	1,067	4,807	35,619	45 %
610C Attorney Fees	63,000	63,000	65,000	(2,000)	5,250	7,216	(1,966)	(2,000)	(3)%
6105 Legal Services / Filing Fees	1,000	1,000	0	1,000	83	0	83	1,000	100 %
6106 HR Risk Management	4,500	4,500	5,625	(1,125)	375	0	375	(1,125)	(25)%
611C Conference Expense	45,400	45,400	5,209	40,191	267	0	267	40,191	89 %
6115 In-Lieu	13,200	13,200	13,100	100	1,100	1,100	0	100	1 %
612C Trustee Support	7,550	7,550	682	6,868	717	0	717	6,868	91 %
620C Meetings Expense	4,690	4,690	1,087	3,603	391	178	213	3,603	77 %
621C Promotion & Education	26,500	26,500	17,731	8,769	2,208	0	2,208	8,769	33 %
622C Public Outreach Advertising	45,000	45,000	9,851	35,149	20,417	2,550	17,867	35,149	78 %
650C Benefit Assessment Expenses	96,000	96,000	44,227	51,773	0	0	0	51,773	54 %
<b>Total Administrative Expenses</b>	<b>854,287</b>	<b>854,287</b>	<b>645,290</b>	<b>208,997</b>	<b>83,638</b>	<b>61,640</b>	<b>21,998</b>	<b>208,997</b>	<b>24 %</b>
<b>Utilities</b>									
640C Utilities	106,000	106,000	95,824	10,176	8,442	0	8,442	10,176	10 %
641C Telecommunications	1,270	1,270	1,802	(532)	106	0	106	(532)	(42)%
<b>Total Utilities</b>	<b>107,270</b>	<b>107,270</b>	<b>97,626</b>	<b>9,644</b>	<b>8,548</b>	<b>0</b>	<b>8,548</b>	<b>9,644</b>	<b>9 %</b>

CVMVCD  
Statement of Revenue and Expenditures  
June 30, 2021

	Annual Budget	YTD Budget	YTD Actual	YTD Budget Variance	Current Period Budget	Current Period Actual	Current Period Variance	Annual Budget Variance	Percent Annual Budget
<b>Operating</b>									
700C Uniform Expense	44,255	44,255	45,175	(920)	3,574	3,924	(350)	(920)	(2)%
705C Safety Expense	25,225	25,225	31,911	(6,686)	2,042	5,932	(3,890)	(6,686)	(27)%
710C Physican Fees	5,000	5,000	3,955	1,045	417	170	247	1,045	21 %
715C IT Communications	56,740	56,740	59,649	(2,909)	4,291	3,371	920	(2,909)	(5)%
720C Household Supplies	3,000	3,000	1,908	1,092	250	0	250	1,092	36 %
730C Repair & Maintenance	42,000	42,000	32,241	9,759	3,500	1,842	1,658	9,759	23 %
731C Maintenance & Calibration	0	0	5,567	(5,567)	0	0	0	(5,567)	0 %
735C Permits, Licenses & Fees	41,552	41,552	26,957	14,595	3,079	23,640	(20,561)	14,595	35 %
740C Vehicle Parts & Supplies	42,720	42,720	43,013	(293)	3,560	3,646	(86)	(293)	(1)%
742C Offsite Vehicle Maint & Repair	18,123	18,123	11,877	6,245	1,344	0	1,344	6,245	34 %
745C Equipment Parts & Supplies	16,800	16,800	21,125	(4,325)	1,400	399	1,001	(4,325)	(26)%
750C Small Tools Furniture & Equip	4,100	4,100	4,137	(37)	342	632	(290)	(37)	(1)%
755C Lab Supplies & Expense	36,700	36,700	17,071	19,629	3,208	968	2,241	19,629	53 %
757C Aerial Pool Surveillance	26,000	26,000	18,966	7,034	0	18,966	(18,966)	7,034	27 %
757S Surveillance	46,610	46,610	52,418	(5,808)	1,759	1,881	(121)	(5,808)	(12)%
760C Staff Training	85,337	85,337	29,131	56,206	8,179	75	8,104	56,206	66 %
765C Equipment Rental	1,000	1,000	829	171	83	126	(42)	171	17 %
767S Contract Services	151,521	151,521	199,765	(48,244)	19,874	11,015	8,859	(48,244)	(32)%
770C Motor Fuel & Oils	80,000	80,000	73,942	6,058	6,667	11,878	(5,211)	6,058	8 %
775C Field Supplies	14,400	14,400	7,613	6,787	1,200	909	291	6,787	47 %
780C Control Products	786,931	786,931	573,668	213,263	65,578	0	65,578	213,263	27 %
785C Aerial Applications	156,950	156,950	147,196	9,754	13,079	12,650	429	9,754	6 %
841S Capital Outlay	33,952	33,952	22,960	10,992	2,059	5,220	(3,162)	10,992	32 %
851C Research Projects	135,000	135,000	87,173	47,827	0	14,529	(14,529)	47,827	35 %
900C Contingency Expense	109,750	109,750	0	109,750	9,146	0	9,146	109,750	100 %
<b>Total Operating</b>	<b>1,963,666</b>	<b>1,963,666</b>	<b>1,518,248</b>	<b>445,418</b>	<b>154,629</b>	<b>121,772</b>	<b>32,857</b>	<b>445,418</b>	<b>23 %</b>
<b>Contribution to Capital Reserves</b>									
890C Transfer to other funds	473,481	473,481	473,481	0	39,457	39,457	0	0	(0)%
<b>Total Contribution to Capital Reserves</b>	<b>473,481</b>	<b>473,481</b>	<b>473,481</b>	<b>0</b>	<b>39,457</b>	<b>39,457</b>	<b>0</b>	<b>0</b>	<b>(0)%</b>
<b>Total Expenditures</b>	<b>11,509,287</b>	<b>11,509,287</b>	<b>10,335,767</b>	<b>1,173,520</b>	<b>934,489</b>	<b>955,901</b>	<b>(21,412)</b>	<b>1,173,520</b>	<b>10 %</b>
<b>Net revenue over/(under) expenditures</b>	<b>(1)</b>	<b>(1)</b>	<b>1,904,157</b>	<b>1,904,158</b>	<b>1,766,810</b>	<b>2,081,159</b>			

CVMVCD  
Balance Sheet  
As of 6/30/2021

		Current Year
Assets		
Cash and Investments		
1000	Cash - Investments	15,311,672.74
1012	Cash - Clearing Account	150.00
1016	Petty Cash	500.00
1017	Petty Cash Checking	1,500.00
1035	CB&T General Checking	2,560.65
1036	CB&T Payroll Checking	143,649.82
	Total Cash and Investments	15,460,033.21
Current Assets		
1050	Accounts Receivable	7,240.64
1080	Interest Receivable	7,907.14
1085	Inventory	459,270.86
1167	Prepaid Research Proposals	87,173.40
1168	Prepaid Insurance	(1,425.87)
1169	Deposits	723,977.00
	Total Current Assets	1,284,143.17
Fixed Assets		
1300	Equipment/Vehicles	1,950,149.55
1310	Computer Equipment	488,713.68
1311	GIS Computer Systems	301,597.91
1320	Office Furniture & Equipment	1,241,521.94
1330	Land	417,873.30
1335	Oleander Building	5,665,861.83
1336	Signage	23,651.39
1340	Structures & Improvements	3,026,125.52
1341	Bio Control Building	6,998,161.74
1342	Bio Control Equip/Furn	43,986.77
1399	Accumulated Depreciation	(9,979,973.04)
	Total Fixed Assets	10,177,670.59
Other Assets		

CVMVCD  
Balance Sheet  
As of 6/30/2021

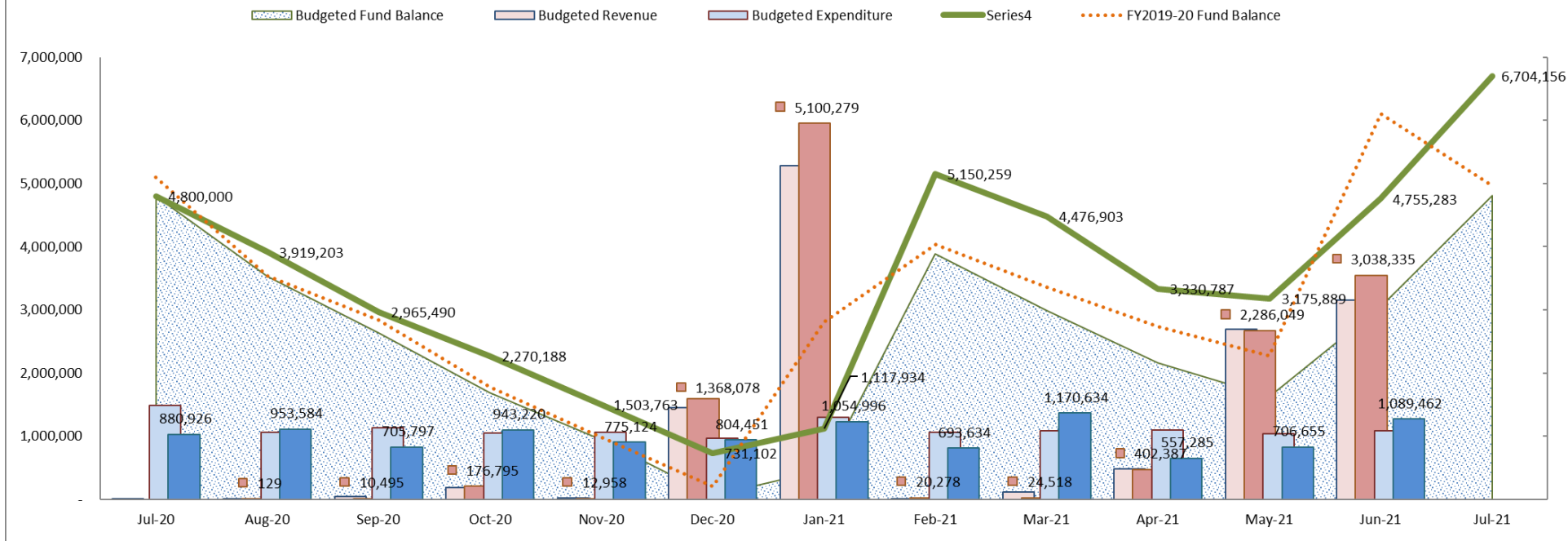
		Current Year
1520	Resources to Be Provided	3,514,102.32
1525	Deferred Outflows of Resources	1,672,593.00
1530	Deferred Outflows of Resources - OPEB	324,662.00
1900	Due to/from	0.12
	Total Other Assets	5,511,357.44
	Total Assets	32,433,204.41
Liabilities		
Short-term Liabilities		
Accounts Payable		
2015	Credit Card Payable	17,813.97
2020	Accounts Payable	125,340.07
2040	Payroll Taxes Payable	4.54
	Total Accounts Payable	143,158.58
	Total Short-term Liabilities	143,158.58
Long-term Liabilities		
2100	Pollution Remediation Obligation	2,100,000.00
2200	Net Pension Liability	1,883,157.00
2210	Deferred Inflows of Resources	177,324.00
2230	Deferred Inflows - OPEB	17,340.00
2300	Net OPEB Liability	547,704.00
2500	Compensated Absences Payable	723,025.86
	Total Long-term Liabilities	5,448,550.86
	Total Liabilities	5,591,709.44
Fund Balance		
Non Spendable Fund Balance		
3920	Investment in Fixed Assets	10,698,793.35
3945	Reserve for Prepaids & Deposit	1,041,259.68
3960	Reserve for Inventory	459,270.86
	Total Non Spendable Fund Balance	12,199,323.89

CVMVCD  
Balance Sheet  
As of 6/30/2021

		Current Year
	Committed Fund Balance	
3965	Public Health Emergency	4,309,674.00
	Total Committed Fund Balance	4,309,674.00
	Assigned Fund Balance	
3910	Reserve for Operations	4,800,000.00
3925	Reserve for Future Healthcare Liabilities	547,704.00
3955	Thermal Remediation Fund	463,724.00
3970	Reserve for IT Replacement	277,991.00
3971	Reserve for Vehicle Replacement	344,376.00
	Total Assigned Fund Balance	6,433,795.00
	Unassigned Fund Balance	
3900	Fund Equity	1,342,365.90
3999	P&L Summary	401,168.84
	Total Unassigned Fund Balance	1,743,534.74
	Current YTD Net Income	
		2,155,167.34
	Total Current YTD Net Income	2,155,167.34
	Total Fund Balance	26,841,494.97
	Total Liabilities and Net Assets	32,433,204.41



### General Fund Operational Cash Flow Fiscal Year 2020 - 2021



The **General Fund Operational Cash Flow** graph outlines the District's working capital for the fiscal year July 1 2020 to June 30, 2021. The beginning fund balance is \$4.8 million and the ending fund balance is \$4.8 million. Expenditure is approximately divided by 12 equal months, with some differences accounting for the seasonality of the program for example control products and seasonal employment which are greater in the mosquito breeding season. July expenditure is higher than average because of the prefunding lump sum of \$310,000 for CalPERS unfunded liability. The budget also accounts for prepayments. The revenue follows a different pattern, Riverside County distributes the property tax revenue in January and May with advancements in December and April.

The *shaded area* represents the **Budgeted Fund Balance** which has a formula of (beginning) **Fund Balance** plus **Revenue** minus **Expenditure**. The *green line* represents the **Actual Fund Balance** and is graphed against the *shaded area* **Budgeted Fund Balance**. FY2019-2020 Fund Balance is the orange dash line.

The graph shows for June 1 the \$4.8 million **Fund Balance** plus total Revenue for July 1 to June 30, 2021, preliminary financials of \$12,239,924 minus total Expenditure of \$10,335,767 is \$6,704,156. Revenue is higher than budgeted, the District received \$1,000,000 higher Pass-Thru revenue than anticipated, expenses are below budget. Payroll favorable variance of \$509,460 is due to timing payroll expenses are approximately a month behind. Administrative Expense favorable variance of \$208,997 - conferences expenses down because of Covid, Benefit Assessment expense lower than budgeted, professional fees & public outreach timing (expenses will continue to be accrued during July and August). Operating Expense favorable variance of \$445,418 - contingency expense not used, research expensed monthly & added as a prepaid expense over 2 fiscal years, staff training expense down because of Covid, some expenses due to timing. Overall the District is showing a favorable variance of \$1.9 million. For planning purposes, the District is under budget. As long as the green line stays out of the shaded area the District is within budget, as of June 30, 2021, the line is outside the shaded area.

### **Board Business Status Log 2021**

<b>Board Action Item / Description</b>		<b>Month</b>	<b>Status</b>	<b>Comments</b>
<b>Agreements</b>				
	Research Agreement – UC Davis	January	Completed	
	Research Agreement – UC Riverside	January	Completed	
	Research Agreement – USDA	January	Completed	
	Research Agreement – Icahn School of Medicine at Mount Sinai	January	Completed	
	Renewal of the Agreement with Salton Sea Aerial Services	February	Completed	
	Renewal of the Agreement with Fedak & Brown	February	Completed	
	Agreement with Ames Construction to locate CV Link Temporary Office/ Yard on District Property	February	In Process	
	Agreement to obtain Microsoft M365 Licensing	March	Completed	
	Renewal of the Agreement with the Coachella Valley Unified School District for an additional two years	March	Completed	
	Renewal of the Agreement with CleanExcel for cleaning	March	Completed	
	Agreement to upgrade and replace District’s electronic door access, security alarm, and CCTV systems	June	Completed	
	Agreement for the Market Research Project	July	In Progress	
<b>Resolutions And Proclamations</b>				
	Resolution No. 2021-01 Adopting the District’s Investment Policy	January	Completed	
	Proclamation in Honor of Anita Jones for her 20 Years of Service to the District	January	Completed	

	Resolution 2021-02 Adopting Employee Pay Schedule	February	Completed	
	Approval of Proclamation designating the week of April 18-24, 2021 as Mosquito Awareness Week	March	Completed	
	Resolution 2021-03 Adopting Ad Hoc Assessment Appeal Committee recommendation	May	Completed	
	Resolution 2021-04 and Adoption of the 2021 CVMVCD Mosquito-borne Virus Surveillance and Emergency Response Plan	May	Completed	
	Resolution 2021-05 to adopt the amendments to Trustee Bylaws	May	Completed	
	Proclamation in Honor of Jess Lucia for his 20 Years of Service to the District	June	Completed	
	Resolution 2021-06 adopting the FY 2021-22 Budget	June	Completed	
	Resolution 2021-22 intention to levy assessments for FY 2021-22	June	Completed	
	Resolution 2021-08 Approving levy assessments for FY 2021-22	July	In Process	
	Resolution 2021-09 Approving FY 2021-22 Professional Development	July	In Process	
<b>Other</b>				
	Yearly Training for Trustees: Ethics and Sexual Harassment Prevention	January-March	In Process	
	Statements of Economic Interests (Form 700)	March	Completed	
	Approval of participation of Jeremy Wittie, General Manager, on the Special Districts Association of Riverside County Chapter Board	March	Completed	

	Approval to purchase pesticide control products	July	In Process	
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# **CORRESPONDENCE**

## Melissa Tallion

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**From:** Oldembour Avalos  
**Sent:** Monday, June 7, 2021 2:17 PM  
**To:** DistrictWideGroup  
**Subject:** Compliment

Hello all,

I got an email from a resident in Palm Springs complimenting Jeff's service on Friday, 6/4/2021 (see email message attached below):

"Jeff came to my home in PS this morning to look for imported red fire ants. He didn't find any, but he gave me a great overview and answered all my questions while he was checking my yard. He was pleasant, courteous, professional, and he even showed some humor. I'm very impressed. Thank you for having a great organization."

Great job Jeff! Way to represent the District.

Thank you,



**Oldembour Avalos**  
Field Supervisor  
Office (760) 342-8287 Cell (760) 541-6978  
[www.cvmosquito.org](http://www.cvmosquito.org)  
**CV Mosquito and Vector Control District**



## Coachella Valley Mosquito and Vector Control District

July 13, 2021

### Staff Report

**Agenda Item:** Informational Item

Semi-annual research reports from the University of California, Davis, University of California, Riverside, Mount Sinai School of Medicine, and the USDA for 2021 – **Jennifer A. Henke, M.S., Laboratory Manager**

**Background:**

The Research Department (Department 600) supports cooperative work with the University of California system and other research institutions for conducting mosquito-borne disease and vector research, optimizing control measures for vectors, and understanding of vector biology. The proposals include examining control interventions to predict when to better time future applications; using mosquito excreta as another method of virus testing for remote locations; using biological control organisms to target adult mosquitoes in storm water systems; examining control strategies for house flies; and examining impacts of irrigation on fire ant control methods. Each of the proposals was approved by the Research Committee and later approved by the full Board of Trustees at the November 2020 Meeting (with one exception noted below).

As described in District’s Research Funding Policy and Procedure, researchers are to provide semiannual progress reports. Due to COVID-19, the researchers have adjusted their work. Two researchers from 2020 have not been able to complete their funded work as they wait for their institutions to re-open. The reports are from the following proposals:

- 1. Icahn School of Medicine at Mount Sinai (Dr. N. DeFelice)**
  - Adaptive policy pathways for West Nile virus management
- 2. UC Davis (Dr. L. Coffey and Dr. A. Ramírez)**
  - Evaluate mosquito excreta as an early warning system for arbovirus surveillance in remote locations
- 3. UC Riverside (Dr. A. Gerry) – funded in 2020**
  - Examine the use of attractive toxic sugar bait stations for house flies associated with melons and peppers
- 4. UC Riverside (Dr. A. Gerry and Mr. D. Popko)**
  - Examine the use of attractive toxic sugar bait stations with fungi and pyriproxifen as the toxic agents in storm drains
- 5. USDA (Dr. D. Oi)**
  - Examine the impacts of irrigation on fire ant baits and monitor fire ant mating flight activity

**Attachments:**

- Reports from Dr. DeFelice, Dr. Coffey, Dr. Gerry, Mr. Popko, and Dr. Oi

# CV Mosquito and Vector Control Progress report – July Board Meeting

July 2021

Adaptive policy pathways for West Nile virus management

**PI** – Nicholas DeFelice

**Team:** Meytar Sorek-Hamer, Mathew J. Ward, Krishna Vemuri

## **Narrative**

West Nile Virus (WNV) is the leading domestically acquired arbovirus, and ecologically informed forecast applications hold promise to help improve management decisions for abatement and public health. Here, we expand our current research of developing a WNV forecast system by integrating some of the most detailed ecological images of the earth's surface ever acquired from space. We hypothesize that integrating micro-ecology at the watershed level (i.e., hydrology and temperature indicators) will provide new insight into vector development and potential risk of WNV spillover, allowing vector abatement districts to enhance their current monitoring network. We have constructed an environmental database and have begun generating statistical models.

**Aim 1.** We will create a geographic database of remote sensing, land use and environmental variables that influence mosquito life cycle. This environmental database will be linked to mosquito monitoring data and adulticide and pesticide use.

**Aim 2.** Develop a probabilistic model using the environmental database and mosquito monitoring data to quantify the sensitivity of individual WNV trap data and identify the likelihood of a false negative.

**Aim 3.** Develop high-resolution risk maps of the probability of WNV infected mosquitoes, to help guide the timing of two key mosquito control interventions: larviciding—insecticide applications targeting mosquito larvae—and adulticiding—insecticide applications targeting adult mosquitoes.

## **Status**

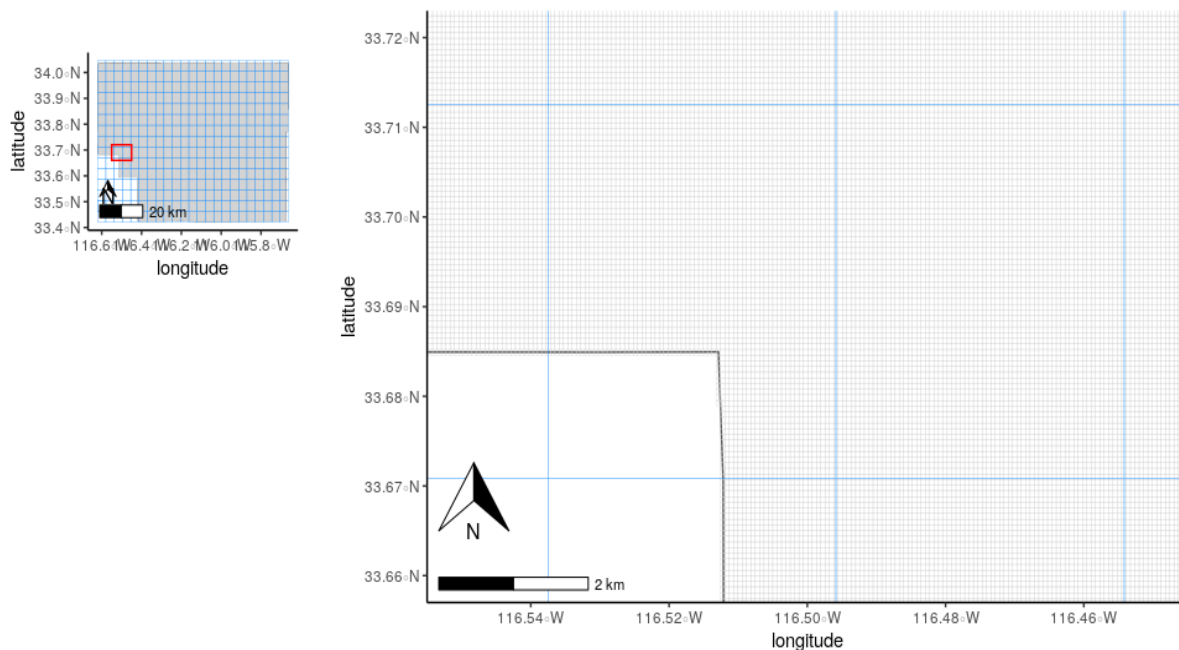
**Aim 1.** Create a geographic database of remotes sensing, land use, and environmental variables that influence vector-borne diseases, in addition to processing local trapped mosquito monitoring data. We have developed a ECOSTRESS grid, 70 m<sup>2</sup> resolution of a hydrology and temperature indicator for Coachella Valley. Additionally, we have downloaded a suite of environmental variables as described below.



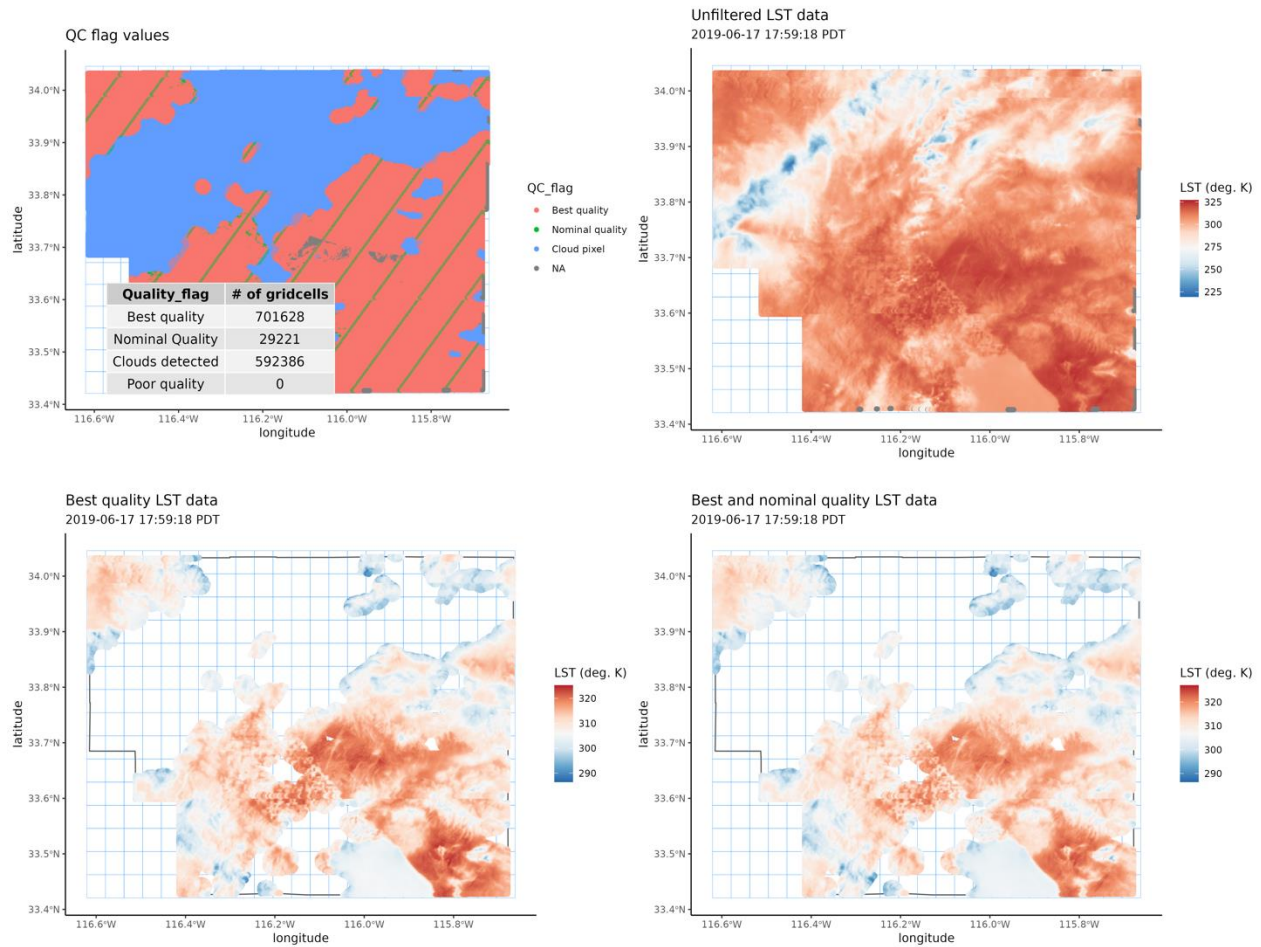
## Obtaining Data:

Our primary data source for environmental data was ECOSTRESS. We obtained ECOSTRESS data for trap abatement areas in Coachella Valley, CA, for the period between July 18<sup>th</sup>, 2018 and May 31<sup>st</sup>, 2021. We obtained approximately 13,000 ECOSTRESS raster files of data over these trap sites from the AppEEARS LPDAAC data repository in the GeoTIFF format. This included Cloudmask data, Land Surface Temperature (LST) data, Evapotranspiration (ET) data, Evaporative Stress Index (ESI) data, Water Use Efficiency data and Emissivity data, and the associated error files and quality control files for levels 2 and 3. For this period, ECOSTRESS had 564 overpasses over Coachella Valley, CA.

We constructed a standard grid for Coachella Valley, CA (Figures 1). We observed that for each ECOSTRESS overpass, a raster file with CloudMask data was always available, as opposed to LST raster files, which were only available for some overpasses. For Coachella Valley, CA, we identified the overpass date and time with the CloudMask file which had the maximum coverage over our area of interest and set the centroids of the pixels of this CloudMask file as the standard grid. Thus, for each area of interest, we were able to obtain a standard grid which had the same spatial resolution as the ECOSTRESS raster files. The standard grid for Coachella Valley had 1,329,503 pixels (Figure 1b).



**Figure 1:** Standard grid of Coachella Valley, with inset showing the area highlighted in red. Blue lines represent the GRIDMET standard grid, 4 Km x 4 Km, and grey lines represent ECOSTRESS, 70m x 70m.



**Figure 2.** Spatial variability of data quality.

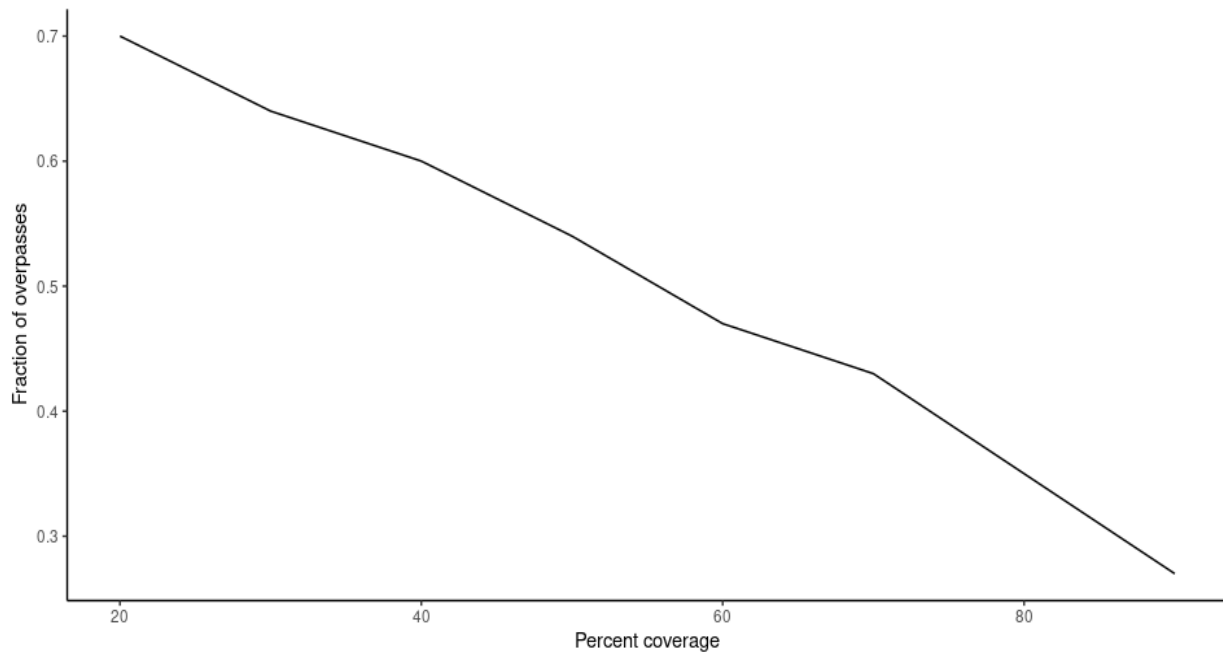
We extracted data from the remaining raster files with this standard grid as reference. The data for a given ECOSTRESS product from all overpasses was saved as a CSV flat file and an FST file.

We focused on LST and ET data as these are the sources of the environmental state variables for our forecasting model. Occasional extreme values for LST were observed on preliminary plotting, suggesting errors in the GeoTIFF files. In order to minimize these implausible observations, we tested applying various quality control parameters, including: 1) applying the SDS QC flag for L2 products, 2) selecting for only those pixels which also have an ET value identified, and 3) selecting for pixels with an emissivity value in band 5 greater than or equal to 0.95, which ensured selecting only cloud-free pixels (Figure 2).

**Table 1.** The number of overpasses between July 18<sup>th</sup>, 2018 and May 31<sup>st</sup>, 2021 containing the product of interest.

Product	Coachella Valley, CA			
	All years	2018-19	2020	2021
LST	557	229	210	118
LST Error	564	235	211	118
QC	564	235	211	118
ET	257	110	95	52
Emis. 5	556	228	210	118

We found that selecting for the pixels which had a QC flag of “best quality”, or “nominal quality” attached to them eliminated a large proportion of the implausible values of LST that were observed, while also retaining most of the data. For ET, we focused on processing and using the instantaneous ET product, since this also incorporated soil ET and canopy ET observations in any given overpass (Table 1). Additionally, we evaluated the proportion of the region of interest that each filtered figure captured (Figure 3). From the ECOSTRESS mission we are able to obtain an updated image of the environmental conditions approximately every 10 days.



**Figure 3.** The fraction of overpass observations and the proportion of the observed abatement district that was captured with a best or nominal quality observation.

**Critical Periods of Viral Amplification:**

WNV vector population amplification coincides with rising atmospheric temperature and relative humidity. Traps positive for infected vectors in Coachella Valley are traditionally

observed from July through September. The critical period of viral amplification has been documented to be early in the season (April – July) where environmental conditions have been correlated with the overall total number of infectious mosquitoes observed for a season. For this reason, we separately examined data availability between the first half of the WNV season, April – July, and second half, July – September, to see if we can identify changes in environmental conditions during the pre-amplification period of WNV for each of the three years of available ECOSTRESS data (Table 2).

**Table 2.** The number of overpasses available in the first and second half of the mosquito amplification season for Coachella Valley, CA, from 2018 to 2020.

Year	Early season (April 1 <sup>st</sup> – July 15 <sup>th</sup> )			Late season (July 16 <sup>th</sup> – October 1 <sup>st</sup> )		
	All LST images	LST images QC = Best quality /Nominal quality	ET inst	All LST images	LST images QC = Best quality/Nominal quality	ET inst
2018*	3	3	1	44	44	20
2019%	38	37	19	53	49	18
2020	63	17	33	41	29	22
2021^	51	48	26	-	-	-

\*Data in 2018 for the critical period is limited since the ECOSTRESS instrument was launched on June 29, 2018,

%Data in 2019 is limited due to instrument malfunction between March 15<sup>th</sup> and May 24<sup>th</sup>.

^Data in 2021 is only up until May 31<sup>st</sup> 2021

### **GRIDMET Data & NLDAS Data - Different Spatial Scales:**

As secondary data sources, we also downloaded gridMET (METDATA) data and National Land Data Assimilation System phase 2 (NLDAS-2) data from NASA GES DISC. NLDAS-2 is a Land Surface Model dataset, at an hourly timestep and is available at ~13 km resolution. The variables obtained from NLDAS-2 were: Modelled LST, modelled atmospheric temperature, soil moisture at 10 cm depth, specific humidity, potential evapotranspiration and hourly precipitation. NLDAS-2 data is available from 1979 onwards. Data from 1980 to 2000 was downloaded to define the climatology of the region; then, 2006 through 2020 was downloaded to look at the current meteorological conditions and vector infection prevalence/population dynamics. GridMET is a high spatial resolution modelled dataset output by the Climatology lab of John Abatzoglou at the University of California, Merced. GridMET assimilates inputs from PRISM and NLDAS-2 outputs using climatological aided interpolation to output data on climatological variables at a spatial resolution of 1/24<sup>th</sup> of a degree (~4KM) and at a

temporal resolution of 1 day and data on the following variables was downloaded: daily maximum and minimum temperature, daily precipitation, daily maximum and minimum relative humidity, daily specific humidity and the 5-day Palmer Drought Severity Index.

**Trap information from Coachella Valley:** Mosquito Abatement districts carried out weekly mosquito surveillance subject to budgetary constraints, the severity of WNV, mosquito nuisance problems, and weather. Coachella Valley Mosquito abatement districts has an extensive mosquito monitoring network that records mosquito populations in each trapping region, and other details such as species, number of adults and females, and the viruses these populations carry, which, when combined, provides a detailed picture of the spatial distribution of WNV and the regional vectors.

Mosquito viral testing data for WNV is available from 2006 to present. The number of pooled mosquito samples varied by year between 2018-2020, years when ECOSTRESS was active (Table 3). Lastly, in addition to mosquito trap data, information related to pesticide usage during the study period was also obtained. Larvicide data, is geocoded, meaning we can assign pesticide exposure to traps. The data is also standardized, through pesticides named and their concentrations recorded, uniformly from 2016 to 2020.

**Table 3.** Mosquito monitoring network for 2018 - 2020 in Coachella Valley, CA.

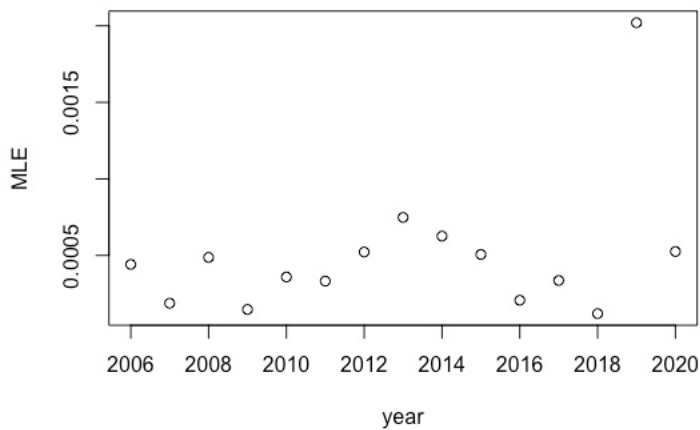
Year	Coachella Valley	
	# Traps	Average # pools per week
2018	245	150
2019	529	152
2020	356	118
2021 (year to date)	203	169

**Aim 2.** Model mosquito and virus response to the hydrological variability in the ecosystem.

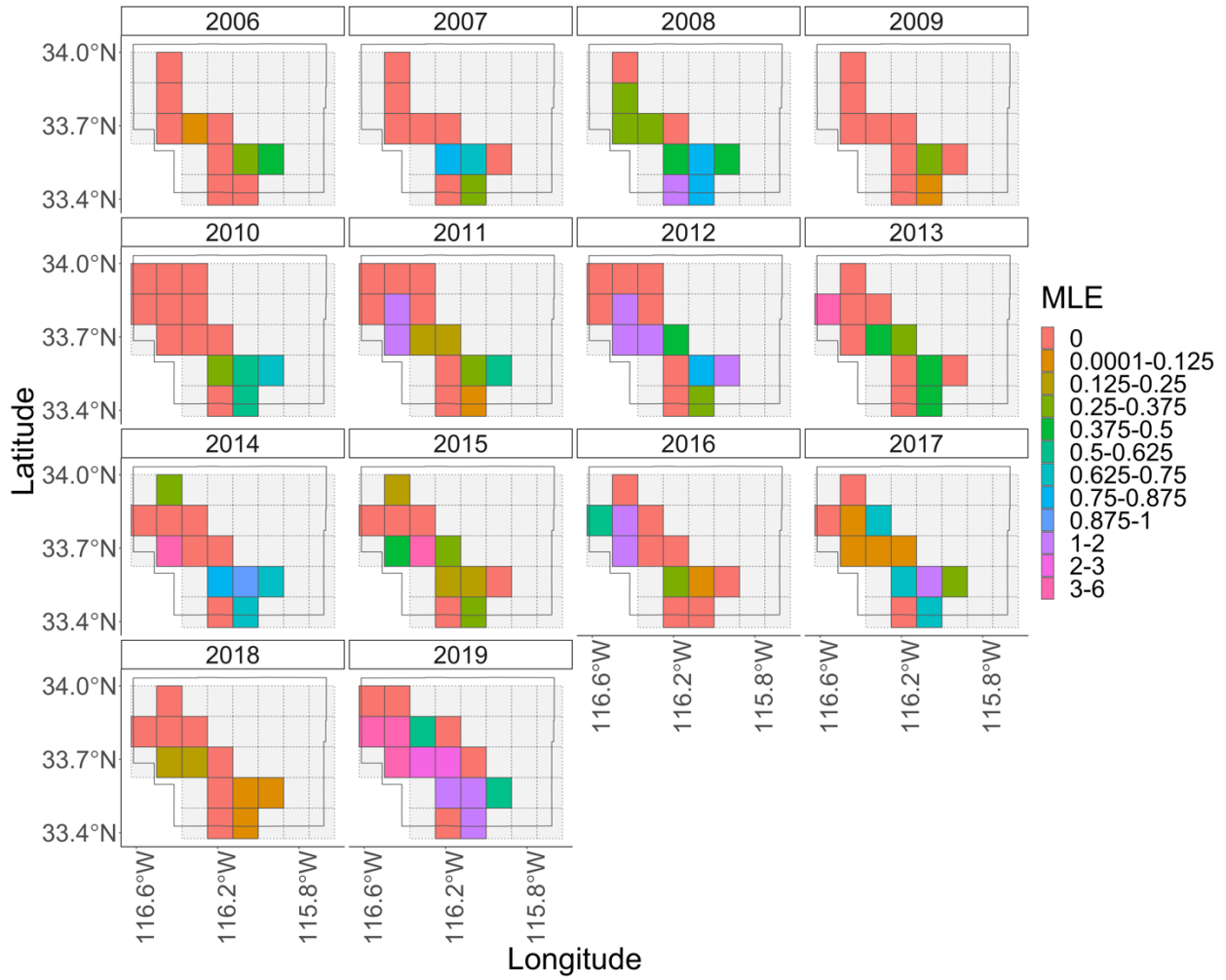
Building on Task 1, we will begin generating environmental groupings from a combination of hydrology and meteorological conditions to identify the most relevant combination of environmental conditions for viral amplification. We are in the early stages of developing a more robust inference system able to improve our current understanding of the current spatial distribution of WNV activity and improve the effectiveness of public health interventions. Mosquito trapping data was used to calculate the maximum likelihood estimate (MLE) of the WNV infection rate at the annual time step and different remote sensing platform scales. Model testing is currently underway using remote sensing variables including temperature, precipitation, specific humidity and evapotranspiration from NLDAS, HRRR and ECOSTRESS platforms (Table 1). *Culex* species are currently aggregated, but we plan to disaggregate between *Cx. quinquefasciatus* and *Cx. tarsalis* for further model testing.

The MLE indicates variability among years and geospatial areas across the 15 years under analysis (Figures 4, 5), while also demonstrating an average peak infection rate in Coachella Valley between weeks 26 - 38 each year (Figure 6). This is in contrast with mosquito abundance data where we observe distinct bimodal peaks on either side of the peak in infection rates (Figure 6). Additionally, mapping the evapotranspiration (ET) measurements from ECOSTRESS shows distinct seasonality as well as consistent hydrology indicative of agricultural irrigation that may provide sources for mosquito production and WNV amplification during the hot and dry summers of the Coachella Valley (Figure 7). This is made apparent by the darker blue areas that indicate consistently higher ET throughout the year while the ET in the rest of the valley fluctuates.

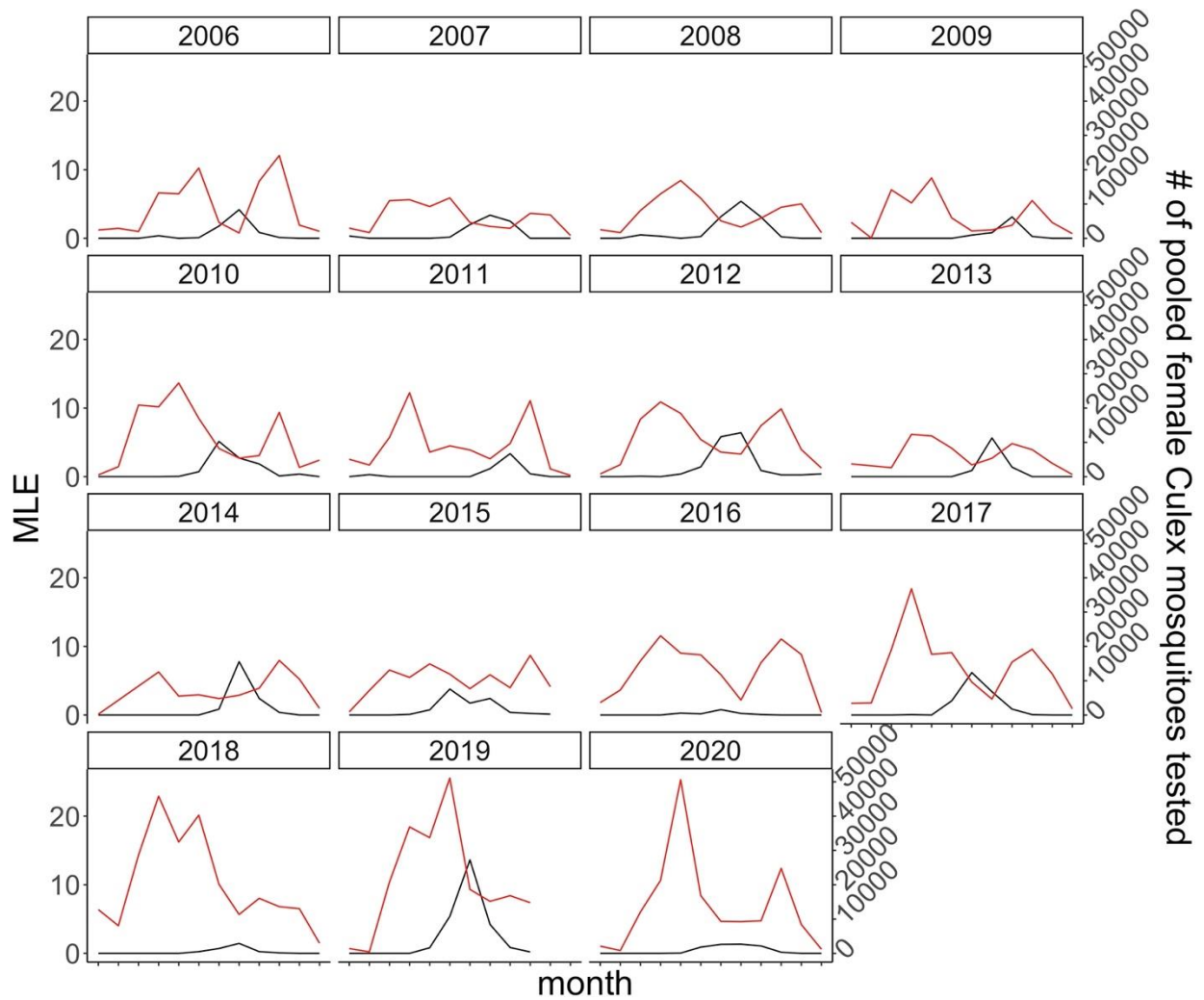
ECOSTRESS's near real-time space-based remote sensing observations provide a new set of highly resolved fine-scale environmental observations that may be used to further inform existing and future WNV forecast models. The inclusion of ECOSTRESS' high spatial resolution (70 m<sup>2</sup>) and highest repeat frequency (1-5 days) thermal infrared data in the state space model should provide structure and allow us to capture tipping points within micro-ecosystems that explain the observed biology. The model-inference system can then be used to better understand the spatial variability of amplification and the zoonotic amplification potential risk of human spillover events in near real-time. This work is an initial step in the development of a statistically rigorous framework for spatially resolved indicators of WNV risk.



**Figure 4.** WNV mosquito infection rates (MLE) for each year of available data from the Coachella Valley, CA.

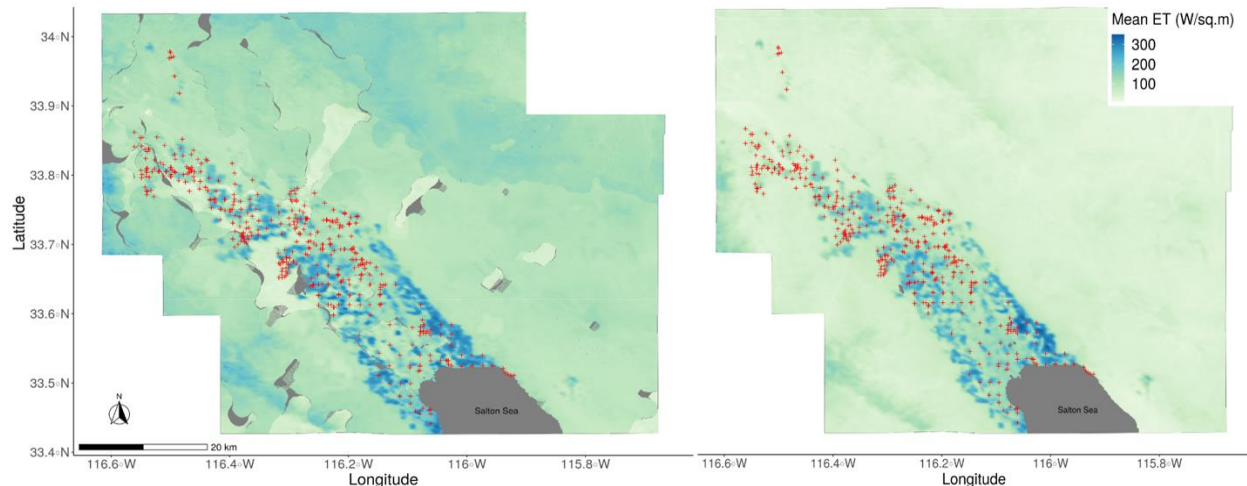


**Figure 5.** Historical annual mosquito infection rates (MLE) stratified by NLDAS grid across the Coachella Valley, CA.



**Figure 6.** Monthly infections per 1,000 of *Culex* mosquitoes tested (MLE) (black) and the total number of female *Culex* mosquitoes tested (red) in the Coachella Valley, CA for the years 2006 - 2020. *Cx. quinquefasciatus* and *Cx. tarsalis* are combined.





**Figure 7.** Mean ET ( $W/m^2$ ) as measured by ECOSTRESS in the Coachella Valley, CA during the early season (March - May) and late season (June - Aug) with trap locations (red x) for 2019.

WNV exhibits considerable inter-annual and geographical variation making the effective allocation of public health resources challenging, highlighting the need for accurate forecasts of WNV transmission. Additionally, mosquito control interventions are traditionally informed by trap-level monitoring. By integrating trap-based surveillance with fine-scale remote sensing, we hope to provide better spatial resolution for more informed control efforts. Remote sensing products such as ECOSTRESS, which provide near real-time fine scale observations of potential mosquito sources and WNV amplification sites hold the potential to provide the information needed to facilitate highly targeted and effective mosquito control interventions. Such decision support tools would help stakeholders target control of infectious mosquito populations and activate public health interventions in a more timely and economical fashion.

## Deliverables and accomplishments

### Year 1:

- Downloaded and processed 564 overpasses for Coachella Valley, CA between July 18<sup>th</sup>, 2018 and May 31<sup>st</sup>, 2021.
- Downloaded and processed 227 observations in the first half of the 2021 West Nile virus outbreak season of best or nominal quality observations over Coachella Valley, CA.
- Presentation at annual MVCAC & AMCA meetings
  - Ward, Matthew J., Meytar Sorek-Hamer, Jennifer Henke, Krishna Vemuri, Nicholas DeFelice. Developing high-resolution risk maps of West Nile virus in Coachella Valley using ECOSTRESS data. Accepted, (Extended Abstract) 2020 MVCAC Annual meeting proceedings.

**Future prospects:**

Over the next year and a half, we will build probabilistic models off the database we constructed to facilitate making environmentally informed spatial risk maps. We are in the initial phase of running models to develop downscaled observations on WNV and understanding how meteorological conditions are most appropriate for different regions of Coachella Valley to amplify WNV.

**Table 1. Project timeline**

	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Task #1</b>								
Download and process environmental data	[Redacted]							
<b>Task #2</b>								
Develop downscaled observations of WNV	[Redacted]							
Feasibility study	[Redacted]							
Feasibility study Complete	[Redacted]							
<b>Task #3</b>								
Forecast at fine spatial scale	[Redacted]							
Verify decision support system	[Redacted]							
Verify decision support system Complete implement in real time	[Redacted]							

## Evaluating mosquito excreta as an early warning system for arbovirus surveillance in remote locations

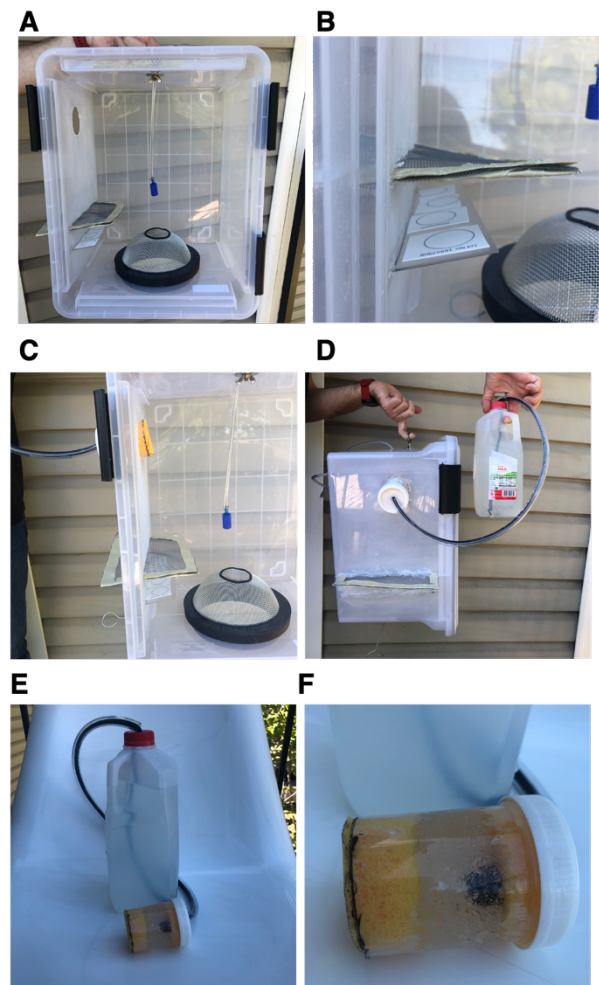
CVMVCD mid-year progress report / June 2021

A. Ramírez and L. Coffey

**Aim 1:** Develop a robust protocol for the collection of mosquito excreta and saliva on nucleic-acid preservation cards using passive box traps suitable for long term deployment in remote and arid locations

The evaluation of detection of viral RNA in mosquito excreta deposited on FTA® nucleic-acid preservation cards stored in arid conditions of high heat and low humidity will inform 1) if using the method for remote surveillance in the Coachella Valley is feasible and 2) the optimum deployment schedule of the traps to avoid RNA degradation. For this, we exposed 5- to 7-day old female *Culex tarsalis* mosquitoes to sheep's bloodmeal containing  $10^5$  PFU/mL St. Louis encephalitis virus (SLEV; IMP 570). On day 7 post-exposure, mosquitoes were to be transferred to individual containers for excreta collection. Unfortunately, we encountered high-mortality, probably associated with cold knock-down. Because of this, we plan to repeat this experiment in July 2021. We are currently waiting for adult mosquitoes from the colony.

Although in the initial project design we proposed to evaluate viral RNA stability in mosquito excreta deposited on FTA® cards before conducting any trap modifications-because of the setbacks described above, we decided to start conducting both activities in parallel. Based on the design previously described by Meyer in Australia, we built prototype A of the modified Passive Box Trap (PBT) to collect mosquito excreta (Figure 1). The modified trap contains two honey-soaked filter paper cards held by magnets on top of the trap to act as a feeding substrate (not shown). Two slits on the side (A-B) secure an FTA® card holder for excreta collection and insect screen to prevent dead mosquitoes from falling on the cards. The FTA® card holder is made of an acrylic sheet while the screen consists of a fiberglass standard screen (Phifer) over a frame made of stainless-steel woven wire mesh. The FTA® card holder and mesh are placed beneath the humidity chamber opening (C) of the external water reservoir (D). The water reservoir is essential since it provides humidity to improve mosquito survival, which increases the chances of mosquitoes feeding and excreting on the substrate thus increasing the chances of viral detection. The external water reservoir consists of a 0.5-gallon plastic bottle with water, connected by capillary action to the humidity chamber by  $\frac{1}{4}$ " nylon rope covered in  $\frac{1}{2}$ " clear vinyl tubing to prevent evaporation (E). The humidity chamber is made of a 100 mL specimen collection jar with its bottom removed. Although the



**Fig 1.** PBT for excreta collection- prototype A

original design uses multipurpose or chamois sponges to maintain humidity in tropical conditions, we have included water storing crystals (Miracle-Gro) between two pieces of multipurpose sponge (F) expecting to increase humidity and reduce desiccation further. Currently, we are testing the performance of the humidity chamber outdoors in summer conditions in Sacramento. Based on these results, we expect to conduct initial trials locally later in the season which will inform further trap modifications.

**Aim 2:** *Deploy the traps developed in Aim 1 in remote locations around the Salton Sea in COAV for arbovirus surveillance and perform a cost benefit analysis.*

Because of the setbacks encountered with Aim 1, we request to put this component of the project on hold using no-cost extension mechanism. We proposed to wait until next season to deploy the modified traps around the Salton Sea, starting from March. Therefore, most of our efforts for the field component of this project will occur in the summer of 2022.

## Progress Report - June 2021

### *Strategies for Using Toxic Sugar Bait to Control House Flies associated with Agricultural (Melon/Pepper) Production*

Alec C. Gerry, Ph.D.

Department of Entomology, University of California, Riverside, CA 92521

**Objectives:** Develop method for control of house flies in agricultural fields using bait stations to eliminate risk of insecticidal exposure to food crops or to beneficial honeybees, while also reducing quantity of insecticide needed to achieve appropriate level of control.

**Status Update (COVID Restrictions):** Funding for this proposal was received in February 2020 with initial work to develop laboratory methods for testing fly attraction to bait materials beginning shortly thereafter. However, this work was soon ceased in response to the COVID pandemic when UC Riverside initiated research restrictions on all non-critical research in March 2020. These restrictions limited researcher (and especially student) access to research laboratories and university vehicles. In response to these UCR restrictions, we halted work on this research project and reduced our fly colonies to maintenance levels to reduce the need for lab members and students to be on-campus. Year 1 funding for this project has been preserved and use of these funds was extended through 2021 following my request to CVMVCD for funds extension. I expect to restart work on this project when the university allows for a return to normal research activity, including student return to campus.

At the moment, it is anticipated that the State of California will authorize a return to normal business activities in mid-June. Following this announcement by the State, I expect that UCR will likely rescind many of the current research restrictions. In anticipation of this, we have started a new field house fly colony to be used for testing bait materials with fly numbers being sufficient to begin work again on bait testing in July 2021. Using colony flies, bait and trap design testing will continue through summer and into early fall in preparation for subsequent field studies to test baits and methods on wild flies in the Coachella Valley.

In the Coachella Valley, house fly activity peaks during cooler months of the year and we anticipate conducting mid-late fall field trials in the Coachella Valley at locations identified with sufficient fly numbers to make treatment comparisons. I will work with our CVMVCD collaborator (Dr. Kim Hung) to identify sites that will be appropriate for field trials during the fall period.

Thus, if COVID in southern California continues to decrease, and the State/UCR announce relaxing of restrictions as is anticipated, then this funded research project will resume this summer with field trials expected in fall. We thank the District Board for their patience as we comply with our university-mandated research restrictions that stopped all research projects that research labs at UCR could reasonably stop. And we look forward to restarting this work soon.

# Progress Report, June 2021: Attractive Toxic Bait Station Control of Mosquitoes in Underground Storm Drain Systems of the Coachella Valley

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## Objectives:

The goals of this project are to investigate the efficacy of stations with attractive toxic sugar bait (ATSB) to transmit and promote mosquito-propagated dissemination (autodissemination) of chemical and biological control agents targeting mosquitoes in underground storm drain systems (USDS). We proposed (i) to develop an ATSB design that effectively attracts adult *Culex quinquefasciatus* mosquitoes and exposes them to control agents via contact and/or ingestion under laboratory conditions, (ii) to assess lethal and sublethal effects on mosquito life stages in laboratory exposure assays with an ATSB-based entomopathogenic fungus, biocidal/reproductive sterilizing agent, and/or insect growth regulator (IGR), and (iii) to determine the efficacy of multiple ATSB-based control agents against mosquito adults and immature stages at developmental sites in release and recapture trials under laboratory and field conditions.

## USDS Field Trial: Spring 2021

### Experimental Design and Methodology

A total of 12 bait stations were deployed singly in 12 USDS chambers at Coachella, La Quinta, and Palm Desert cities from March to April 2021 (Figure 1). A single bait station of the same treatment was placed in each of two USDS chambers less than 20 meters apart, but with separate manhole entrances. USDS-ATSB pairs were separated by USDS-Control pairs by greater distances (average = 200 meters) intended to limit adult mosquito movement between treatments. An additional 6 bait stations were situated aboveground, one ATSB and one control per city-site, at metal stakes located within 20 meters of USDS with the same bait treatment.

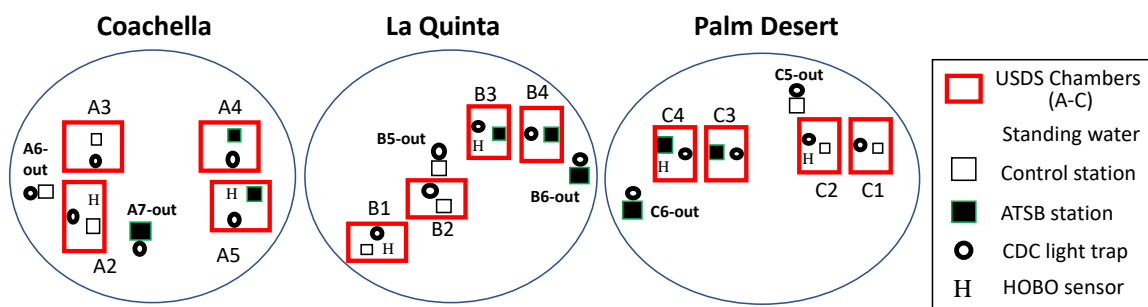


Figure 1. Experimental design for the field trial during spring 2021. Control = green attractive sugar bait, no surface-based insecticide. ATSB = red attractive sugar bait with 1% boric acid and *Beauveria bassiana* spray. ABC-out designates aboveground sites. Note: figures and distances not drawn to scale.

Bait stations were modified for the spring 2021 trial in four key ways from previous designs (Annual Reports, 2019 and 2020). First, bait was added to wash tubs to create an open reservoir (1000 mL) intended to take advantage of past findings that leaky toxic bait dispensers were associated with a large number of dead, bait-dyed adults in wash tubs (Annual Report 2020). The open reservoir was also expected to ameliorate the problem of mosquito larval development, which plagued wash tubs flooded by USDS run-off (Annual Report 2019-2020), since sugar bait solutions appear to prevent survival of *Culex quinquefasciatus* larvae (laboratory data not shown, Winter 2021). Plastic water absorbing crystals (saturation ~ 12 grams per 1L) were added to the open bait reservoir to prevent volume loss during transport and slow evaporation rates.

Second, the mesh feeding membrane of the bait dispenser was inverted and depressed by 2 cm (height = 7 cm) compared to the past design (Figure 2), with the underlying stack of bait-saturated sponges lowered to accommodate the new height. This more compact arrangement enhanced moisture retention, bait uptake and overall mortality of *Culex quinquefasciatus* in the laboratory (data from winter 2021 not shown). The concave design also acted as an effective splash guard and facilitated rapid recharge of bait reservoirs on-site.

Third, *Beauveria bassiana* was applied as a spray on mosquito contact surfaces in place of a dry powder moat surrounding the feeding membrane (Annual Report 2020). Compared to wet applications, dry fungal powder was linked to reduced feeding on and efficacy of toxic baits against *Culex quinquefasciatus* adults in the laboratory (Winter 2021, data not shown). A suspension of *Beauveria* at the maximum label concentration (5.4 g BGWP per 1500mL stock solution) was sprayed evenly across bait station surfaces with potential mosquito contact. A pressurized hand sprayer (Flo Master, 1.75 LT, Model 56HD, Root-Lowell Manufacturing, MI, USA) was calibrated to deliver about 90 mL of fungal suspension in 20 seconds (50 pumps) to approximate the manufacturer's guideline for maximum application rate by surface area.

Fourth, pyriproxyfen was excluded from all stations, given bait stations have yet to reliably deliver the IGR to control mosquito development sites (Annual Report 2020), and potential interactions with adulticides that may alter efficacy require further preliminary investigation.



Figure 2. Bait dispensers with sealed reservoirs (maximum volume = 1700 mL) accessible by a hollowed-out mesh feeding surface used in spring 2021 (right) compared to the previous design (left).

A single CDC suction trap with UV light (no carbon dioxide) was deployed overnight once a week at each below- and above-ground station. Live and dead adults in CDC traps were

identified and enumerated by species, sex, reproductive state, and presence of bait dye. These characteristics were determined visually in live adults after aspiration into a 50-dram vial (maximum  $n = 30$  individuals) and under a dissecting microscope for dead adults. Trap catches with hundreds of adults were subsampled in 3 replicate vials (maximum number = 90 adults). Mortality and fungal infection rates of live cohorts were assessed up to one-month post-collection using laboratory procedures outlined previously (Annual Report 2018).

Dipper cup sampling was restricted to USDS with sufficient standing water, and included triplicate samples on all dates from all four USDS at Palm Desert and a single USDS-Control at Coachella (A2). A single dipper sample was collected from a transient shallow pool in the USDS-ATSB at La Quinta (B3) two weeks into station deployment. Dipper samples were concentrated into 20-dram vials, preserved on-site with 95% ethanol, and immature mosquitoes with associated invertebrates were catalogued by microscope by standard methods.

Both adult and immature samples were collected weekly during a 6-week period, beginning one week before bait stations deployment and ending one week after bait station removal. The physical condition of bait stations was surveyed 1, 2, and 4 (post-removal) weeks after deployment. Dead mosquitoes inside bait dispensers and washtub reservoirs were removed and sorted by species, sex, reproductive state, and presence of bait dye. Dead specimens with dry, intact bodies were monitored for up to 2 weeks for fungal infection with the same procedures used for adults collected from CDC traps.

Bait dispensers were weighed and recharged on week 2 with the appropriate freshly-prepared bait treatment (toxic red or non-toxic green). Wash tubs were also recharged with fresh bait; however, tubs could not be easily weighed and bait volume additions were based on visual estimates of tub volume. Ultimately, four liters were prepared for each bait treatment and at most 500 mL of bait was added to any single reservoir to have enough volume for all 36 reservoirs (18 dispensers and 18 washtubs). Dispensers were recharged to weigh at least 1500 grams, which was determined in the laboratory to represent about 1000 mL of bait, a volume below which bait feeding membranes can begin to lose efficacy due to drying. ATSB reservoirs at USDS-A5 (Coachella) appeared to increase in volume over time, probably due to periodic street-based run-off, and ultimately overflowed by study's end. The A5 station was therefore excluded from comparisons of bait stations by location and bait treatment when appropriate.

Mold growth on dispenser membranes and/or within washtub reservoirs was qualitatively rated (1 = none, 5 = thick) and mechanically disrupted if possible, to inhibit growth of biofilms that can reduce overall station efficacy (laboratory data not shown). After USDS removal, covered washtubs with bait dispensers were sealed in black garbage bags and transported to the laboratory to measure final bait volumes in dispensers and washtubs.

HOBO sensor units (Onset Computer Corp., Bourne, MA) were deployed inside USDS six days after bait deployment until the study ended (April 1-30) to record hourly temperature and humidity (Figure 5 and Table 3). A total of 6 HOBO units, one per treatment per site, were hung from hooks located approximately in the horizontal center of each underground chamber, one meter above the solid bottom, and on the same side as the manhole access cover. Whenever possible, sensors were placed at dry spots likely to be spared from direct contact with street run-off. In contrast to other sensors, the sensor at Coachella USDS-A5 was positioned opposite to the manhole to avoid a ladder that travelled down the center of the access wall. USDS measurements



were compared to those of an aboveground weather station closest in average proximity to all sites (CIMIS: La Quinta II, [www.cimis.water.ca.gov](http://www.cimis.water.ca.gov), accessed May 26, 2021).

On March 30, 2021 (Day 5 of bait deployment), CVMVCD personnel applied Natular G30 (spinosad) to curb excessive mosquito production from the Coachella USDS with standing water (Control-A2). This was reported to be a one-time treatment that, based on the label, was expected to be efficacious for about one month given typical field conditions.

Kruskal-Wallis ANOVA (SYSTAT version 9, SPSS Inc., 1998) analyzed non-transformed abundance of adult and immature mosquitoes constrained by experimental variables. The one-way, non-parametric test was selected given low replicate numbers and high variance among samples. Adult abundance (females and males) in CDC catches (Table 1) were grouped by trap position (USDS vs. aboveground) and, for USDS traps only, sample week, station presence (absent vs. present), larviciding (Coachella only: before vs. after), city-site, and bait treatment (control vs. ATSB). Immature mosquito abundance in dipper cups (Table 2) was differentiated with similar-yet-fewer comparisons than performed for adult data due to sampling being restricted to USDS with permanent water reservoirs. For samples repeated over time and categorized by bait treatment and/or city, Kruskal-Wallis ANOVA was applied to each individual date and results were grouped by significance levels when appropriate.

### ***Results: Adult Mosquito Traps***

CDC traps averaged 73 adults per trap night in USDS chambers ( $n = 7843$ ) and 2 adults per trap night at aboveground sites ( $n = 75$ ). Nearly all identified mosquitoes were *Culex quinquefasciatus*, although seven *Culex tarsalis* females were also captured (six from the last sample date). *Aedes* spp. was absent from CDC traps. The sex ratio of *Culex quinquefasciatus* adults was slightly skewed, with fewer females ( $n = 3,569$ ) than males ( $n = 4,340$ ). Females were primarily without a visible egg batch or bloodmeal (79%); although gravid (16%), absent-body (3%), and bloodfed (2%) specimens were not uncommon. Females were the dominate sex at La Quinta (90% of total) and gravid/bloodfed specimens were more than twice as abundant than non-gravid specimens. Females were also the majority at Coachella (66% of total), although the proportions of gravid/bloodfed and non-gravid specimens were similar. In contrast, males were the majority at Palm Desert (60% of total) and gravid/bloodfed females were rarely collected (2% of total).

Adult mosquitoes with red-dyed bodies indicative of toxic bait ingestion were observed in 1% of total USDS-ATSB counts (two females and four males) on Days 1, 7, and 28. Adult mosquitoes with green-dyed bodies indicative of non-toxic bait ingestion were observed in 2% of total USDS-Control counts (104 females and 49 males) and mean prevalence increased steadily by more than three-fold, Day 1-28. No toxic bait ingestion was evident in Control-USDS and vice versa.

USDS-Control consistently collected more adult mosquitoes, regardless of sex and reproductive state, than USDS-ATSB at all sample sites (Figure 3 and Table 1). This gap averaged 5-fold before, 10-fold during, and 17-fold after bait station deployment; however, the 5-fold differential before bait station deployment was not statistically significant. Over time,

USDS-Control mosquito abundance generally increased, while USDS-ATSB mosquito abundance generally decreased or stayed constant. With pooled control and ATSB numbers, sample week was not a significant predictor of adult mosquito abundance during sampling.

City was a significant predictor of USDS adult totals and on average: Palm Desert > Coachella > La Quinta. In the specific period of bait deployment, Palm Desert and La Quinta catches generally increased and were on average 10-fold greater in USDS-ATSB compared to USDS-Control. Conversely, Coachella mean abundance generally declined over time when baits were on-site, even more so within USDS-ATSB (17-fold) than USDS-Control (2-fold), and overall averages were 3-fold greater in USDS-ATSB than in USDS-Control. Coachella USDS averages were lower than expected given numbers before station deployment were similar to Palm Desert USDS and both cities historically produce similar adult counts (Annual Reports 2018-2020). Stagnant Coachella production coincided with the larvicide application in A2-USDS on March 30; although overall adult abundance did not differ statistically before and after the larvicide event. A rise in average mosquito productivity was evident the week after bait removal for all cities, with an especially sharp increase in numbers at Coachella USDS traps.

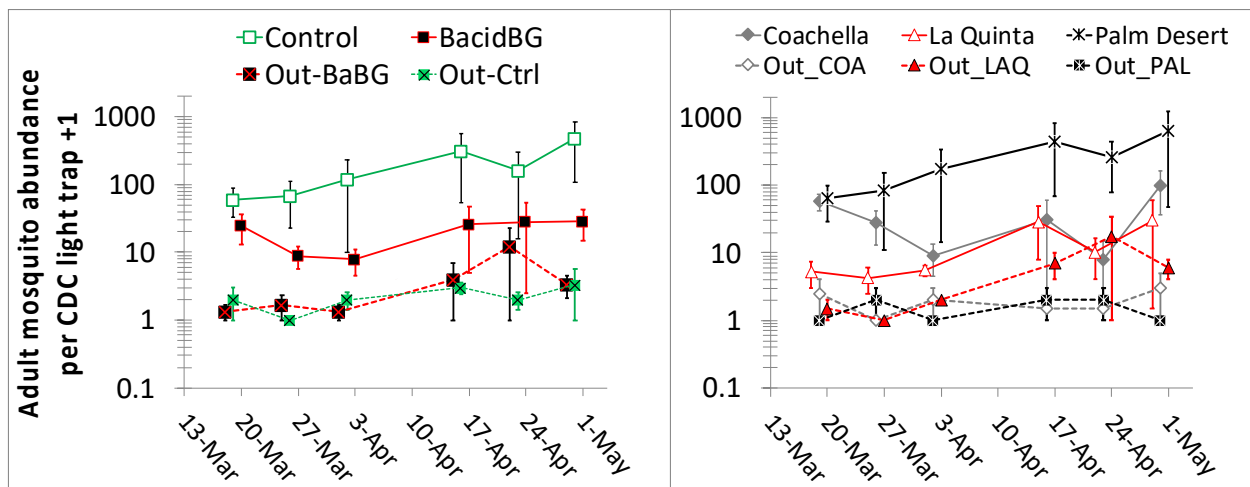


Figure 3. Mean ( $\pm$ SE) log<sub>10</sub> scale abundance of native adult mosquitoes from CDC traps inside USDS and at aboveground sites (Out) stratified by bait station treatment (left) and city-site (right). COA = Coachella, LAQ = La Quinta, and PAL = Palm Desert.

Aboveground traps infrequently collected adults at low abundances and were not appreciably linked to bait treatment, city-site, or sample date. Nearly half (32 males, 1 female) of all aboveground mosquitoes were captured week 4 in a single trap (La Quinta, B6, toxic station)

Fungal infection was monitored on a subsample of more than 3,000 mosquitoes, 30% of which were captured alive, from control ( $n = 1,289$  females and 598 males) and ATSB ( $n = 642$  females and 551 males) treatments. *Beauveria bassiana* infection was detected in a single female mosquito that was captured alive on Day 1 of deployment at USDS-ATSB in Palm Desert (C4).

Table 1. Kruskal-Wallis ANOVA of adult mosquito abundance in USDS-CDC light traps. †  $P < 0.05$  on most dates; however, exceptional dates with maximum  $P$ -values are included in the reported range.

Grouping Variable (s)		Sample Date(s)	Female (total)		Female (gravid)		Male		Total Adults	
			Statistic	P-value	Statistic	P-value	Statistic	P-value	Statistic	P-value
USDS v. Outside			U ≥ 59.0	≤ <b>0.03</b>	U ≥ 53.0	< <b>0.08</b> †	U ≥ 50.0	< <b>0.17</b> †	U ≥ 54.0	< <b>0.09</b> †
USDS only	Week	All	H = 4.70	0.454	H = 5.61	0.347	H = 2.75	0.739	H = 4.33	0.503
	Station Presence		H = 1.81	0.404	H = 4.03	0.133	H = 0.90	0.639	H = 2.08	0.353
	Larvicide		(COA)	U = 45.0	0.243	U = 39.5	0.131	U = 62.5	0.925	U = 50.5
	City	Before	H = 6.61	<b>0.037</b>	H = 5.26	0.072	H = 7.24	<b>0.027</b>	H = 6.09	<b>0.048</b>
		Wk 0,1,3	H < 5.1	> 0.08	H < 2.34	> 0.310	H > 5.65	< <b>0.06</b> †	H < 5.7	> 0.057
		Wk 4	H = 7.53	<b>0.023</b>	H = 1.81	0.405	H = 7.93	<b>0.019</b>	H = 8.23	<b>0.016</b>
		After	H = 2.33	0.313	H = 0.09	0.956	H = 6.81	<b>0.033</b>	H = 3.12	0.211
	Bait (Control v. ATSB)	Before	U = 16.0	0.747	U = 16.5	0.809	U = 17.5	0.935	U = 16.0	0.747
		Wk 0,1	U < 16.0	> 0.370	U < 15.0	> 0.330	U < 17.0	≥ 0.330	U < 15.0	> 0.290
		Wk 3	U = 1.00	<b>0.006</b>	U = 0.50	<b>0.005</b>	U = 10.0	0.197	U = 6.00	0.054
Wk 4		U = 11.0	0.260	U = 8.00	0.094	U = 14.0	0.514	U = 12.0	0.334	
After		U = 4.00	<b>0.025</b>	U = 2.00	<b>0.009</b>	U = 12.0	0.330	U = 5.00	<b>0.037</b>	

On-site bait dispenser inspections at week 1 revealed a single dead male with red dye in a USDS-ATSB at Palm Desert (C3). No dead mosquitoes were evident during week 2 inspections. Week 4 inspections (post-removal) revealed a total of 61 dead adults with red dye (20 females, 41 males) from inside three ATSB dispensers (USDS: C3/C4/B3). An additional 24 dead mosquitoes (12 females and 12 males) were found suspended in four of twelve USDS-ATSB washtubs (Palm Desert C3/C4 and La Quinta B3/B4). *Beauveria bassiana* infection was detected in one male cadaver collected from inside an ATSB dispenser (Palm Desert C3). No dead mosquitoes were evident in control dispensers and washtubs.

### **Results: Immature Mosquito Collections**

More than 5,000 immature mosquitoes were collected from dipper samples of permanent water reservoirs at all four Palm Desert ( $n = 84$ ), one Coachella ( $n = 21$ ), and one La Quinta ( $n = 1$ ) USDS. Immature mosquito stages consisted of 58% young (1<sup>st</sup>/2<sup>nd</sup>) larvae, 35% mature (3<sup>rd</sup>/4<sup>th</sup>) larvae, 6% pupae, and < 0.1% egg rafts. All immatures were identified as *Culex quinquefasciatus*.

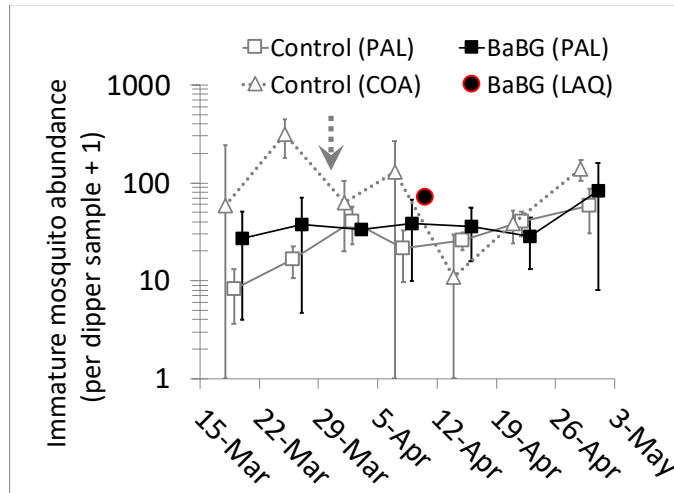


Figure 4. Mean (PAL  $\pm$ SE, COA  $\pm$ SD, LAQ is single sample) log<sub>10</sub> scale abundance of immature mosquitoes in USDS by dipper samples. Arrow indicates application of larvicide treatment at Coachella-A2 control USDS.

With regard to Palm Desert-USDS (PAL: Figure 4 and Table 2), immature mosquito production was, in general, not statistically different between ATSB (mean =  $40 \pm 7$ ) and control (mean =  $29 \pm 6$ ). Pupae was an exception after bait deployment, when control averages (3.8 per dipper sample) were twice that of ATSB averages (1.9 per dipper sample). Conversely, young (1<sup>st</sup>/2<sup>nd</sup> instars) larvae were marginally more abundant at ATSB sites (mean =  $21 \pm 3$ ) compared to control sites (mean =  $13 \pm 4$ ). Pooled mosquito larvae (Control + ATSB) varied significantly in number among sample weeks.

Table 2. Kruskal-Wallis ANOVA of immature mosquito abundance from dipper samples in USDS.

Site	Grouping Variable	1 <sup>st</sup> /2 <sup>nd</sup> Instars		3 <sup>rd</sup> /4 <sup>th</sup> Instars		Pupae		Egg Rafts		Total		
		Statistic	P-value	Statistic	P-value	Statistic	P-value	Statistic	P-value	Statistic	P-value	
PAL (C1-C4)	Station Presence	U = 577	0.155	U = 749	0.773	U = 758	0.695	U = 684	0.576	U = 653	0.504	
	Week	H = 21.7	<b>0.001</b>	H = 20.9	<b>0.002</b>	H = 6.13	0.409	H = 7.14	0.308	H = 14.3	<b>0.026</b>	
	Bait	Before	U = 7.0	0.076	U = 14.0	0.503	U = 19.0	0.867	U = 21.5	0.461	U = 11.5	0.296
		Wk. 0,1	U < 18.0	> 0.460	U < 23.0	> 0.460	U < 25.0	> 0.180	U < 21.0	> 0.520	U < 23.0	> 0.420
		Wk. 2	U = 14.0	0.517	U = 12.0	0.336	U = 31.0	<b>0.029</b>	U = 21.0	0.317	U = 13.0	0.422
Wk. 3,4 & After		U < 21.0	> 0.629	U < 26.0	> 0.196	U < 23.0	> 0.417	U < 15.0	> 0.316	U < 25.0	> 0.261	
COA (A2)	Larvicide	U = 15.0	<b>0.019</b>	U = 23.0	0.086	U = 41.0	0.749	U = 21.0	<b>0.041</b>	U = 19.0	<b>0.043</b>	
	Station Presence	U = 69.0	0.062	U = 51.0	0.219	U = 41.0	0.749	U = 82.5	<b>0.001</b>	U = 64.0	0.139	
	Week	H = 11.5	0.074	H = 6.56	0.364	H = 5.61	0.469	H = 12.1	0.059	H = 10.4	0.110	

Coachella USDS produced the largest average mosquito density ( $311 \pm 130$  immatures per dipper sample) in the study immediately after bait deployment (Day 1) and the larvicide treatment (Day 5) was significantly associated with a 5-fold average decline over subsequent dates. A rebound in abundance may have begun the week after bait station removal; however, bait station presence did not significantly predict dipper trends overall. At La Quinta, the single dipper sample (Day 13) contained a total of 73 immature mosquitoes comprised of 96% larvae (63% early and 33% late instars), two pupae, and two eggs.

Total *Culex spp.* egg abundance (from raft fragments and found singly) per dipper sample was on average 112 eggs at Coachella (Control USDS:  $n = 2,362$ ) compared to 9 eggs at Palm Desert (Control and ATSB USDS:  $n = 724$ ). Among Palm Desert USDS, egg counts were similar at ATSB (mean = 10 eggs per sample) and control (mean = 7 eggs per sample) sites.

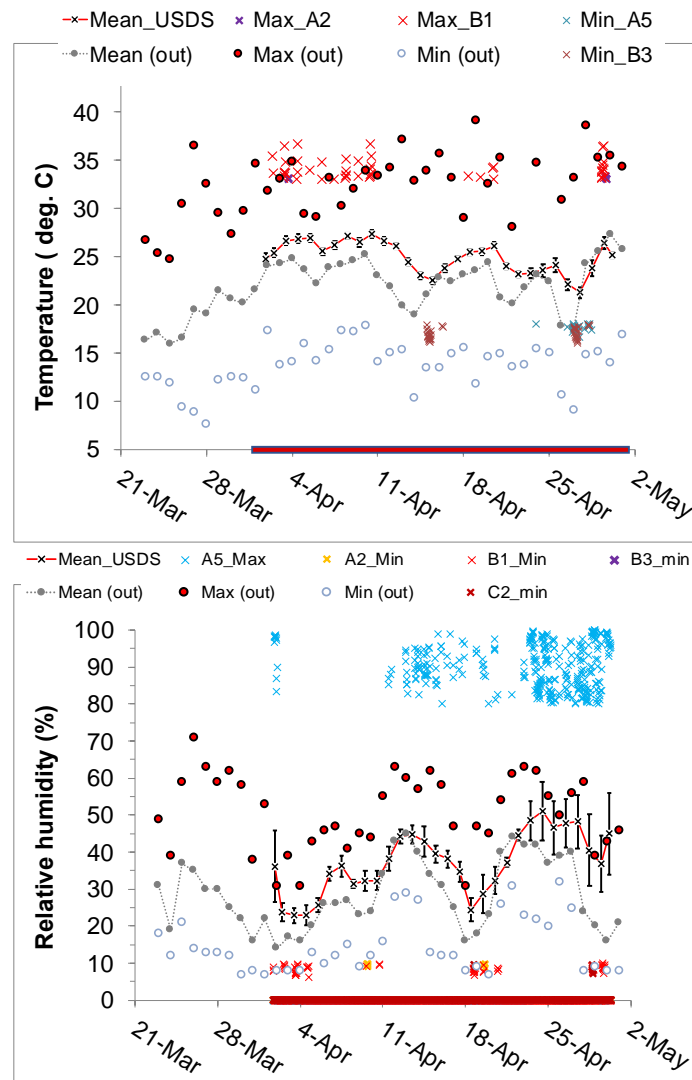


Figure 5. Temperature (top) and relative humidity (bottom) within USDS and at ground level in the region (= out, CIMIS, La Quinta II station). HOBO sensors were deployed in USDS during the shaded time period indicated on the x-axis. USDS means have standard error bars that represent variation among the 6 USDS chambers. Extreme conditions in specific USDS chambers (max/min) were plotted when

temperature was greater than 33 °C or less than 18°C and/or relative humidity was greater than 80% or less than 10%. Aboveground measurements indicated on the graph included daily average, maximum, and minimum values.

**Results: Environmental Conditions**

Temperatures within USDS were on average 3°C warmer and 2°C less variable than those of an aboveground weather station (Figure 5 and Table 3). Relative humidity greater than 80% was frequent only at a single Coachella ATSB-USDS (A5:  $N = 338$ ), probably due to both direct contact with street run-off and the sensor falling to the ground during the last week of April. Excluding USDS-A5 data, USDS-ATSB were slightly cooler with similar relative humidity ( $24.8 \pm 0.3^\circ\text{C}$  and  $33 \pm 5\%$ ) relative to USDS-Control ( $26 \pm 0.4^\circ\text{C}$  and  $33\% \pm 3\%$ ). Critically low moisture levels ( $\text{RH} < 10\%$ ) were primarily recorded (83% of  $N = 110$  measurements) in La Quinta USDS (B1/B3) which lacked permanent standing water.

Table 3: Temperature, relative humidity, and bait reservoir size during April 2021.

Sensor	City	Site	Bait Station Treatment	Temperature (°C)			Relative Humidity (%)			Bait Dispensers	
				Mean	SD	95% CI	Mean	SD	95% CI	Week 2 weight (g)	Final vol. (mL)
USDS (HOBO)	Coachella	A2	Control	25.8	3.3	25.6, 26.0	33.1	12.3	32.4, 33.7	1,800	1,000
		A5	Toxic	23.8	2.8	23.7, 24.0	50.7	27.0	49.2, 52.1	> 2,110	Overflow
	La Quinta	B1	Control	26.1	3.6	25.9, 26.3	27.5	11.3	26.9, 28.1	1,272	500
		B3	Toxic	24.2	3.6	24.1, 24.4	31.2	12.3	30.6, 31.9	1,876	800
	Palm Desert	C2	Control	25.0	2.5	24.9, 25.1	40.3	13.6	39.6, 41.1	1,481	500
		C4	Toxic	24.8	2.5	24.6, 24.9	38.7	12.6	38.0, 39.4	1,817	1,300
Surface station	La Quinta	n/a	n/a	22.5	4.8	22.1, 22.9	30.9	14.5	29.8, 32.0	1,033	300

**Results: Bait Station Aging**

Stations located aboveground and at control sites appeared to have greater reductions in bait dispenser volume over time compared to bait stations inside USDS and at ATSB sites (Table 3). Bait loss was on average 30% higher in aboveground stations compared to USDS stations both before (week 2) and after recharge (week 4). Bait loss was greater in control stations than ATSB stations by an average of 16% on week 2 and 35% on week 4. Bait dispenser reservoirs were on average similar in size among cities on week 2 (1517 g) and week 4 (678 mL).

## ***Discussion***

The spring 2021 trial was the first among our underground storm drain system (USDS) studies where attractive toxic sugar bait (ATSB) stations coincided with reduced mosquito production compared to control stations. CDC adult trap counts from all sites combined were 10-fold lower in USDS-ATSB compared to USDS-Control. Adult mosquitoes contained the red dye of ATSB stations within CDC traps, bait dispensers, and wash tub reservoirs, suggesting bait ingestion was prevalent in USDS populations. Masses of dead, red-dyed females and males found inside ATSB dispensers on the final inspection date indicated appreciable mosquito mortality continued up to one month after deployment.

Post-mortality collection of adults may be a way to rapidly assess bait station efficacy and corroborate active trapping methods; however, dead individuals did not accumulate inside dispensers every week. Continuous formation of dead cohorts would have been predicted given, from the first day of deployment onward, swarms were common around USDS stations, trapped specimens were positive for red dye every week, and boric acid ingestion is typically lethal in under one week. Regardless, dead adult masses were absent inside bait dispensers in previous studies (Annual Report 2019-2020) and their discovery suggested the current ATSB design was a clear upgrade from past models. The hollowed out feeding membrane may encourage adult resting and/or discourage poisoned individuals from exiting dispensers, especially considering adults with sugar meals tainted with boric acid have been observed in the laboratory to crawl more and fly less than non-poisoned counterparts. A non-stick coating such as Teflon added to the inner walls of bait dispensers may be one way to try to increase dead mosquito numbers and improve real-time estimates of bait station performance.

Weekly inspections with a biweekly bait recharge is currently recommended to optimize the efficacy of bait feeding stations, especially under the arid conditions of the Coachella valley, where high temperature and low humidity can rapidly dry feeding surfaces and deplete bait volumes even in the most sheltered USDS locations. Regular inspections can also allow immediate repair, repositioning, or removal of stations threatened by often-unpredictable USDS disturbances that can cause acute damage despite protective enclosures. Most bait stations in USDS seemed to function acceptably for at least one month when reservoirs were recharged once; however, aboveground and open-style bait reservoirs more exposed to the elements would require more frequent – e.g., weekly – recharges for sustained efficacy. Station deployment over a 6-week period, with two bait recharges at weeks 2 and 4, is planned for autumn 2021, to test viability of ATSB-based mosquito control beyond one month.

The importance of open bait reservoirs to station efficacy is not clear yet and warrants a future comparison of stations with and without open reservoirs; regardless, flooded stations did not produce mosquito larvae unlike in previous years (Annual Reports 2019 and 2020) to show open reservoirs, at the very least, may be crucial to prevent unwanted mosquito production in stations subjected to even minor flooding.

Spray applications of fungi were linked to minimal infections and may have been an ineffective method for transmitting *Beauveria bassiana* to adult mosquitoes compared to

previous dry powder applications to bait stations in USDS (Annual Report 2020). There is continued hope that bait station design will evolve to promote synergy rather than antagonism between *Beauveria* and boric acid; however, evidence to date suggests only one of these control methods should be used per station. Pairing two stations per USDS, one with fungi and one with boric acid, may be an alternative approach worth investigating.

Unlike adult capture rates, the number of collected immature mosquitoes from Palm Desert was not directly linked to USDS bait treatment and oviposition by adult mosquitoes that originated from sources outside USDS may be in part responsible for this difference. Studies that track the origin and movement of adult mosquitoes in USDS relative to their developmental sites may shed some light on the matter. Although the larvicide application was not originally part of the ATSB experiment, the combination of both treatments coincided with significant mosquito reductions and gave a glimpse that this type of integrated mosquito management should be expanded upon in future experiments.



Semiannual Research Progress Report #3 for CVMVCD grant:

Improving fire ant IPM in the Coachella Valley: Effects of irrigation on bait efficacy, mating flight phenology, and the status of biocontrol agents.

David H. Oi and Steven M. Valles  
USDA Agricultural Research Service,  
Center for Medical, Agricultural, and Veterinary Entomology  
1600 SW 23<sup>rd</sup> Drive, Gainesville, FL 32605

June 28, 2021

**Summary of Activity January 2020 through June 2021.**

The objective of the proposed research for 2020-2021 is to improve the integrated pest management (IPM) of fire ants in the Coachella Valley by: 1) Evaluating the effect of irrigation on bait efficacy to determine the need to withhold irrigation after bait application; 2) Identifying periods of peak mating flight activity to improve timing of bait applications; and 3) Determining the spread of fire ant biocontrol agents released in the Coachella Valley to assess their further utilization for fire ant IPM.

- 1) To evaluate the effect of irrigation on fire ant bait efficacy in the field, two field sites, located at Lake Cahuilla Veterans Regional Park and Lake La Quinta Recreation Area, were determined to be suitable for the study. These sites were surveyed for red imported fire ants on Feb. 25-26, 2020. Fire ant activity was high enough to allow for two replicates to be located at each site.

Further preparations for the field study were suspended due to the USDA-ARS prohibition of air travel and limited laboratory access since March 19, 2020, due to the COVID-19 pandemic. As of June 28, 2021, air travel is still prohibited, and this research is on hold. ARS has submitted plans for returning to more normal operations, but the timeline for resuming more normal operations, including easement of travel restrictions, is yet to be determined.

- 2) Research on monitoring fire ant mating flight activity has progressed despite the limited laboratory access due to COVID restrictions. A prototype fire ant alate trap has been developed and was field tested in Gainesville, Florida. Two traps were sent to the CVMVCD in March 2021 for testing under Coachella Valley conditions. Fire ant alates were caught in these traps both in Florida and California.
- 3) Surveying for the spread of fire ant biocontrol agents in Coachella was originally scheduled for the first quarter of 2021 and has been postponed until the 3<sup>rd</sup> quarter of 2021.

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Due to the COVID-19 pandemic, USDA-ARS labs were closed on March 19, 2020 and all personnel were placed in mandatory telework status. In July 2020, the CVMVCD project was approved for limited research activity to allow progress toward meeting objectives of extramural

agreements. However, the pace of research is slow as CMAVE is permitted 25% occupancy (1 person per lab) and air travel continues to be prohibited.

### 1) Irrigation effects on bait efficacy.

We proposed to compare the efficacy of standard fire ant bait on fire ant populations in field sites where irrigation is withheld after baiting and in sites that follow a normal, daily irrigation schedule. We hypothesize that fire ant bait efficacy will be similar at the irrigated and non-irrigated sites, based on the results of the 2019 Coachella Valley field study and observations of fire ants foraging on wet bait.

Site selection and preliminary fire ant sampling was completed on February 25-26, 2020. Two field sites, located at Lake Cahuilla Veterans Regional Park and Lake La Quinta Recreation Area, were determined to be suitable for the study. Infestations were high enough to allow for two replicates to be located at each site. However, when research and travel restrictions are lifted, these sites (or other sites) must be sampled to ensure fire ants densities are adequate for testing. Resumption of this test has been postponed until travel prohibition is ended, which we very tentatively anticipate in late 3<sup>rd</sup> quarter of 2021.

### 2) Peak mating flight activity.

With the resumption of limited research activity in July 2020 at CMAVE, we focused on the development of equipment (traps/cameras) for fire ant alate flight monitoring. Wildlife cameras partially recorded alate flights but were difficult to deploy and did not provide consistent, useable surveillance footage. Thus, we redesigned alate traps used in the past to make them less cumbersome to transport and service. Previous traps utilized an inverted root ball basket with screening to collect alates in a covered bunt pan (Fig. 1). Utilizing the fire ant alate behavior of crawling up blades of grass or other elevated perches from a nest before taking flight, the trap was redesigned with the following modifications (Fig. 2):

- 1) Dowel rods are used to guide alates into the covered collecting pan. Alates will crawl to the top of the rods and then take flight. The cover confines the alates which drop into the collecting pan filled with liquid preservative (propylene glycol solution).
- 2) Screening is not used, since the dowel rod technique collects enough alates.
- 3) Root ball baskets were replaced with legs that can be disassembled from the collecting pan which allows for easier transport.



Fig. 1 Previous fire ant alate trap with inverted wire basket and screening that funnels alates initiating flights into a pan filled with collecting fluid.



Fig. 2. Redesigned fire ant alate trap with dowel rods that guide alates into a collecting pan. Alates typically crawl to a high perch when they initiate mating flights.

Traps were sent in March 2021 to the District for field testing under Coachella Valley conditions. Alates were caught in traps set in Gainesville, FL and Palm Desert, CA (Table 1.) Below is a link for a video of fire ant alates being trapped in Gainesville:

. <https://drive.google.com/file/d/1KQGp2oP86L-PP6gpfcQFQShrdqDBjfr0/view?usp=sharing>

Table 1. Number and month fire ant alates caught in traps set in Gainesville, FL and Palm Desert, CA 2021.

Location	Trap 1	Trap 2	Trap 3	Trap 4	Trap 5
Gainesville, FL	57, April	35, May	37, May	49, June	548, June
Palm Desert, CA	87, June	–	–	–	–

To correlate temperature and humidity with the occurrence of alate flights radiation shields were constructed to protect temperature and humidity recorders (iButtons) that will be installed near alate traps (Fig. 3).

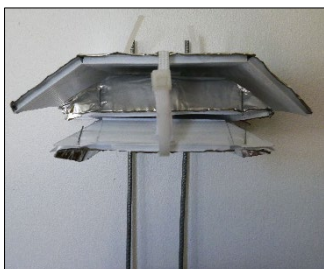


Fig. 3. Interior view of radiation shield that houses temperature and humidity recorders.

Pending the lifting of USDA-ARS domestic air travel restrictions, we tentatively anticipate locating two or more monitoring sites. We plan to install a total of eight traps among the sites during the fall of 2021, in time for the purported regional flights initiated by seasonal fall and winter rains.

3) **Status of fire ant biocontrol agents.**

Sampling for the fire ant biocontrol agents, *Solenopsis invicta* virus 3 (SINV-3), and two species of phorid flies, *Pseudacteon obtusus* and *Pseudacteon curvatus*, will be conducted to determine their spread from the initial release sites. Sampling was originally scheduled for the first half of 2021. Pending the status of travel restrictions due to COVID, biocontrol sampling will hopefully be initiated before the fall of 2021.

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Table 2. Milestones for fire ant bait efficacy in irrigated landscapes, mating flight activity, and determining the spread of fire ant biocontrol agents in the Coachella Valley. Red text indicates potential adjustments due to COVID-19.

Year / Quarter	CA field efficacy test of irrigated bait	Mating flight activity:	Biocontrol spread
2020 Jan-Mar	Site selection (Feb-Mar)	Refine alate trap	
2020 Apr-Jun	<del>Treat &amp; sample</del> Suspended due to COVID	Suspended due to COVID	
2020 Jul-Sep		X	
2020 Oct-Dec		Refined alate trap	
2021 Jan-Mar		X	<del>Sample &amp; map</del>
2021 Apr-Jun		Trap tested in CA	
2021 Jul-Sep	Treat & sample	Alate trapping	
2021 Oct-Dec	X	X	Sample & map



# **OLD BUSINESS**



**Coachella Valley Mosquito and  
Vector Control District**

**Staff Report**

**July 13, 2021**

**Agenda Item:** Old Business

Continued discussion regarding return to in-person meetings and COVID-19 prevention procedures for in-person meetings. - **Board of Trustees Executive Committee and Jeremy Wittie, M.S., General Manager**

**Background:**

On May 11, 2021, the Board of Trustees began a discussion regarding the return to in-person Board meetings. This discussion was led by Lena Wade, General Counsel. Ms. Wade advised and discouraged returning to in-person meetings before communication from the California Department of Public Health. The consensus of the Trustees was to continue to hold meetings remotely until the September 14, 2021, Board meeting.

During the May 21, 2021, Executive Committee meeting, it was recommended to have a follow-up discussion with Legal Counsel about returning to in-person meetings. Legal Counsel did not have an update for the June 8, 2021, Board meeting as there was nothing new to report.

On June 23, 2021, the Executive Committee had a follow-up discussion to the previous two discussions. Staff reported that the current Executive Order permitting remote public meetings expires on September 30, 2021, which means that October 12, 2021, is the first time that a physical meeting is required for Public Agencies. Based on this new information, the Executive Committee agreed to recommend holding a hybrid meeting for the September 14, 2021, Board meeting where some Trustees could return, and some could remain remote and return fully to in-person meetings as an entire Board on October 12, 2021. It was decided to bring the discussion back to the full Board at the July 13, 2021, Board of Trustees meeting.

On June 17, 2021, Cal/OSHA updated the COVID-19 regulations for the workplace. On July 7, 2021, the District adopted these new CalOSHA requirements for staff and implemented the District's COVID-19 Prevention Program. The key changes to the Cal/OSHA COVID-19 regulations that are applicable and should be considered for public meetings returning to the District Board room are as follows:

- To be considered vaccinated in the workplace, an employee’s vaccination status must be documented either by showing proof of vaccination or through self-certification. If proof is not provided, then the employee is considered unvaccinated.
- Face coverings are required indoors for unvaccinated employees except when:
  - Alone in a room or vehicle
  - Eating and drinking
  - Accommodation is required
  - Job duties make a face-covering infeasible or create a hazard
- A face covering means a surgical mask, medical procedure mask, a respirator is worn voluntarily, or a tightly woven fabric or non-woven material of at least two layers.
  - A face covering does not include a scarf, ski mask, balaclava, neck gaiter, bandana, turtleneck, collar, or a single layer of fabric.
- No social distancing requirements

**Staff and Executive Committee Recommendation:**

1. Staff recommends that Board Members and Staff adhere to District COVID-19 policies as described above for in-person Board meetings.
2. Staff recommends members of the public who attend in-person Board meetings be required to wear face-covering as is currently District policy for vendors and visitors during normal business hours.
3. The Executive Committee is recommending that the Board of Trustees meeting be held as a hybrid meeting on September 14, 2021, with the full Board returning to in-person meetings on October 12, 2021.



# **NEW BUSINESS**





**Coachella Valley Mosquito and  
Vector Control District**

**July 13, 2021**

**Staff Report**

**Agenda Item:** New Business

Discussion regarding the development and timeline for the District's 2022 Strategic Plan –  
**Jeremy Wittie, MS, General Manager**

**Background:**

The purpose of the Strategic Plan is to incorporate strategic issues into Board and management planning, budgeting, decision-making, program monitoring, and performance measurement. The plan is a living document that serves as a guide to assist agencies in achieving goals developed through a collaborative strategic planning workshop and then projects are planned and implemented over a specific course of time to reach the strategic goals that support the agency's mission, vision, and values.

On February 7, 2018, the District conducted its third Strategic Planning Workshop with the Board of Trustees, management, and represented employees, with the goal to provide a framework for decision making over a three-year period. The workshop was led by Martin Rauch of Rauch Communication Consultants, Inc. After the workshop concluded, Rauch drafted an official strategic plan which highlighted the District's mission, vision, and values and outlined high-level goals to be accomplished. The goals focused on the following seven areas that were developed through the process: Financial Management; Equipment and Technology; Human Resources and Governance; Outreach, Engagement, and Collaboration; Research and Development; Programs and Practices; and Emergency Preparedness. The District's current strategic plan document can be found on the District website at

[https://www.cvmosquito.org/sites/g/files/vyhlf4551/f/uploads/pd\\_strategicplan2018.pdf](https://www.cvmosquito.org/sites/g/files/vyhlf4551/f/uploads/pd_strategicplan2018.pdf).

While there have been many unexpected challenges over the past three years, the strategic planning process and plan has served as a valuable roadmap for the Board and staff amidst an ever-changing and at times unpredictable work environment. A majority of the strategic plan projects aimed at reaching those goals will be completed by the end of 2021 and thus it is time to begin preparation for the next strategic planning process to ready the District for future strategic issues in 2022.

Staff is proposing the following timeline for the development of the 2022 Strategic Plan:

1. Request for Qualifications – August 2021
2. Review of submitted qualifications by Executive Committee and General Manager – September 2, 2021
3. Recommendation by the Executive Committee to the full Board – September 14, 2021
4. Contract with Board approved Consultant – September/October 2021
5. Strategic Planning Preliminary work and workshop - October/November 2021
6. Strategic Plan completion – February 2022

COVID-19 resurgence and local health restrictions could possibly impact this timeline or the method by which to hold a workshop and can be addressed as necessary with the Board.

**Staff Recommendation:**

Staff recommends approval to begin the first step of the Strategic Planning process in seeking out qualified strategic planning consultants and requesting proposals that will be reviewed by the Executive committee with a recommendation to the full Board at the September 14<sup>th</sup> Board meeting.



**Coachella Valley Mosquito and  
Vector Control District**

**Staff Report**

**July 13, 2021**

**Agenda Item:** New Business

Discussion regarding the Sterile Insect September workshop and dates for the workshop – **Jennifer A. Henke, M.S., Laboratory Manager**

**Background:**

Controlling insect populations can be achieved through a variety of strategies. One non-chemical method is by releasing sterile male insects. This strategy can work when some specific criteria are met – that the male insects are not the source of the problem; when the female insect mates once instead of multiple times; and when the released, sterile male insects are able to compete with the wild males for mates (and are not weak compared with the male insects already in the area).

At the May 2021 board meeting, the Trustees shared their initial thoughts regarding sterile mosquito releases. The Trustees also agreed to have a workshop in September to devote time to review the current information and to consider what role this technology may take in the future.

**Staff Recommendation:**

Staff will survey the Board members to determine a date and time that works for the majority of the Board and necessary staff. The survey results will be discussed during the July 13, 2021, Board meeting and a date and time for the September workshop will be selected by the Board.



**Coachella Valley Mosquito and  
Vector Control District**

**July 13, 2021**

**Staff Report**

**Agenda Item:** New Business

Approval to enter into an agreement for The Market Research Project in an amount not to exceed \$60,000 from Professional Fees fund – **Budgeted, Funds Available - Tammy Gordon, MA, Public Information Officer and David I’Anson, MPA, MBA/ACC., Administrative Finance Manager**

**Background:**

The CVMVCD 2018 Strategic Implementation Plan calls out a Valley-wide Market Research and Survey Project (No. 4.3.1) on current vector-related surveillance and control issues every three years and uses data to develop messaging to address identified issues. The project goals include determining resident awareness of District services, identifying behavior change motivation, and assessment of resident level of accepting future Integrated Vector Management program changes. Data and analysis from focus groups and surveys will be used to develop and target public messaging and education relevant to current and future District integrated vector management programs.

The CVMVCD issued this Request for Proposal (RFP) to obtain proposals for the implementation of a variety of awareness and behavioral change campaigns and initiatives. These projects will involve the efforts of a full-service professional market research agency that can assist in the creation and development of marketing research surveys, focus groups, public relations activities, and media services.

Submissions for this project ranged from \$24,500-\$129,000 and included proposals for focus groups, surveys in English and Spanish, and interpretation of results.

Each submission was graded on the following criteria:

- Conformance to the specified RFP format.
- The organization, presentation, and content of the submittal.
- References of performance including such factors as control of costs, quality of work, ability to meet schedules, cooperation, responsiveness, compliance with the requirements, and other considerations.
- Cost for services.

- Mandatory Zoom Walk-through attendance.

A value-added rubric was also included to score additional qualifications. The marketing firm **Research America** was scored the highest of all submitted proposals. Their proposal includes a marketing research team with integrated pest management experience including an entomologist that will be part of the development of focus groups and survey implementation and interpretation.

**Staff Recommendation:**

Award the contract for the Market Research Project to the firm Research America in an amount not to exceed \$60,000 from Professional Fees Fund for FY21-22.

**Fiscal Impact:**

FY2021-22 Budget Capital Facility Replacement Fund	Current Available Funds	Proposed Expense Fiscal Year 2021/22	Remaining Available Funds
<b>Amount budgeted \$60,000</b>	<b>\$71,000</b>	<b>\$60,000</b>	<b>\$11,000</b>



**Coachella Valley Mosquito and  
Vector Control District**

**July 13, 2021**

**Staff Report**

**Agenda Item:** New Business

Discussion and/or approval to purchase chemical control products in an amount not to exceed \$530,940.79 from fund 7800.01.500.028, 7850.01.501.028, and 7850.01.502.028 Field Chemical Control – *Budgeted, Funds Available* – **Gregorio Alvarado, Acting Operations Manager**

**Background:**

In 2014 the purchase of chemical control products was changed requiring approval of annual purchase of products based on multi-year historical analysis of pesticide usage to predict total product requirements and delivery schedules.

The purchase of the following chemical control products for Operations Control program is required during the FY 2021-2022. The bid decision will consider the level of technical support provided by the chemical distributors and/or manufacturers in determining the final award for each product. The amount and quality of service does vary from one company to another, and their technical support and expertise is an added benefit to the District and does increase value of funds spent on chemical products by the District.

Products will be delivered and billed on or near the projected delivery date or as needed if determined by the Operations Manager and approved by the General Manager.

<b>PRODUCT</b>	<b>TARGET</b>	<b>TOTAL AMOUNT</b>	<b>COST</b>
ADVION	RIFA	2,500 LBS	\$28,612.13
SIESTA	RIFA	500 LBS	\$6,729.45
EXTINGUISH PLUS	RIFA	9,000 LBS	\$64,989.00
ALTOSID BRIQUETS	MOSQUITO	800 COUNT	\$1,044.00
ALTOSID XR BRIQUETS	MOSQUITO	1,980 COUNT	\$7,428.71
ALTOSID LIQUID	MOSQUITO	8 GAL	\$2,300.72
ALTOSID PELLETS	MOSQUITO	500 LBS	\$14,670.81
ALTOSID P-35	MOSQUITO	500 LBS	\$10,179.00

AQUABAC 200G	MOSQUITO	1,600 LBS	\$3,988.73
NATULAR CENSOR	MOSQUITO	8,400 LBS	\$30,300.00
NATULAR G	MOSQUITO	500 LBS	\$3,468.40
NATULAR G30	MOSQUITO	1,000 LBS	\$16,990.00
NATULAR XRT	MOSQUITO	2,640 COUNT	\$12,302.40
VECTOBAC 12AS	MOSQUITO	100 GAL	\$4,703.44
VECTOBAC G	MOSQUITO	3,200 LBS	\$9,570.00
VECTOBAC WDG	MOSQUITO	5,600 LBS	\$207,060.00
VECTOMAX FG	MOSQUITO	1,200 LBS	\$11,771.10
METALARV SPT	MOSQUITO	1,000 LBS	\$28,814.40
METALARV XRP	MOSQUITO	800 COUNT	\$1,914.00
EVERGREEN ULV (5-25) GROUND	MOSQUITO	110 GAL	\$20,097.00
AQUA RESLIN	MOSQUITO	120 GAL	\$16,507.50
DUET	MOSQUITO	110 GAL	\$27,500.00
<b>TOTAL</b>			<b>\$530,940.79</b>

**Staff Recommendation:**

The Operations Department is requesting Board approval to purchase chemical control products in the amount not to exceed \$530,940.79.

**Fiscal Impact:**

FY2021-22 Budget GL # 7850.01.500.028 GL # 7850.01.501.028 GL # 7850.01.502.028	Current Available Funds	Proposed Expense Fiscal Year 2021/22	Remaining Available Funds
<b>\$696,780</b>	<b>\$696,780</b>	<b>\$530,940</b>	<b>\$165,839</b>



**Coachella Valley Mosquito and  
Vector Control District**

**July 13, 2021**

**Staff Report**

**Agenda Item:** New Business

Accept the resignation of Trustee Doug Hassett - **Jeremy Wittie MS, General Manager**

**Background:**

Trustee Hassett resigned from his position on the CVMVCD Board of Trustees effective June 30, 2021. Trustee Hassett was selected to serve on the La Quinta Planning Commission, a position he has long desired to serve. Commission meetings also conflict with the District's regularly scheduled Board meetings.

The District will be contacting the City of La Quinta to request the appointment of a replacement trustee to serve the remaining term of Trustee Hassett's term (December 2021).

**Staff Recommendation:**

Staff recommends accepting the resignation of Trustee Hassett and thank him for his service to the District.

**Attachments:**

Trustee Hassett Resignation Letter



# DOUGLAS D. HASSETT

LA QUINTA, CALIFORNIA ▪ 760-501-5368 ▪ IMDHASSETT@GMAIL.COM

July 9, 2021

Coachella Valley Mosquito and Vector Control District  
43-420 Trader Place  
Indio, CA 92201

Dear Jeremy:

As we discussed in our previous conversation, I will be stepping down from my Trustee position on the Board. There was an opportunity for me to apply to the La Quinta Planning Commission, a position I've long desired, and I feel fortunate to have been selected. I think it will be a great time of growth for me, and I hope I can help La Quinta do the same.

It's a bittersweet moment no doubt, you all are like family and I will miss being a part of the mission and the camaraderie with those I'm so fond of.

I'll drop by when I get chance and catch up with you all.

Thank you for everything, what a great organization CVMVCD is, and what tremendous value the organization adds to our valley communities.

Kind Regards,

Doug Hassett