



BOARD OF TRUSTEES

****MONDAY, MARCH 9, 2020****

DISTRICT OFFICE

155 Mason Circle

Concord, CA 94520

7:00 PM

AGENDA

CALL TO ORDER:

Roll Call

Pledge of Allegiance

1. APPROVAL OF THE AGENDA AS POSTED (OR AMENDED)

2. PUBLIC INPUT ON NON AGENDA ITEMS

Public Participation: Members of the public may address the Board of Trustees regarding items of interest that are within the subject matter jurisdiction of the Board of Trustees. Generally, the Board will not enter into a dialogue during this period.

Speakers should have a “Speaker Card” completed and presented to the Clerk of the Board prior to the start of the Board meeting. Public input on agenda items will be taken at the beginning of the discussion of those agenda items.

Comments shall be limited to **three minutes per person**, unless different time limits are set by the Chairperson.

3. PRESENTATION

Thomas Minter, newly appointed Trustee representing City of El Cerrito

Jennifer Hogan, newly appointed Trustee representing City of Pleasant Hill

4. CONSENT CALENDAR

Any item may be pulled from the Consent Calendar and separately considered at the request of any Trustee.

A. Minutes of the January 13, 2020 Board of Trustees Meeting

B. Expenditures for December 2019 and January 2020

C. Payroll Expenditures

D. Investment Activity Report for December 2019 and January 2020

E. Financial Report

F. Excess Vehicles

Protecting Public Health Since 1927

BOARD OF TRUSTEES

President **PERRY CARLSTON** Concord • Vice President **LOLA ODUNLAMI** Antioch • Secretary **DANIEL PELLEGRINI** Martinez

Brentwood **MARSHON THOMAS** • Clayton **PEGGIE HOWELL** • Contra Costa County **JIM PINCKNEY** **CHRIS COWEN** & **DARRYL YOUNG** • Danville **RANDALL DIAMOND**
El Cerrito **THOMAS MINTER** • Hercules **DUYLINH NGUYEN** • Lafayette **JAMES FITZSIMMONS** • Moraga **ROBERT LUCACHER** • Oakley **MICHAEL KRIEG** • Orinda **KEVIN MARKER** • Pinole **WARREN CLAYTON**
Pittsburg **RICHARD AINSLEY** PhD • Pleasant Hill **JENNIFER HOGAN** • Richmond **SOHEILA BANA** PhD • San Pablo **Vacant** • San Ramon **PETER PAY** • Walnut Creek **JAMES MURRAY**

5. REPORTS

- A. Board
- B. General Manager
- C. Staff
- D. Legal Counsel

6. INFORMATION ITEMS

- A. Annual Operations Report

7. ACTION ITEMS

- A. Approval of District Trustee Committee Members for 2020 **
- B. Approval of Updated 2020 Board Meeting Schedule **
- C. Board Consideration for Purchase of Backup Generator **

8. ADJOURNMENT

I hereby certify that the District Board of Trustee Agenda was posted 10 days before the noted meeting.



Natalie Martini, Administrative Analyst II

2/28/2020

Date

The Contra Costa Mosquito & Vector Control District will provide reasonable accommodations for persons with disabilities planning to attend CCMVCD meetings who contact Natalie Martini at least 24 hours before the meeting, at (925) 771-6100.

Agenda materials are available to the public for inspection at no charge during business hours at our administrative office located at 155 Mason Circle, Concord, California.

CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT

March 9, 2020 BOARD MEETING

1 - 3. No comment

4. CONSENT CALENDAR

- A. Minutes of the January 13, 2020 Board of Trustees Meeting (*Pages 5-12*) – approval of minutes 20-1, Regular Board Meeting, held on January 13, 2020.
- B. Expenditures for December 2019 and January 2020 (*Pages 13-18*) – Approval of expenditures of December 1, 2019 through January 31, 2020, including checks No. 028348 through No. 028430, in the amount of \$293,011.92.
- C. Payroll Expenditures – Approval of payroll expenditures of December 1, 2019 through January 31, 2020, including checks No. 16171 through No. 16177 and direct deposit No. D04054 through No. D04211 in the amount of \$347,704.91.
- D. Investment Activity Report for December 2019 and January 2020 (*Pages 19-21*)
- E. Financial Report (*Page 22*)
- F. Excess Vehicle/Equipment – Approval to excess;
1) 2013 Year model Honda ATV with 4,802 miles (#36)

5. REPORTS

- A. Board
- B. General Manager
- C. Staff – Staff reports have been submitted (*Pages 23-27*) and staff will be present to answer any questions.
- D. Legal Counsel

6. INFORMATION ITEMS

- A. Annual Operations Report – Scientific Programs Manager Schutz will present the Annual Operations Report, previously titled Annual Environmental Report/CEQA Compliance (*Pages 28-43*)

7. ACTION ITEMS

- A. Approval of District Trustee Committee Members for 2020 – Committee composition has been approved by Board President Carlston. The District primary banking institution, Bank of the West, requests documentation (Board meeting minutes) that officially designates Board members who are on the Executive Committee and can thereby sign District checks.

Recommendation - Approve the 2020 Committees (*Page 44*)

B. Approval of Updated 2020 Board Meeting Schedule

Recommendation - Approve the updated 2020 Board Meeting Schedule (*Page 45*)

- C. Board Consideration for Purchase of New Backup Generator – The District generator was purchased over 20 years ago to provide backup power for the mosquitofish production system and maintain computer and phone systems to the District office. In addition, a generator is needed in the event of a natural disaster, so that the District would be able to assist with emergency services. The generator fuel pump is out and now obsolete without the ability to rebuild or replace and thus could affect the entire District operations if the generator completely malfunctions. Staff is requesting approval for the purchase of a new generator (not to exceed \$100,000.00).

Recommendation – Approve the purchase of a new District generator not to exceed \$100,000.00.

8. ADJOURNMENT

CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT
BOARD MEETING
MINUTES NO. 20-1

A meeting of the Board of Trustees of the Contra Costa Mosquito and Vector Control District was held on Monday, January 13, 2020, in the District Office at 155 Mason Circle, Concord, California.

TRUSTEES PRESENT Perry Carlston, Vice President
 Warren Clayton
 Randall Diamond
 Jim Fitzsimmons
 Peggie Howell
 Kevin Marker
 James Murray
 Duylinh Nguyen
 Lola Odunlami
 Peter Pay
 Daniel Pellegrini
 Jim Pinckney
 Darryl Young

TRUSTEES ABSENT Michael Krieg, President
 Richard Ainsley
 Soheila Bana
 Chris Cowen
 Robert Lucacher
 Marshon Thomas

VACANCIES El Cerrito, Pleasant Hill & San Pablo

OTHERS PRESENT Paula Macedo, General Manager
 Maria Bagley, Administrative Services Manager
 Steve Schutz, Scientific Program Manager
 Nola Woods, Public Affairs Director
 Terry Davis, Program Supervisor
 Natalie Martini, Administrative Analyst II
 Jeremy Shannon, Vector Control Planner
 Vikki Rodriguez, Maze & Associates
 Douglas Coty, Legal Counsel

CALL TO ORDER

Vice President Carlston called the meeting to order at 7:00 p.m.

ROLL CALL

A roll call indicated that 13 Trustees were present, six were absent, and there are three vacancies.

1. APPROVAL OF THE AGENDA AS POSTED

** Motion was made by Trustee Pellegrini and seconded by Trustee Howell to approve the agenda as posted. *Motion passed unanimously.*

2. PUBLIC INPUT ON NON AGENDA ITEMS – None

3. PRESENTATION – Vice President Carlston introduced the newly appointed Trustee, Duylinh Nguyen, representing the City of Hercules.

4. CONSENT CALENDAR

A. MINUTES – Approval of Minutes 19-7, the regular Board meeting held on November 4, 2019.

B. EXPENDITURES – Approval of expenditures of October 1, 2019 through November 30, 2019, including checks No. 028247 through No. 028347, in the amount of \$293,622.62.

C. PAYROLL FOR OCTOBER 2019 & NOVEMBER 2019 – Approval of payroll expenditures of October 1, 2019 through November 30, 2019, including checks No. 16162 through No. 16168 and direct deposit No. D03896 through No. D04052 in the amount of \$351,731.72.

D. TRANSACTION ACTIVITY REPORT FOR OCTOBER 2019 & NOVEMBER 2019

E. FINANCIAL REPORT

** Motion was made by Trustee Pellegrini and seconded by Trustee Diamond to approve the consent calendar. *Motion passed unanimously.*

4. REPORTS

A. BOARD MEMBERS – None.

B. GENERAL MANAGER – General Manager Macedo reported on the meetings and conferences she attended in December 2019 and the beginning of 2020, which included a meeting with the European CDC in Stockholm, Sweden, where she was invited to speak to them about West Nile Virus and mosquito surveillance and control. She also attended a meeting with the United States CDC, where she participated in a group of expert consultants to discuss and assist in reviewing the national guidelines for mosquito surveillance and control.

General Manager Macedo provided the Board with an update on the District's operational software and mentioned staff will be meeting with Leading Edge to start the process of implementing the new software in 2020.

General Manager Macedo reminded Trustees that due to her travel schedule in the first months of the year, the best way to reach her is via cell phone or email. She also mentioned that the CSDA Special District Leadership Academy will be hosting two trainings this year, April 19-22, 2020 in San Diego and the other set for September 27-30, 2020 in South Lake Tahoe. If Trustees would like to attend, they should advise the General Manager in advance so they can be added to the agenda for Board approval.

- C. STAFF – Administrative Services Manager Bagley advised the Finance Department is still in the process of implementing new software with SAP Concur, which has been delayed due to limited staff and reorganizational structure of the front office. By mid-February the process should be established.

Scientific Program Manager Schutz provided the Board with a quick review of the 2019 surveillance season and mentioned there was one official report of human West Nile Virus case in 2019, which was reported by the County very late in the season. There were no equine cases reported in 2019 and only one positive dead bird, which was found in Danville.

Public Affairs Director Woods reported on the advertising campaign for this time of year -“Got Rats”, which is displayed on the District's website to provide information for constituents on rats and mice, as well as the services offered by the District. The vector house construction has been completed, now with a functioning garage door and the education center display boxes are being assembled so they are accurate for the habitat for various vectors.

Vertebrate Program Supervisor Davis reported on the workshop he recently attended in Davis, where a group of individuals reviewed the possible future of rodent control and noted there is no real scientific understanding and methodology for surveying rodent activity. The group is attempting to learn more about the rodent populations and design better programs for future use throughout the United States.

General Manager Macedo provided an update on the mosquito program on behalf of Mosquito Program Supervisors Currier and Wexler, noting that the mosquito season has slowed down for this time of year and technicians have been focusing on winter projects in preparation for next season, to include brushing vegetation to maintain access to sources before it rains, as well as equipment and vehicle maintenance for next season. The District continues to receive yellowjacket service requests even at this time of the year.

Vector Control Planner Shannon presented about the Safety Program and committee, which he chairs. The committee consists of a variety of staff members, a safety officer and a rotating supervisor, and meets once per month to discuss safety concerns, as well as any incidents or accidents that may have occurred within the past month. Each member of the committee is considered a voting member for the new “See Something, Say Something” safety policy, where staff can submit safety topics or items to review for a chance to earn a safety lunch for their group.

Administrative Analyst II Martini mentioned the City of Concord has reappointed Trustee Perry Carlston to a four year term and Trustee Richard Means term on the Board was set to expire with the City of Pleasant Hill, although he decided not be reappointed and has since retired from the Board. City of El Cerrito will be suggesting an appointment to the Board at their next City Council meeting, with the only vacancies now being the City of San Pablo and the City of Pleasant Hill. The Trustee compensation election forms were distributed to the Board, along with new W-4s and direct deposit forms if necessary. Lastly, Administrative Analyst II Martini advised that the Statement of Economic Interest/Form 700 will be due by April 1, 2020 and the County requests that the Board continues to use NetFile to submit the annual filings.

D. LEGAL COUNSEL – None.

6. ACTION ITEMS

A. DISTRICT FY 18/19 FINANCIAL AUDIT AND MEMORANDUM ON INTERNAL CONTROL – of behalf of Chair Fitzsimmons, Trustee Howell provided the Board with an update on the Audit committee meeting from October 2019. As reported at the November 2019 Board meeting, there were a few outstanding items remaining, thus the audit was not available for approval until this meeting. Vikki Rodriguez, Maze & Associates, reported that the District received an unmodified opinion, which is the cleanest opinion the District can receive. The District fiscal year 2018/2019 total current assets increased 11.4% from the prior year. The majority of the increase is due to market value increases and prudent fiscal management. District general fund revenues were \$520,505 over the amount budgeted for fiscal year 2018/2019, primarily driven by the increase in property taxes and interest income. The District budgeted expenditures were down by \$470,225, driven by the savings in employee salaries/vacancies, professional services and delay capital outlay. Total Capital Assets (net of Accumulated Depreciation) were recorded at approximately \$1,451,268. The total Capital Assets decreased 3.1% this year

** A motion was made by Trustee Pellegrini and seconded by Trustee Diamond to accept the Report on District FY 2018/2019 Financial Audit and Memorandum of Internal Control. *Motion passed unanimously.*

B. SIDE LETTER TO MEMORANDUM OF UNDERSTANDING BETWEEN CCMVCD AND LOCAL 1021, SEIU - the side letter amends Exhibit A of the current MOU to add the wage scale for the new position of Mechanic Technician. General Manager Macedo asked for Board approval to amend the current MOU for the wage scale that the Board already approved.

** A motion was made by Trustee Diamond and seconded by Trustee Pinckney to accept the side letter to the Memorandum of Understanding Between CCMVCD and Local 1021, SEIU regarding the wage scale for the new position of Mechanic Technician. *Motion passed unanimously.*

C. EXECUTIVE COMMITTEE REPORT – on behalf of Executive Chair Krieg, Trustee Diamond reported on the Executive Committee meeting held on December 16, 2019, where the committee reviewed Resolutions 10-1 and 14-3.

i. Board Resolution Adopting a Revised Trustee Reimbursement Policy – Trustee Diamond discussed suggestions by the Executive Committee to change eligibility requirements to attend conferences of Resolution 14-3, to allow the Board President and Vice President to attend meetings and conferences by the Mosquito and Vector Control Association of California (MVCAC) and the California Special Districts Association (CSDA). Any other Trustee interested in attending will need Board approval as mentioned in Resolution 20-1.

** A motion was made by Trustee Fitzsimmons and seconded by Trustee Pinckney to approve the resolution with the following amendments: remove AMCA from Items 1, 3 and 5, and add item for approval of additional Trustees at the discretion of the Board. Resolution 20-1 was approved as amended. *Motion passed unanimously.*

ii. Board resolution adopting a Revised Procedure for Electing Board Officers – Trustee Diamond discussed suggestions proposed by the Executive Committee to change the requirements for electing Board Officers of Resolution 10-1, to approve Resolution 20-2 for nominations to come from the floor for Board President and Vice President, as well as having requirements met in order to be considered as a Board Officer. Discussion followed. Trustee Clayton stated his opinion that the current system was satisfactory and spoke regarding his personal experience as the Board President in 2018. Trustee Murray expressed concerns regarding the requirements and the proposed nomination and voting system. Trustee Young raised questions regarding term limits. More discussion followed.

** A motion was made by Trustee Young and seconded by Trustee Pay to add Item 9 to Resolution 20-2 Revising the Procedure for Electing Board Officers identifying a limit of no more than 2 consecutive years for the President’s service. Resolution 20-2 was approved as amended. *Motion passed.*

Ayes: Carlston, Diamond, Fitzsimmons, Howell, Marker, Murray, Nguyen, Odunlami, Pay, Pellegrini, Pinckney, Young

No: Clayton

Absent: Ainsley, Bana, Cowen, Krieg, Lucacher, Thomas

D. Board Nomination and Election of Officers for Board President, Vice President, and Secretary for 2020.

** Motion was made by Trustee Fitzsimmons and seconded by Trustee Pinckney to nominate Trustee Perry Carlston for President, Trustee Lola Odunlami for Vice President, and Trustee Daniel Pellegrini for Secretary. *Motion passed unanimously.*

E. 2020 Board Meeting Schedule – Board and committee meeting schedules were reviewed and it was noted that there will need to be a Personnel committee meeting added in May 2020, before the new fiscal year begins in July.

** Motion was made by Trustee Pellegrini and seconded by Trustee Odunlami to accept the 2020 Board Meeting Schedule as amended with the addition of a Personnel committee meeting in May (TBD). The 2020 Board meeting schedule was approved as amended. *Motion passed unanimously.*

F. Board Consideration and Approval of Committee Charges – the committee charges were reviewed.

** Motion was made by Trustee Diamond and seconded by Trustee Fitzsimmons to approve the committee charges. *Motion passed unanimously.*

G. Board Consideration and Approval of Trustee Travel – besides President Carlston, Trustees Lucacher, Murray and Pay expressed interested and requested Board consideration for approval to travel MVCAC Annual Conference in San Diego.

** Motion was made by Trustee Fitzsimmons and seconded by Trustee Howell to approve Trustees traveling to the MVCAC Annual Conference. *Motion passed unanimously.*

H. Ad Hoc Vision & Mission Statements Committee Report – Trustee Murray spoke on behalf of Committee Chair Lucacher reporting the Ad Hoc Vision & Mission Statements Committee met on several occasions and, after reviewing and discussing suggestions from staff, the committee formed the following principles for the Board to approve:

Established in 1927, the Contra Costa Mosquito & Vector Control District is committed to:

1. Public Health – we use Integrated Vector Management (IVM) as our core approach to reducing risk to the community.
2. Environmental Stewardship – we use materials and methods that meet or exceed all applicable regulatory requirements.
3. Science & Technology – we work diligently with the scientific community to ensure that our methods are scientifically sound and to advance the state of the art of our discipline.
4. Public Education – we educate and help our residents understand the role they play in assisting us in reducing the risk from vectors of disease.
5. Safety – we are committed to the safety of employees and the public through ongoing attention to facilities, equipment and training.
6. Management Effectiveness – we use management systems, protocols and methods that allow us to fulfill our mission in an efficient, transparent and fiscally responsible manner.
7. Teamwork & Collaboration – we believe that a productive work environment requires teamwork, active collaboration and clear and open communication within and across all entities to develop the future.

** A motion was made by Trustee Clayton and seconded by Trustee Pellegrini to approve the principles for the District. *Motion passed unanimously.*

CLOSED SESSION – 8:47 p.m.

At 8:50 p.m., Trustee Jim Pinckney excused himself from the meeting.

At 8:55 p.m., Trustee Warren Clayton excused himself from the meeting.

7. CONFERENCE WITH LEGAL COUNSEL – SIGNIFICANT EXPOSURE TO LITIGATION PURSUANT TO PARAGRAPH (2) OF SUBDIVISION D OF SECTION 54956.9 (ONE CASE)

RETURN TO OPEN SESSION – 9:21 p.m.

REPORT FROM CLOSED SESSION – No reportable action.

At 9:22 p.m., the meeting was adjourned due to lack of a quorum.

I certify the above minutes were approved as read or corrected at the meeting of the Board held on March 9, 2020.

Ayes: _____

Noes: _____

Abstain: _____

Absent: _____

Daniel Pellegrini
2020 Secretary, Board of Trustees

Payment History Report
Sorted By Check Number
Activity From: 12/1/2019 to 1/31/2020

CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT (CCV)

Bank Code: 1 Bank of the West

Check Number/ Invoice Number	Check Date	Vendor Number	Name Invoice Date	Discount Amount	Invoice Amount	Check Amount	Check Type
028348	12/15/2019	0000015	Health Care Dental Trust			5,229.53	Auto
	12/1/2019		12/1/2019	0.00	5,229.53		
028349	12/15/2019	0000187	Sheila Currier			32.00	Auto
	12/10/2019		12/10/2019	0.00	32.00		
028350	12/15/2019	0000202	Terry Davis			48.26	Auto
	11/19/2019		11/19/2019	0.00	23.56		
	11/22/2019		11/22/2019	0.00	24.70		
028351	12/15/2019	0000328	PG&E			908.10	Auto
	12/4/2019		12/4/2019	0.00	908.10		
028352	12/15/2019	0000335	Concur Technologies, Inc			559.98	Auto
	12/1/2019		12/1/2019	0.00	559.98		
028353	12/15/2019	0000482	City of Antioch Marina			104.00	Auto
	12/1/2019		12/1/2019	0.00	104.00		
028354	12/15/2019	0000894	Quenvold's Safety Shoemobile			163.88	Auto
	12/4/2019		12/4/2019	0.00	163.88		
028355	12/15/2019	0000913	Guardian Security Agency			1,140.00	Auto
	12/11/2019		12/11/2019	0.00	285.00		
	12/4/2019		12/4/2019	0.00	855.00		
028356	12/15/2019	0000956	Waterlogic Americas LLC			79.39	Auto
	12/3/2019		12/3/2019	0.00	79.39		
028357	12/15/2019	0000971	Flyers Energy, LLC			3,550.40	Auto
	11/30/2019		11/30/2019	0.00	1,482.27		
	12/5/2019		12/5/2019	0.00	2,068.13		
028358	12/15/2019	0001036	RKL eSolutions LLC			6,800.00	Auto
	12/1/2019		12/1/2019	0.00	6,800.00		
028359	12/15/2019	0001049	ALSCO			1,052.99	Auto
	12/2/2019		12/2/2019	0.00	1,052.99		
028360	12/15/2019	0001061	KBA DOCUMENT SOLUTIONS, LLC			30.06	Auto
	12/3/2019		12/3/2019	0.00	30.06		
028361	12/15/2019	0001073	Paula A. Macedo			11.00	Auto
	12/4/2019		12/4/2019	0.00	11.00		
028362	12/15/2019	0001077	Banksia Landscape, Inc.			475.00	Auto
	12/1/2019		12/1/2019	0.00	475.00		
028363	12/15/2019	0001078	Kirk Thill			323.74	Auto
	12/11/2019		12/11/2019	0.00	323.74		
028364	12/15/2019	0001113	Comcast			1,082.88	Auto
	11/15/2019		11/15/2019	0.00	387.62		
	12/1/2019		12/1/2019	0.00	695.26		
028365	12/30/2019	0000007	SEIU UPE LOCAL 1021-Union Dues			2,296.71	Auto
	12/23/2019		12/23/2019	0.00	2,296.71		
028366	12/30/2019	0000009	Nationwide Retirement Solutions - 457 Plan			1,308.00	Auto
	12/23/2019		12/23/2019	0.00	1,308.00		
028367	12/30/2019	0000010	CalPERS			51,750.20	Auto
	12/20/2019		12/20/2019	0.00	51,750.20		
028368	12/30/2019	0000202	Terry Davis			36.00	Auto
	12/10/2019		12/10/2019	0.00	6.00		
	12/11/2019		12/11/2019	0.00	24.00		
	12/12/2019		12/12/2019	0.00	6.00		
028369	12/30/2019	0000328	PG&E			924.24	Auto
	12/23/2019		12/23/2019	0.00	924.24		
028370	12/30/2019	0000373	FP MAILING SOLUTIONS			139.73	Auto
	12/19/2019		12/19/2019	0.00	139.73		
028371	12/30/2019	0000452	U.S. BANK CORPORATE PAYMENT SYSTEMS			12,639.03	Auto
	10/30/2019		10/30/2019	0.00	89.90		
	11/15/2019		11/15/2019	0.00	179.43		
	11/19/2019		11/19/2019	0.00	45.42		

Run Date: 2/26/2020 2:40:52PM

Page: 1

A/P Date: 2/26/2020

Payment History Report
Sorted By Check Number
Activity From: 12/1/2019 to 1/31/2020

CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT (CCV)

Bank Code: 1 Bank of the West

Check Number/ Invoice Number	Check Date	Vendor Number	Name Invoice Date	Discount Amount	Invoice Amount	Check Amount	Check Type
11/21/2019			11/21/2019	0.00	499.70		
11/22/2019			11/22/2019	0.00	626.40		
11/25/2019			11/25/2019	0.00	1,253.37		
11/26/0019			11/26/2019	0.00	565.75		
11/26/2019			11/26/2019	0.00	691.30		
11/30/2019			11/30/2019	0.00	383.78		
11/9/2019			11/9/2019	0.00	1,498.37		
12/1/2019			12/1/2019	0.00	17.20		
12/10/2019			12/10/2019	0.00	328.37		
12/11/2019			12/11/2019	0.00	319.39		
12/12/2019			12/12/2019	0.00	467.82		
12/13/2019			12/13/2019	0.00	959.24		
12/16/2019			12/16/2019	0.00	384.76		
12/17/2019			12/17/2019	0.00	270.96		
12/18/2019			12/18/2019	0.00	28.26		
12/19/2019			12/19/2019	0.00	1,244.03		
12/2/2019			12/2/2019	0.00	81.55		
12/20/2019			12/20/2019	0.00	105.20		
12/22/2019			12/22/2019	0.00	1.92		
12/3/2019			12/3/2019	0.00	1,041.88		
12/4/2019			12/4/2019	0.00	247.88		
12/5/2019			12/5/2019	0.00	877.53		
12/6/2019			12/6/2019	0.00	406.75		
12/8/2019			12/8/2019	0.00	22.87		
028372	12/30/2019	0000486	Bay Alarm Company			267.75	Auto
	12/19/2019		12/19/2019	0.00	267.75		
028373	12/30/2019	0000610	Liebert Cassidy Whitmore			4,724.00	Auto
	11/30/2019		11/30/2019	0.00	4,724.00		
028374	12/30/2019	0000694	TD Ameritrade Institution			7,983.66	Auto
	12/23/2019		12/23/2019	0.00	7,777.12		
	12/25/2019		12/25/2019	0.00	206.54		
028375	12/30/2019	0000696	KBA DOCUSYS, INC			406.72	Auto
	11/21/2019		11/21/2019	0.00	203.36		
	12/21/2019		12/21/2019	0.00	203.36		
028376	12/30/2019	0000739	Department of Industrial Relations			225.00	Auto
	12/17/2019		12/17/2019	0.00	225.00		
028377	12/30/2019	0000793	AFLAC			106.84	Auto
	12/23/2019		12/23/2019	0.00	106.84		
028378	12/30/2019	0000806	Fred Loux			323.74	Auto
	12/23/2019		12/23/2019	0.00	323.74		
028379	12/30/2019	0000814	Staples Business Advantage			814.98	Auto
	12/12/2019		12/12/2019	0.00	814.98		
028380	12/30/2019	0000899	Sun Life Financial			1,349.33	Auto
	12/23/2019		12/23/2019	0.00	1,349.33		
028381	12/30/2019	0000913	Guardian Security Agency			475.00	Auto
	12/18/2019		12/18/2019	0.00	475.00		
028382	12/30/2019	0000925	INFINISOURCE, Inc.			80.00	Auto
	12/16/2019		12/16/2019	0.00	80.00		
028383	12/30/2019	0000971	Flyers Energy, LLC			1,308.18	Auto
	12/23/2019		12/23/2019	0.00	1,308.18		
028384	12/30/2019	0000975	Reliance Standard Life In			905.07	Auto
	12/18/2019		12/18/2019	0.00	905.07		
028385	12/30/2019	0000981	Colonial Life			514.14	Auto
	12/20/2019		12/20/2019	0.00	514.14		
028386	12/30/2019	0001047	Calderon Janitorial Services			650.00	Auto
	12/23/2019		12/23/2019	0.00	650.00		

Payment History Report
Sorted By Check Number
Activity From: 12/1/2019 to 1/31/2020

CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT (CCV)

Bank Code: 1 Bank of the West

Check Number/ Invoice Number	Check Date	Vendor Number	Name Invoice Date	Discount Amount	Invoice Amount	Check Amount	Check Type
028387 12/10/2019	12/30/2019	0001088	Verizon Wireless 12/10/2019	0.00	1,379.99	1,379.99	Auto
028388 12/23/2019	12/30/2019	0001113	Comcast 12/23/2019	0.00	775.24	775.24	Auto
028389 12/23/2019	12/30/2019	0011120	Ford Lincoln Fairfield 12/23/2019	0.00	38,544.97	38,544.97	Auto
028390 12/31/2019	1/15/2020	0000011	Vision Service Plan 12/31/2019	0.00	654.00	654.00	Auto
028391 12/6/2020	1/15/2020	0000159	David Wexler 12/6/2020	0.00	32.00	32.00	Auto
028392 1/2/2020	1/15/2020	0000313	Contra Costa Water District 1/2/2020	0.00	617.83	617.83	Auto
028393 1/10/2020	1/15/2020	0000328	PG&E 1/10/2020	0.00	1,372.77	1,372.77	Auto
028394 1/6/2020 10/16/2019	1/15/2020	0000331	Mosquito & Vector Control Association of Californi 1/6/2020 10/16/2019	0.00 0.00	1,810.00 2,100.00	3,910.00	Auto
028395 12/26/2019	1/15/2020	0000435	Green Light Carpet Cleaning 12/26/2019	0.00	700.00	700.00	Auto
028396 1/9/2020	1/15/2020	0000482	City of Antioch Marina 1/9/2020	0.00	104.00	104.00	Auto
028397 1/10/2020 1/9/2020	1/15/2020	0000486	Bay Alarm Company 1/10/2020 1/9/2020	0.00 0.00	3,126.50 192.88	3,319.38	Auto
028398 12/20/2019	1/15/2020	0000608	ADAPCO, Inc. 12/20/2019	0.00	19,556.11	19,556.11	Auto
028399 1/3/2020	1/15/2020	0000610	Liebert Cassidy Whitmore 1/3/2020	0.00	3,515.00	3,515.00	Auto
028400 12/31/2019	1/15/2020	0000814	Staples Business Advantage 12/31/2019	0.00	217.45	217.45	Auto
028401 1/10/2020 1/2/2020 12/30/2019	1/15/2020	0000913	Guardian Security Agency 1/10/2020 1/2/2020 12/30/2019	0.00 0.00 0.00	855.00 112.00 475.00	1,442.00	Auto
028402 1/2/2020	1/15/2020	0000956	Waterlogic Americas LLC 1/2/2020	0.00	79.39	79.39	Auto
028403 1/2/2020	1/15/2020	0001049	ALSCO 1/2/2020	0.00	1,028.17	1,028.17	Auto
028404 1/2/2020	1/15/2020	0001061	KBA DOCUMENT SOLUTIONS, LLC 1/2/2020	0.00	41.50	41.50	Auto
028405 1/10/2020	1/15/2020	0001062	ACS 1/10/2020	0.00	324.01	324.01	Auto
028406 1/2/2020	1/15/2020	0001077	Banksia Landscape, Inc. 1/2/2020	0.00	475.00	475.00	Auto
028407 1/24/2020	1/31/2020	0000007	SEIU UPE LOCAL 1021-Union Dues 1/24/2020	0.00	2,294.63	2,294.63	Auto
028408 1/23/2020	1/31/2020	0000009	Nationwide Retirement Solutions - 457 Plan 1/23/2020	0.00	1,408.00	1,408.00	Auto
028409 1/25/2020	1/31/2020	0000010	CalPERS 1/25/2020	0.00	51,750.20	51,750.20	Auto
028410 1/23/2020	1/31/2020	0000015	Health Care Dental Trust 1/23/2020	0.00	5,229.53	5,229.53	Auto
028411 12/15/2019	1/31/2020	0000159	David Wexler 12/15/2019	0.00	221.96	221.96	Auto
028412	1/31/2020	0000335	Concur Technologies, Inc			559.98	Auto

Payment History Report
Sorted By Check Number
Activity From: 12/1/2019 to 1/31/2020

CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT (CCV)

Bank Code: 1 Bank of the West

Check Number/ Invoice Number	Check Date	Vendor Number	Name Invoice Date	Discount Amount	Invoice Amount	Check Amount	Check Type
028413	1/25/2020 1/31/2020	0000385	1/25/2020 Pacific Gas & Electric	0.00	559.98	1,442.77	Auto
028414	1/24/2020 1/31/2020	0000452	1/24/2020 U.S. BANK CORPORATE PAYMENT SYSTEMS	0.00	1,442.77	9,091.89	Auto
	1/10/2020		1/10/2020	0.00	567.11		
	1/12/2020		1/12/2020	0.00	19.99		
	1/13/2020		1/13/2020	0.00	585.30		
	1/14/2020		1/14/2020	0.00	280.56		
	1/15/2020		1/15/2020	0.00	1,109.98		
	1/16/2020		1/16/2020	0.00	62.24		
	1/17/2020		1/17/2020	0.00	336.20		
	1/2/2020		1/2/2020	0.00	377.19		
	1/20/2020		1/20/2020	0.00	9.27		
	1/21/2020		1/21/2020	0.00	148.75		
	1/3/2020		1/3/2020	0.00	1,455.57		
	1/6/2020		1/6/2020	0.00	102.97		
	1/7/2020		1/7/2020	0.00	40.45		
	1/8/2020		1/8/2020	0.00	618.81		
	1/9/2020		1/9/2020	0.00	403.07		
	12/21/2019		12/21/2019	0.00	229.79		
	12/23/2019		12/23/2019	0.00	524.90		
	12/24/2019		12/24/2019	0.00	54.36		
	12/26/2019		12/26/2019	0.00	202.01		
	12/27/2019		12/27/2019	0.00	234.62		
	12/3/2019		12/3/2019	0.00	246.93		
	12/30/2019		12/30/2019	0.00	142.32		
	12/31/2019		12/31/2019	0.00	1,247.65		
	12/8/2020		12/8/2020	0.00	23.89		
	12/9/2019		12/9/2019	0.00	67.96		
028415	1/31/2020	0000486	Bay Alarm Company			3,319.38	Auto
	1/22/2020		1/22/2020	0.00	3,319.38		
028416	1/31/2020	0000552	Humor Speaks LLC			4,000.00	Auto
	1/25/2020		1/25/2020	0.00	4,000.00		
028417	1/31/2020	0000684	Clarke			1,225.21	Auto
	1/14/2020		1/14/2020	0.00	1,225.21		
028418	1/31/2020	0000694	TD Ameritrade Institution			11,329.82	Auto
	1/27/2020		1/27/2020	0.00	11,329.82		
028419	1/31/2020	0000814	Staples Business Advantage			719.39	Auto
	1/16/2020		1/16/2020	0.00	336.97		
	1/22/2020		1/22/2020	0.00	267.85		
	1/6/2020		1/6/2020	0.00	114.57		
028420	1/31/2020	0000899	Sun Life Financial			1,270.81	Auto
	1/21/2020		1/21/2020	0.00	1,270.81		
028421	1/31/2020	0000913	Guardian Security Agency			855.00	Auto
	1/21/2020		1/21/2020	0.00	380.00		
	1/23/2020		1/23/2020	0.00	475.00		
028422	1/31/2020	0000925	INFINISOURCE, Inc.			80.00	Auto
	1/21/2020		1/21/2020	0.00	80.00		
028423	1/31/2020	0000971	Flyers Energy, LLC			2,952.93	Auto
	1/14/2020		1/14/2020	0.00	1,451.14		
	1/15/2020		1/15/2020	0.00	1,501.79		
028424	1/31/2020	0000975	Reliance Standard Life In			905.07	Auto
	1/22/2020		1/22/2020	0.00	905.07		
028425	1/31/2020	0000981	Colonial Life			514.14	Auto
	1/23/2020		1/23/2020	0.00	514.14		
028426	1/31/2020	0000991	BOLD, POLISNER, MADDOW, NELSON & JUDSON			2,384.60	Auto

Payment History Report
Sorted By Check Number
Activity From: 12/1/2019 to 1/31/2020

CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT (CCV)

Bank Code: 1 Bank of the West

Check Number/ Invoice Number	Check Date	Vendor Number	Name Invoice Date	Discount Amount	Invoice Amount	Check Amount	Check Type
028427	12/31/2019 1/31/2020	0001047	12/31/2019 Calderon Janitorial Services	0.00	2,384.60	650.00	Auto
028428	1/21/2020 1/31/2020	0001077	1/21/2020 Banksia Landscape, Inc.	0.00	650.00	475.00	Auto
028429	1/27/2020 1/31/2020	0001088	1/27/2020 Verizon Wireless	0.00	475.00	1,411.44	Auto
028430	1/10/2020 1/31/2020	0001113	1/10/2020 Comcast	0.00	1,411.44	11.83	Auto
	1/1/2020		1/1/2020	0.00	6.39		
	1/15/2020		1/15/2020	0.00	5.44		
Bank 1 Total:						<u>293,011.92</u>	
Report Total:						<u>293,011.92</u>	

CONTRA COSTA MOSQUITO & VECTOR CONTROL DISTRICT
UNUSUAL ITEMS LIST

<i>DATE</i>	<i>CHECK #</i>	<i>AMOUNT OF CHECK</i>	<i>VENDOR & DESCRIPTION</i>
December 15, 2019	028358	\$6,800.00	RKL eSolutions, Inc. – Sage accounting software consulting
December 30, 2019	028373	\$4,724.00	Liebert Cassidy Whitmore – Professional Legal Services
January 15, 2020	028394	\$3,910.00	MVCAC – Trustee & Employee Training and Lab Testing
“ “ “	028397	\$3,319.38	Bay Alarm – Deposit Updated Security System and Entry Door Locks
“ “ “	028398	\$19,556.11	ADAPCO, Inc. – BVA Larvicide
“ “ “	028399	\$3,515.00	Liebert Cassidy Whitmore – Professional Legal Services
January 31, 2020	028415	\$3,319.38	Bay Alarm – Installation of Updated Security System and Entry Door Locks
“ “ “	028416	\$4,000.00	Humor Speaks LLC – Professional Trainer for Employee Development Day 2/18/2020
“ “ “	028417	\$1,225.21	Clarke – Port Mister Duster (Pesticide Equipment)
“ “ “	028426	\$2,384.60	Bold, Polisner, Maddow, Nelson & Judson – Professional Legal Services

TRANSACTION ACTIVITY REPORT

Months of December & January

Transaction Number	Date	Wells Fargo	LAIF	Bank of the West
Balance	12/1/19	265,885.41	5,775,848.97	309,377.49
1	12/12/2019		(145,000.00)	145,000.00
2	12/17/2019	3,981,129.03		
3	12/19/2019	(4,210,000.00)	4,210,000.00	
4	12/20/2019	884.76	-	
5	12/27/2019	5,372.52	(285,000.00)	285,000.00
6	12/31/2019	10.86		(455,550.24)
Balance		43,282.58	9,555,848.97	283,827.25
7	1/13/2020		(180,000.00)	180,000.00
8	1/22/2020	264,633.38		
9	1/30/2020		(225,000.00)	225,000.00
10	1/31/2020	3.28	38,416.45	(457,688.61)
Balance		307,919.24	9,189,265.42	231,138.64

Transaction Number & Brief Description

1	Transfer from LAIF to Bank of the West for Payroll & Vendor Checks & Deposit & Interest Earned LAIF
2	Property Tax Deposit
3	Transfer of Property Tax and other Income from Wells to LAIF
4	Misc Deposits into Wells Fargo Account
6	Clearing of checks from Bank of the West for Payroll & Vendor & Int Earned in Wells Fargo
7	Transfer from LAIF to Bank of the West for Payroll & Vendor Checks & Deposit
8	Misc Deposits into Wells Fargo Account - Majority Redevelopment income
9	Transfer from LAIF to Bank of the West for Payroll & Vendor Checks & Deposit
10	LAIF interested & Clearing of checks from Bank of the West for Payroll & Vendor & Int Earned in Wells Fargo

I certify that this report reflects all cash transactions and is in conformity with District Policy. The cash flow shown provides sufficient cash flow liquidity to meet the next six months expenditures.

Respectfully submitted,


 Paula Macedo
 General Manager

California State Treasurer
Fiona Ma, CPA



Local Agency Investment Fund
 PO Box 942809
 Sacramento, CA 94209-0001
 (916) 653 3001

February 26, 2020

[LAIF Home](#)
[PMIA Average Monthly Yields](#)

CONTRA COSTA MOSQUITO AND VECTOR CONTROL
 DISTRICT
 MANAGER
 155 MASON CIRCLE
 CONCORD, CA 94520

[Tran Type Definitions](#)

December 2019 Statement

Effective Date	Transaction Date	Tran Type	Confirm Number	Authorized Caller	Amount
12/12/2019	12/12/2019	RW	1625428	PAULA MACEDO	145,000 00
12/19/2019	12/19/2019	RD	1625981	PAULA MACEDO	4,210,000 00
12/27/2019	12/26/2019	RW	1626517	PAULA MACEDO	285,000 00

Account Summary

Total Deposit:	4,210,000.00	Beginning Balance:	5,775,848.97
Total Withdrawal:	430,000 00	Ending Balance:	9,555,848.97

California State Treasurer
Fiona Ma, CPA



Local Agency Investment Fund
 PO Box 942809
 Sacramento, CA 94209-0001
 (916) 653 3001

February 26, 2020

[LAIF Home](#)
[PMIA Average Monthly Yields](#)

CONTRA COSTA MOSQUITO AND VECTOR CONTROL
 DISTRICT
 MANAGER
 155 MASON CIRCLE
 CONCORD, CA 94520

[Tran Type Definitions](#)

January 2020 Statement

Effective Date	Transaction Date	Tran Type	Confirm Number	Authorized Caller	Amount
1/13/2020	1/13/2020	RW	1627482	PAULA MACEDO	180,000 00
1/15/2020	1/14/2020	QRD	1627959	SYSTEM	38,416 45
1/30/2020	1/30/2020	RW	1631041	MARIA BAGLEY	225,000 00

Account Summary

Total Deposit:	38,416.45	Beginning Balance:	9,555,848.97
Total Withdrawal:	405,000 00	Ending Balance:	9,189,265.42

**Contra Costa Mosquito and Vector Control District
FY20 Budget Year**

(July 1 2019 - June 30 2020)

Board Packet

49% of the Year
completed

	FY20 <i>As of 1/31/20</i>	FY20 Budget	YTD FY19 VS ADOPTED	ADOPTED FY20 VS FY20 \$
Personnel Costs				
Payroll & OT	2,017,334	3,820,353	52.8%	1,803,019
Retirement	1,186,457	1,267,909	93.6%	81,452
OASDI	117,736	236,862	49.7%	119,126
Medicare	28,341	55,395	51.2%	27,054
Health Insurance (Dental / Vision Etc)	304,269	646,687	47.1%	342,418
Unemployment	15,863	32,202	49.3%	16,339
Disability Ins	-	9,500	0.0%	9,500
Other Post Employment Benefits	-	176,000	0.0%	176,000
Subtotal Personnel Costs	3,670,001	6,244,908	58.8%	2,574,907
Operational Costs				
Professional Services - Legal	32,629	90,000	36.3%	57,371
Professional Services - Building & Grounds Maint	5,591	10,000	55.9%	4,409
Professional Services - All Other	77,805	98,438	79.0%	20,633
Public Affairs	1,929	65,330	3.0%	63,401
Lab Services	17,516	53,500	32.7%	35,984
Information & Technology	16,703	353,500	4.7%	336,797
Operations - Control Materials	35,219	62,000	56.8%	26,781
Operations - Aerial	4,340	22,000	19.7%	17,660
Operation and Facilities - All Other	93,002	339,925	27.4%	246,923
General Office Administration - Insurance	304,328	304,328	100.0%	-
General Office Administration - Trustee Expense	6,327	22,000	28.8%	15,673
General Office - Research	0	25,000	0.0%	25,000
General Office Administration - Employee Travel & Training	29,942	62,000	48.3%	32,058
General Office Administration - Utilities	33,167	83,460	39.7%	50,293
General Office Administration - All Other	38,736	447,000	8.7%	408,264
Subtotal Operational Cost	697,234	2,038,481	34.2%	1,341,247
Capital				
Land				-
Structures and Improvements	0	7,500	0.0%	7,500
Vehicles	80,802	84,000 *	96.2%	3,198
Heavy Equipment	15,551	30,000	51.8%	14,449
Subtotal Capital	96,353	121,500	79.3%	25,147
Total Expenditures	4,463,588	8,404,889		
Revenues				
Property Taxes	2,974,268	5,790,540	51.4%	2,816,271
Benefit Assessment	1,130,323	2,045,903	55.2%	915,580
Contract Billing	27,007	20,000	135.0%	(7,007)
Interest Income (LAIF)	141,208	135,000	104.6%	(6,208)
Medical Reimbursement	82,986	115,000	72.2%	32,014
Fixed Asset Disposal	0	24,000	0.0%	24,000
Miscellaneous	38,107	35,000	108.9%	(3,107)
Subtotal Revenue	4,393,900	8,165,443	53.8%	3,771,542
Estimate Ending Balance		-239,446		
Designated Reserves NEW POLICY				
Bond Reserve	-			
Public Health Emergency	2,500,000			
Capital Improvement	1,393,370			
Emergency Reconstruction Response	500,000			
Operations	4,072,118			
Vehicle & Equipment Replacement	150,000			
IT Equipment Replacement	200,000			
8,815,488				

* Revised Budget Per 9/9/19 Board Meeting
Requested additional Budget Allocation
for Vehicles (additional \$5,600)

March 2020 Operations Report

Prepared February 27th by David Wexler, Shela Currier and Terry Davis, Program Supervisors

Mosquito Program:

- The mosquito season is off to a quick start, technicians have completed their equipment calibrations and have begun to conduct field inspections/treatments of sources throughout the County.
- Annual Training began this month, every Tuesday, Wednesday, and Thursday from 1:30-3:30pm. We have had several outside speakers come in to discuss topics such as the importance of calibration, pesticide selection, pesticide rotation to prevent resistance, and others.
- The pool program is in full swing as letters are being sent out to homeowners to remind them to make sure their pool is in compliance for this upcoming season.
- The coronavirus is impacting our ability to purchase respirators as most vendors are sold out/back-ordered/ or price gouging. An example on eBay \$100 for a box of 10 that expired in 2013!

Rodent Program:

- Terry Davis provided 1st annual rodent training.
- Consistent number of calls coming in from the public.

Skunk Program:

- Peak breeding season
- Providing resources to a local community college to help reduce the impact on the students.

Yellowjacket Program:

- With a mild winter, we are already receiving service requests and field technicians are observing nests with multiple queens. Normally queens would disperse, overwinter and then start a new nest in the spring.
- We are conducting selective early-season trapping to identify how the season is progressing and to collect as many queens as possible to reduce the yellowjacket population later in the season.



March 2020 Public Affairs Department Report

Prepared February 27, 2020 by Nola Woods, Public Affairs Director

- Presentations & Events
 - No off-site presentations or events in February
- Advertising
 - 3-month campaign to raise awareness of the District's Rat & Mouse program during November, December, and January has concluded.
 - The **Got Rats?** advertising generated 878 pageviews during the total campaign.

Page	Pageviews	Page Value
/index.html	1,971	\$0.00
/rats_mice_propel_19.htm	878	\$0.00
/service_request.htm	602	\$0.00
/rodents_virus_risk.htm	578	\$0.00
/rats_mice.htm	462	\$0.00
/employment_opportunities.htm	258	\$0.00
/mites.htm	240	\$0.00
/services_programs.htm	237	\$0.00
/contact.htm	206	\$0.00
/staff.htm	196	\$0.00

Nov 1, 2019 - Feb 1, 2020 [PAGES REPORT >](#)

- Website Views
 - February 1, 2020 – February 27, 2020
 - Top 10 pages viewed:
 - Most popular page: The District Homepage: 762 pageviews or 3.96% ↑ over January 1 - January 31, 2020
 - Second most popular page: The rodent_virus_risk page: 350 pageviews or ↑ 96.63%.

Page	Pageviews
/index.html	762
/rodents_virus_risk.htm	350
/service_request.htm	239
/mites.htm	127
/services_programs.htm	98
/employment_opportunities.htm	88
/staff.htm	84
/contact.htm	78
/about_us.htm	77
/ccmvcd_faq.htm	64

Feb 1, 2020 - Feb 27, 2020 [PAGES](#)

- The total number of Users ↓ by 3.26 percent.
- The number of New Users ↓ by 2.58 percent.
- The number of Total Pageviews for the top 10 District website pages ↑ by .20 percent.



▪ Publications

- Mosquito Bytes Newsletter February 25, 2020
 - It's Only February and Yellowjackets are Back
 - 1299 Sent
 - 30% Opened as of February 27, 2020
 - 4% Clicked Links
 - Top Links:
 - Yellowjacket Service page
 - Sign Up page for Mosquito Bytes Newsletter and other District publications
 - Submit a Service Request



- Social Promotion: Twitter
 - 92 Impressions in first two days of Mosquito Bytes tweet
 - Overall Twitter Engagement in February
 - 1345 Reach
 - 2360 Impressions



March 2020 Administration Report

Prepared February 28th by Maria Bagley, Administrative Services Manager

The Administration department has completed the yearly benefits enrollment and made all the corresponding changes in the systems. There are several systems and administrators for the Districts health and welfare benefits. Administration is also reorganizing files to make it easier to access historic information for each employee. At the end of January, all 2019 reports were completed and sent to employees and state and federal agencies.

We have started the recruitment process for the Mechanic Technician position and interviews will be conducted in early March.

We are continuing to work on systems and processes to continue to gain efficiencies where we can. We will be continuing this process throughout 2020.

Annual Operations Report

Contra Costa Mosquito & Vector Control District
2019

Prepared by
Steve Schutz, Ph.D.
Scientific Programs Manager
and submitted to
the CCMVCD Board of Trustees on
March 9th, 2020

1. Introduction and Summary

CEQA, the California Environmental Quality Act, requires all state and local agencies in California to evaluate and publicly report on the potential environmental impacts of their discretionary activities and to mitigate those impacts which could be significantly adverse. In March 2016, in order to ensure the fullest possible compliance with CEQA, the District completed a full Programmatic Environmental Impact Report (PEIR), which includes a comprehensive review of all District practices and policies, potential environmental impacts, and mitigation measures used to minimize or eliminate potential impacts. Although CEQA regulations do not mandate annual updates unless there are significant changes in our program, District Staff continues to produce an annual Operations Report. This report summarizes District activities during 2019, in comparison with the previous ten years.

The District has long emphasized environmental stewardship while accomplishing its public health mission, primarily through strict adherence to an IPM (Integrated Pest Management) approach to the control of mosquitoes and other vectors of human disease. As such, District policies emphasize training, vector and pathogen surveillance, the integration of biological and physical control practices with chemical control (public health pesticides), and the judicious use of appropriate control tools only when vectors exceed specific thresholds. During 2019 there were no new or extraordinary District activities or substantial changes in District policies which could have caused significant environmental impacts, and there were no substantial new regulations or research results which alter the conclusions in our PEIR regarding actual or potential environmental impacts.

2. Biological Control of Mosquitoes

District staff has traditionally implemented a four-pronged approach to biological control of mosquitoes. The general elements of biological control used by the District are 1) rearing, stocking, and providing for limited public use the mosquitofish (*Gambusia affinis*) to eat larval mosquitoes in sites where mosquitofish are unlikely to cause significant adverse impacts on native species; 2) a program to identify, develop, and evaluate additional biocontrol agents that can be produced at reasonable cost; 3) collaboration with land-owners and managers to implement land and water management practices that protect and support populations and dispersal of native mosquito predators; and 4) policies and training designed to protect native predators.

In 2019, District staff stocked out approximately 48,000 mosquitofish, which was higher than the previous year, due to an increase in treatments of un-maintained swimming pools (Figure 1). Artificial sources like un-maintained swimming pools continue to produce substantial numbers of mosquitoes, but the number of such sources varies with changing economic conditions. Fish stocking in pools continues to be a critical tool for addressing the risk of West Nile virus in urban and suburban areas, and poses essentially no environmental risk. Year-to-year variations in stocking in natural waters and other traditional sites (horse troughs, etc.) are due primarily to weather patterns that change the extent of appropriate stocking sites. Although the District continues to study potential use of native fish for mosquito control, mosquitofish stocking in natural sites will most likely continue at similar rates in upcoming years. There was

no substantial new research published nor regulations issued in the past year on the potential environmental consequences of mosquitofish.

Fish Stocking 2000-2019

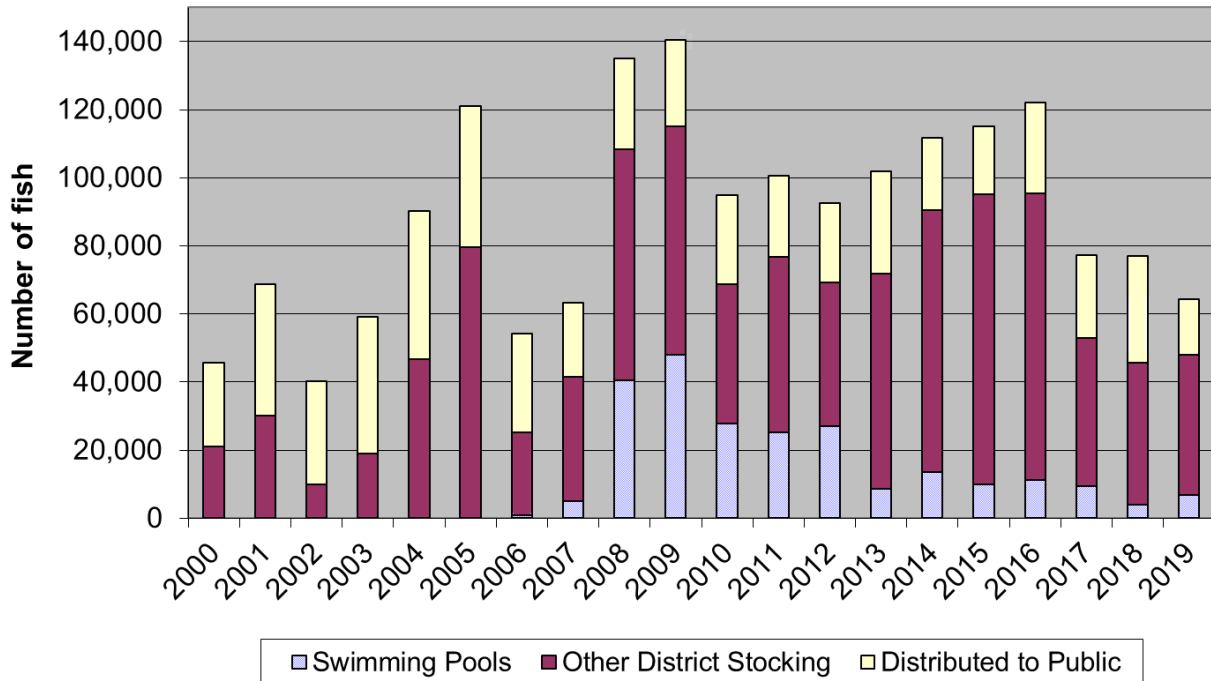


Figure 1: Use of mosquitofish for biological control, 2000 - 2019.

The District also dispersed approximately 16,000 mosquitofish to members of the public during this period, with instructions that these were for use only in contained water bodies (ornamental ponds, horse troughs, etc.). This number was lower compared with the last five years. All public “walk-ins” requesting fish are logged by the District, with the mosquito habitat type and number of fish recorded as well as the name and address of the person obtaining fish. This information is tracked electronically through our database, which enables mapping of locations where fish are being stocked by the public (Fig. 2). To ensure that fish releases are appropriate, the District provides information on appropriate stocking locations and densities to the public at the time of fish dispersal.

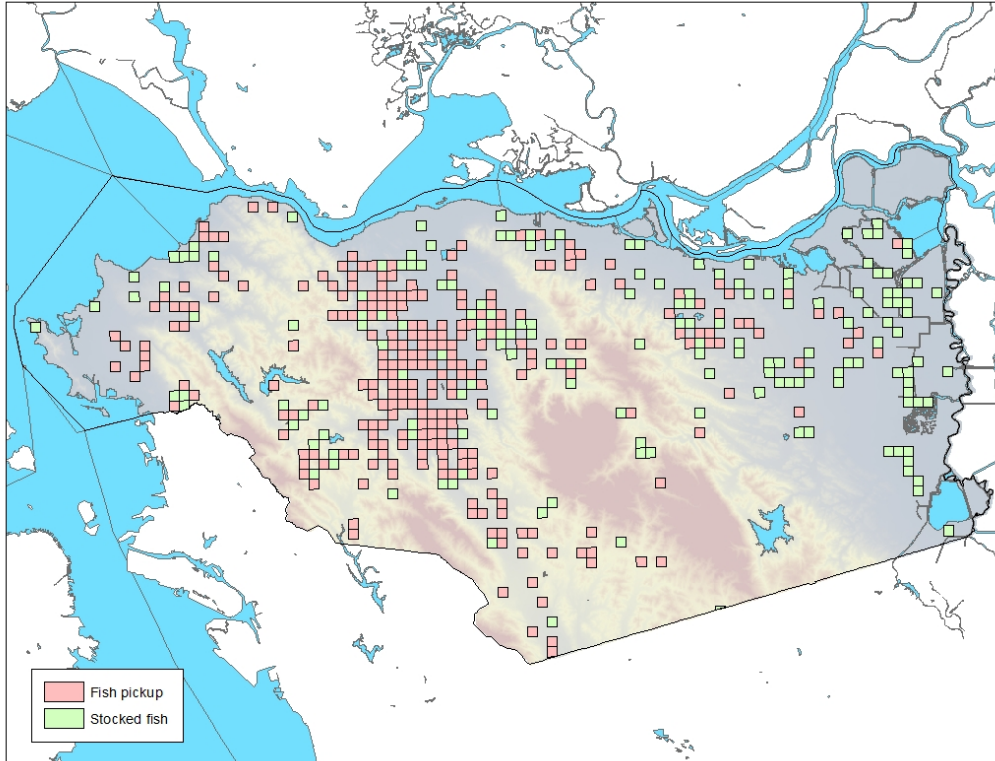


Figure 2. Locations (map coordinates) where mosquitofish were stocked by District technicians or by the public (“Fish pickup”) in 2019.

The District continues to be a lead agency for research on aquaculture and biological control capacity for California native fishes including Sacramento perch, California roach and Sacramento hitch. Because they are native species, the District has been exploring their potential to replace or augment mosquitofish and other aquatic mosquito predators in various sites, and significant in-house production and field releases have led to successful establishment in many moderate-sized permanent water bodies where the adults should be able to establish sustainable breeding populations over time. We continue to work with California native fish species for use in mosquito control and environmental education. We are currently working with four California native fishes - California roach (*Lavinia symmetricus*), Sacramento splittail (*Pogonichthys macrolepidotus*), hardhead (*Mylopharodon conocephalus*), and Sacramento perch (*Archoplites interruptus*). Spawning trials were set up in January 2019 for both hardhead and Sacramento splittail. Egg traps were provided in each of the 3.65m x 0.91m circular fiberglass tanks. Spawning season for the splittail is late February to early July with temperature ranging from 14 to 19°C. We did observe courtship behavior (multiple fish chasing a single fish) in April but no eggs were found in the egg traps. Hardhead spawning season is April and May with water temperatures from 17-20°C. We also saw some courtship behavior but no eggs were found in the egg traps. When we drained the tank to remove fish, one juvenile hardhead was found. We were encouraged with this find and believe that by providing each species with more diverse spawning substrate we will have better results in producing juvenile fish.

Sacramento perch continue to be produced in our wet lab aquaria spawning system. Perch spawned from April 18th to September 23rd. A single pair spawning eleven times produced approximately fifteen thousand larvae each spawn. Larval perch were stocked in several locations, including Summer Lake in Oakley, Montecito retention pond in Concord, and Brickyard pond in Port Costa. A population of perch has become established in Brickyard pond. Montecito pond did have some perch survive but becomes dry by August or September in dry years. We have not yet surveyed Summer Lake. We have partnered on an educational project with the Contra Costa Resource Conservation District and Mt. View Sanitary District titled “Sacramento perch: from Watersheds to Classroom and Back!”. We will provide feed trained Sacramento perch for twenty gallon aquaria that will be set up in classrooms throughout Contra Costa County. A pamphlet covering biology and ecology of Sacramento perch will be provided to each student in the classrooms the aquaria are placed. At the end to the school year there will be a field trip to Mt. View Sanitary District's Moor Hen Marsh where perch will be released in one of Mt. View's ponds. These ponds will also become the primary source of juvenile perch for the project.

In late 2019 we were in contact with the Department of Water Resources regarding stocking native fish species in the Emerson Parcel Mitigation site channels. This site will be connected to Dutch Slough and is part of an effort to restore the delta to tidal wetlands. This is the largest freshwater tidal marsh restoration project in California. It is unique in that ground water is being used to fill the channels. This prevents non- native fish species from entering the channels. We are proposing to stock a number of California native fish species before the connection to Dutch Slough. Stocking the site before connection will allow these natives to become established and permit monitoring before and after the connection. We have requested a small grant and are waiting on the California Department of Fish and Wildlife (DFW) to provide a permit.

A high priority of the District is collaboration with land-owners on improving land and water management to reduce mosquito production while maintaining other desirable ecological functions of the sites, and a major focus of this work is manipulating habitats to promote the survival, reproduction, and dispersal of natural aquatic predators, including fish and aquatic invertebrates such as water beetles and juvenile dragonflies. Target sites include refinery ponds, stormwater treatment facilities, irrigated pastures, duck clubs, sewer treatment marshes, etc. Environmental protection in these projects is ensured through close collaborations with resource and permitting agencies (DFW, the Regional Water Quality Control Board (RWQCB), the Army Corps of Engineers (ACE), the Bay Conservation and Development Commission (BCDC), etc.), as well as with land-owners. Two sub-activities, Physical Control/Source Reduction and Vegetation Management, have been traditionally distinguished in this report, and are discussed below.

Finally, training and treatment protocols for pesticide use emphasize protection of predators when they are present in sites with mosquito larvae. The District's larvicide treatment protocols request field inspectors to observe whether a mosquito-producing site also has the presence of any significant populations of predators, and if so, to avoid pesticides or to use the

pesticide with the least possible impact on natural predators if mosquito populations are sufficient to require prompt treatment.

3. Physical Control

The District is actively working with RWQCB, Contra Costa County Clean Water Program (CCCWP) and other agency staff and property managers to facilitate maintenance of conditions that encourage desirable species while discouraging mosquitoes, and also to reduce the need for staff time (for inspection and control) and for pesticide applications to sites where maintenance is not consistent. To facilitate such interactions, the District added a Vector Control Planner staff position in 2017. Some existing stormwater detention projects have become significant mosquito sources and disease risk foci due to inadequate design and/or maintenance, and our staff has been working closely with the responsible local authorities to correct these conditions, with some noteworthy success. Evaluations of past District source reduction projects continue to indicate that the environmental consequences of these projects have been positive and that increases in tidal action and pro-active water management have particularly benefited a range of wetland-dependent native species.

4. Vegetation Management

The District did not apply any chemical herbicides in 2019. Vegetation management was conducted with hand tools (“brushing”) as needed to allow access for vector surveillance as in past years. No significant or unanticipated problems were encountered.

5. Chemical Control (Pesticides)

The attached tables compare 2019 pesticide use with the previous ten years individually and with ten-year averages. This year, as in the preceding report, the quantity applied is reported as the total amount (pounds) of active ingredients applied. Overall pesticide use was about the same in 2019 vs. 2018 (ca. 7,000 lb) (Fig. 5). The long term trend has been a reduction in the use of larvicidal oils in favor of bacterial larvicides and growth regulators (Table 1). As in previous seasons, adulticides were applied in small quantities using vehicle-mounted ULV (ultra-low volume) or hand foggers in specific rural and residential areas where West Nile virus risk and/or adult mosquito counts were elevated (Fig. 3).

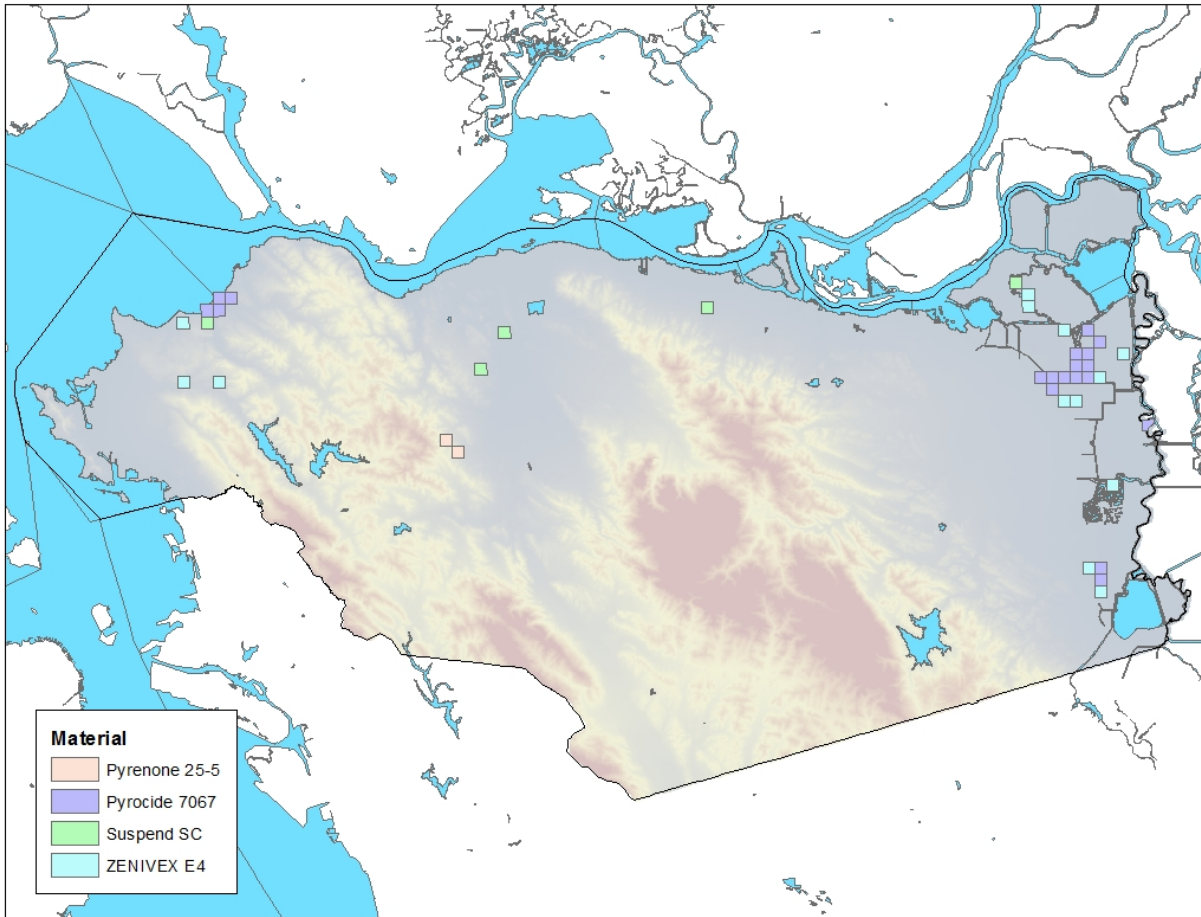


Figure 3. Map coordinates within which adulticides were used in 2019, by material

Pesticide Applications 2009-2019

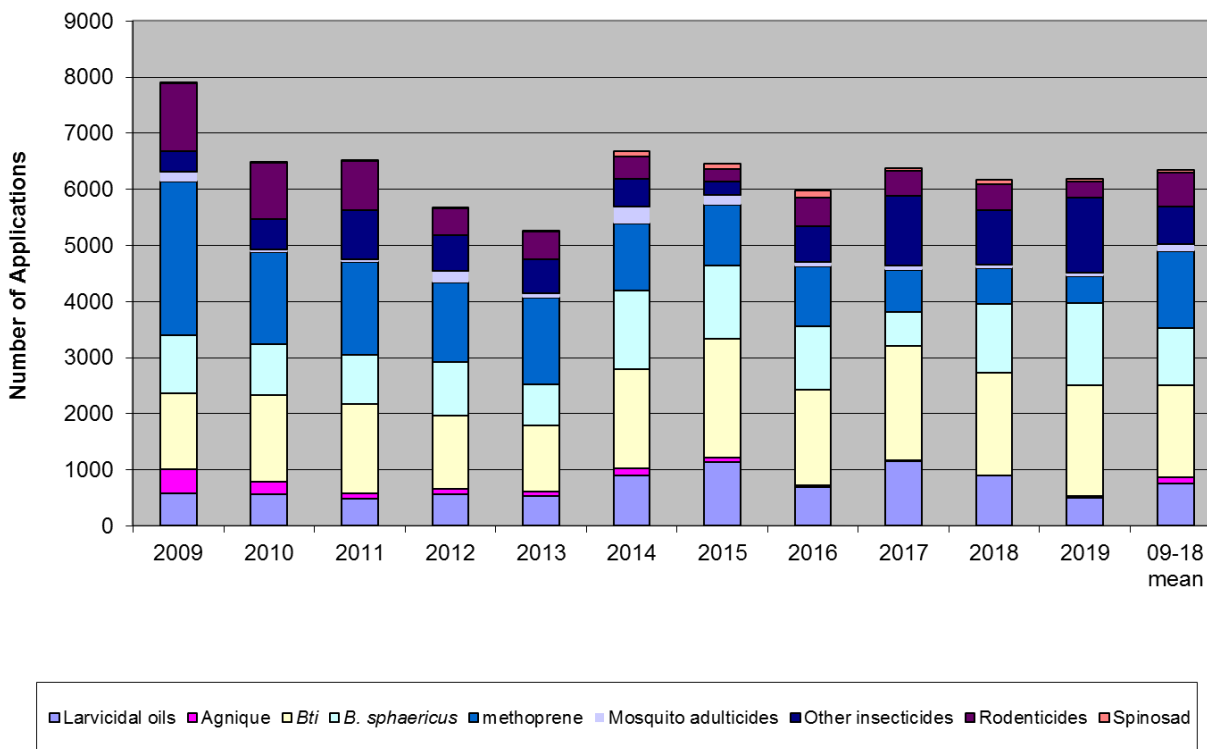


Figure 4. Number of pesticide applications* in 2019, by material
 *see text for explanation

Mosquito larvicides dominate the District’s pesticide applications (Fig. 4), and four active ingredients dominate the District’s larvicide applications. In terms of number of applications, the insect growth regulator methoprene and the bacterial pesticides *Bacillus thuringiensis israelensis* (*Bti*) and *Bacillus sphaericus* (*Bs*), which are considered “biopesticides” by EPA and “least toxic pesticides” by virtually all regulators, are the larvicides of first choice at the District. These products continue to replace larvicidal oils such as GB-1111 and BVA which, in contrast to all other products, are nearly 100% active ingredient and are applied at much higher quantities per acre (up to five gallons/acre in dense vegetation) since they must cover the entire surface area of the source with a thin film in order to suffocate air-breathing mosquito larvae. Therefore, they continue to dominate Figure 5, which shows pounds of active ingredient applied each year. Larvicidal oils are the only products currently used by the District that reliably control mosquito pupae, and therefore these products may continue to be used whenever mosquito pupae are encountered at densities exceeding our control thresholds.

Pesticide Quantities 2009-2019

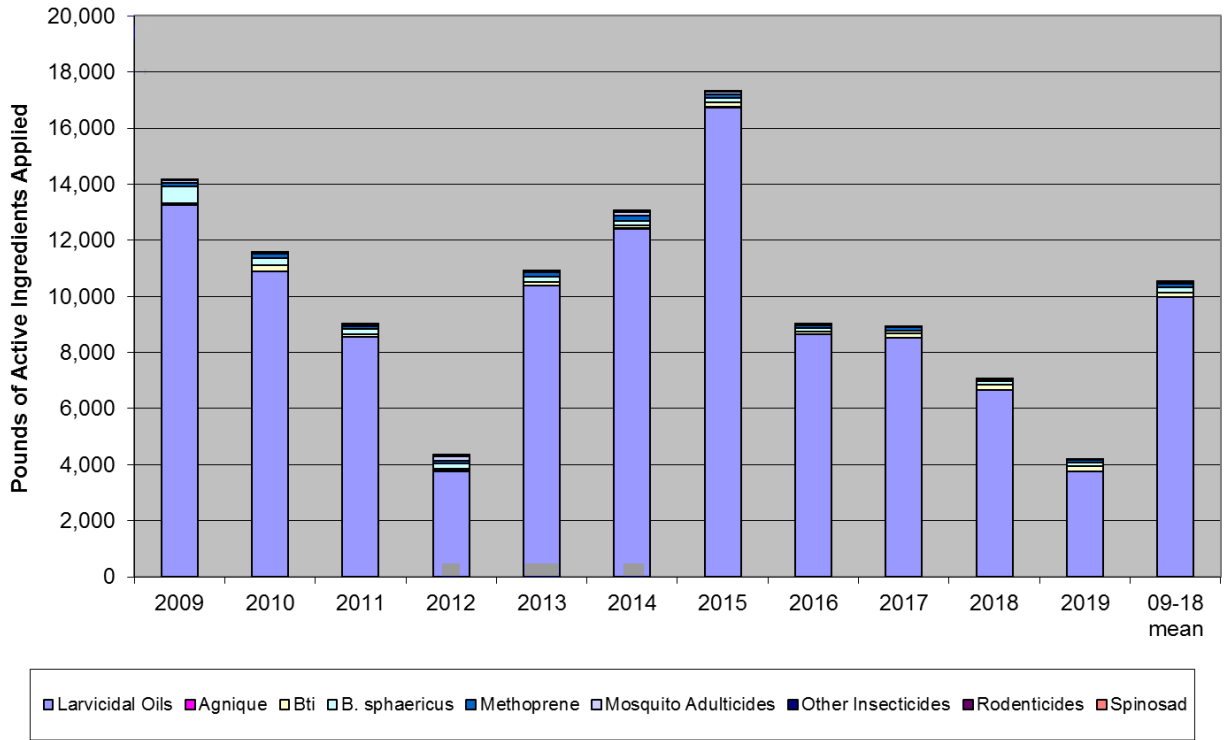


Figure 5. Amount of pesticide applied by material (pounds of active ingredient)

Because of the dominance of larvicidal oils in terms of pounds of active ingredient used annually, Figure 6 shows pesticide quantities with this product excluded to better compare the other products. Agnique, an alternative non-oil based surface film, was used in very small quantities in 2019 (it is useful in swimming pools and other artificial containers, but not in open-water situations where wind and emergent vegetation tend to disrupt the film). Some new formulations of methoprene and *B. sphaericus*, and combinations of *Bti* with *B. sphaericus* and methoprene have been introduced in recent years, but present no potential new environmental consequences. Natular™, containing the active ingredient spinosad, a bacterial fermentation product, continues to be used operationally in small amounts. Since it is similar or lower in risk classification than other biopesticides already in use by the District, it is not expected to have any significant environmental impact. It is also useful in rotation with other larvicides to reduce the likelihood of resistance developing in our local mosquito populations.

Pesticide Quantities (w/o Larv. Oils) 2009-2019

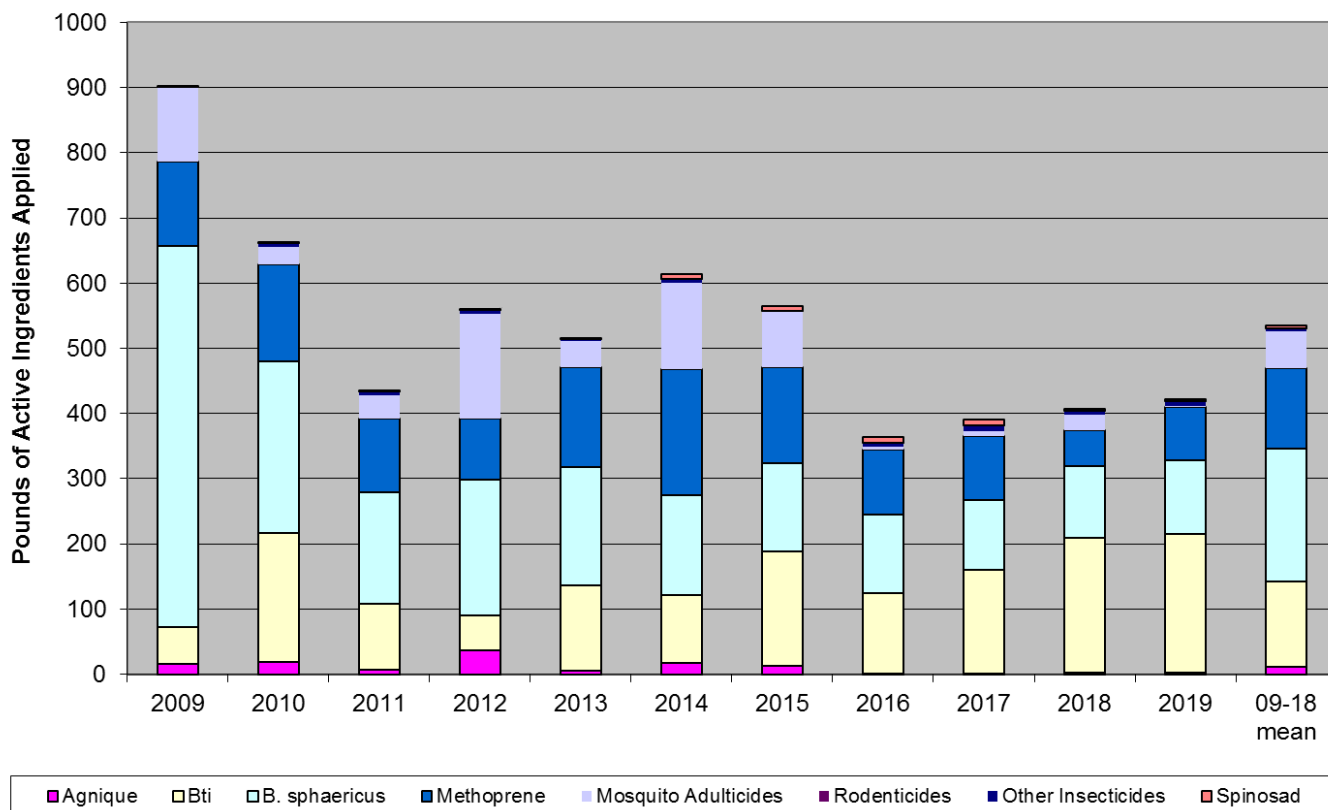


Figure 6. Amount of pesticide applied by material (pounds of active ingredient), excluding oils

District use of mosquito adulticides, in terms of quantity, was lower in 2019 than the previous year and well below the 10-year average, due to low WNV risk and moderate mosquito counts. Overall, use of adulticides continues to be very small in comparison with larvicide use in terms of the number of applications (Fig. 4), the total amount of active ingredient applied (Fig. 6), and the area treated, in keeping with the District’s policy of preventing adult mosquito outbreaks through larval control whenever possible. **Please note that the ‘number of applications’ in the tables and figures counts every applicator, every piece of machinery and (in the case of adulticides) every map coordinate treated as an ‘application’, whether done by the District or by a contract applicator, and thus may not match application counts and material quantities reported to the County Agricultural Commissioner or the District’s website (which reports specific spray events individually, without reporting on how many employees were involved or how many map coordinates were treated).*

Adulticides used by the District in 2019 included the synthetic pyrethroids Zenivex (etofenprox) and Suspend (deltamethrin) and small amounts of the natural pyrethrins products Pyrenone and Pyroicide. Unlike other pyrethrins/pyrethroid products, Zenivex does not contain piperonyl butoxide (PBO) as a synergist and is thus regarded as a ‘reduced risk’ material. Historically, our usage of synthetic pyrethroids had been low compared with natural pyrethrins

(Fig. 7a,b); however, availability of natural pyrethrins varies from year to year, and there have been concerns about the presence of pyrethrin resistance in California mosquito populations, making it prudent not to depend on a single class of products. Resistance testing of *Culex tarsalis* collected in the Martinez waterfront area in 2019 showed that the population is still susceptible to the active ingredient in Zenivex. A colony of fully susceptible *Culex tarsalis* was established in our insectary to provide a control group for future resistance testing and for efficacy evaluations of treatments.

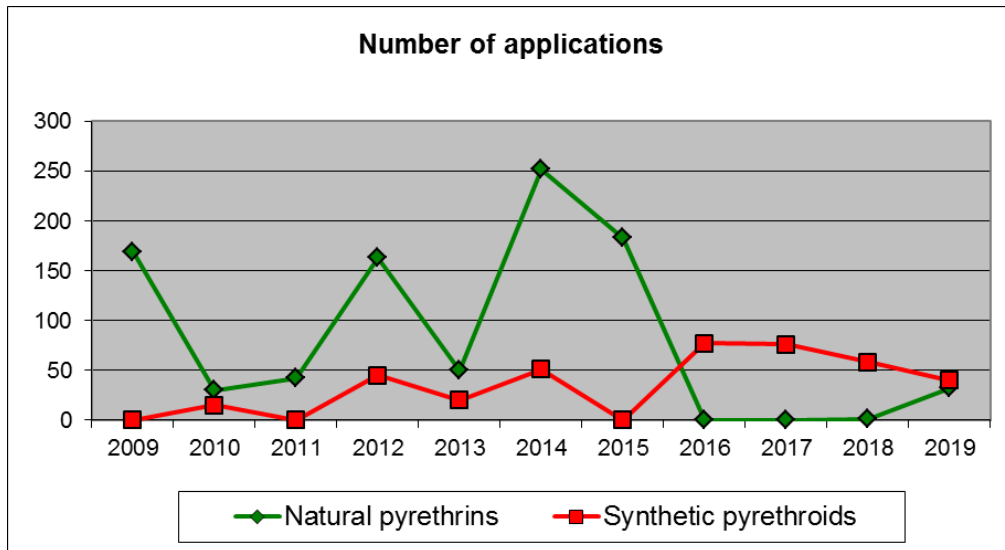


Figure 7 a. Number of adulticide applications by class of material.

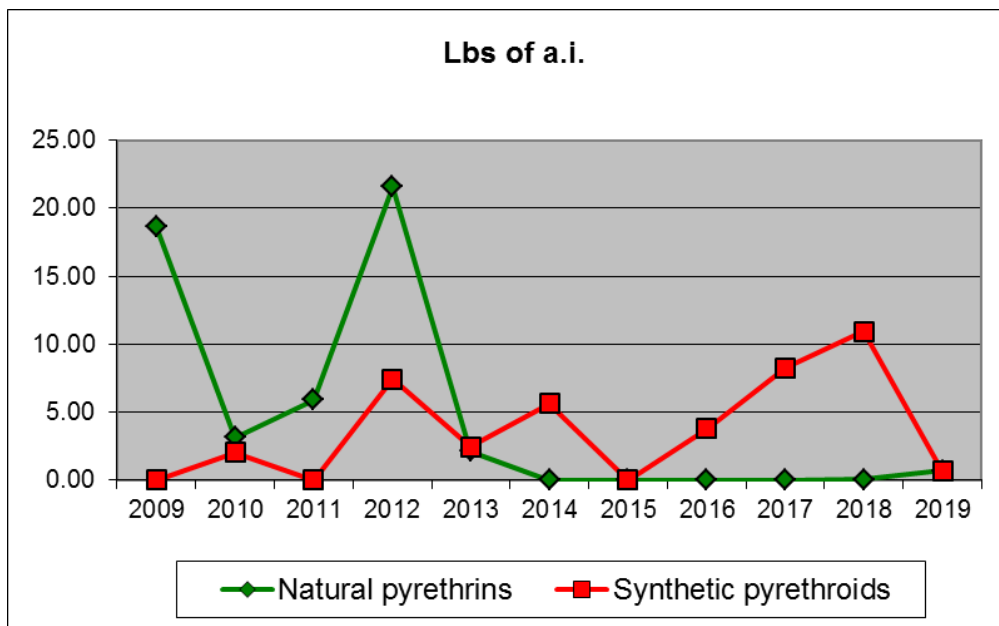


Figure 7b. Amount of a.i. applied by class of material

Applications of other insecticides by the District were limited to the pyrethroid dust product, Drione, used to control yellowjacket nests. Usage of this material against ground-nesting yellowjackets was higher in 2019 due to an increase in yellowjacket service requests.

The number of rodenticide applications by District personnel was lower in 2019 vs. 2018, and the total quantity of rodenticide active ingredients applied remained about the same (<0.01 lb), less than 2/10 ounce of active ingredient (due to the very low percentage of a.i. in these bait-based products). This low level of rodenticide usage has continued even as the District's rodent control program has continued to expand, reflecting the District's focus on education and rodent exclusion, as well as increasingly sophisticated baiting practices. The modes of application continued to minimize the likelihood of accidental contact by the public, pets, or non-target wildlife. District policy continues to prohibit dispersal of rodenticides (or any other pesticides) directly to the public.

6. Other Activities

There were no District activities this year in the areas of Surveillance, Research, Public Education, or Administration which could have caused significant environmental impacts.

7. District Environmental Mitigation Activities

In the October 1999 Negative Declaration and the 2016 PEIR, the District recognized that established District policies require vector surveillance and the use of treatment criteria prior to chemical, biological, or physical control; monitoring and reporting of activities to appropriate agencies; and other measures to minimize potential environmental impacts. Five additional mitigation measures to ensure that these potential impacts remain insignificant were adopted:

- a. Maintenance of up-to-date maps and other information from the California Department of Fish and Wildlife Natural Diversity Database and other reliable sources on the location of Special Status Species and designated Natural Communities in the Project Service Area;
- b. Coordination of District activities with approved Habitat Conservation Plans;
- c. Adoption of new policies as needed and provision of continuing training to field personnel to ensure minimization of specific vector control activities and/or the use of alternative vector control methods at times and in places where those specific vector control activities might otherwise significantly impact Special Status Species or designated Natural Communities;
- d. Ensuring that members of the public that request mosquitofish are informed verbally and in writing to not release them into natural waters; and
- e. Review of agency lists for potential hazards (contaminated soils) prior to implementation of minor physical control projects in historically industrial zones; and additional, site-specific CEQA review prior to implementation of source reduction projects which might result in discharge of hazardous materials into the environment.

The District has adopted policies and practices to ensure that these requirements are met, and continually reviews their effectiveness. District staff, including the General Manager, Program Supervisors, and Scientific Programs Manager, interact with the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, the U.S. Environmental Protection Agency, the American Mosquito Control Association, the Association of American Pesticide Control Officials, and other groups to ensure strong communications and cooperation, and plan and conduct training sessions for District personnel on environmental regulations and compliance measures.

Specific improvements continue to be made to ensure compliance. In 2019, the District maintained its subscription to GIS map layers of endangered species habitat distribution from CDFW. This enables us to provide our field employees with accurate maps of known populations of endangered or threatened species within their zones to avoid any potential conflicts. To improve the accuracy of our mosquitofish distribution data, all fish must be picked up at District headquarters in Concord, where staff can ensure that forms are properly filled out and records can be entered directly into our database. Previous experience indicates that nonstandard releases of mosquitofish were probably quite rare and of little ecological significance, but our ability to document this has improved substantially.

8. Regulations and Outside Research

The District continues to comply fully with all applicable Federal and State regulations, including FIFRA, CEQA, and the Clean Water Act (National Pollutant Discharge Elimination System - NPDES), as detailed in our District's PEIR. We also continue to collaborate with other agencies and groups, including the California Department of Public Health, the University of California, the California Department of Fish and Wildlife, and the US Department of Agriculture (USDA) on policies and projects that enhance our ability to protect public health and environmental quality. In addition, in 2019 we continued to collaborate with the USDA to evaluate potential impacts of aquatic weed control on mosquito larval populations, and provided space in our mosquitofish facility for the rearing of aquatic weed biological control agents by USDA personnel.

9. Acknowledgement

I am grateful to the following individuals for their helpful suggestions and/or assistance with the preparation of the report: Paula Macedo, General Manager; David Wexler, Mosquito Program Supervisor; Sheila Currier, Mosquito Program Supervisor; Terry Davis, Vertebrate Program Supervisor; Eric Ghilarducci, Vector Ecologist II; and Chris Miller, Biologist.

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-18 mean	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-18 mean	
Pesticide (units)																									
Mosquito Larvicides																									
Number of applications																									
Pounds of active ingredient																									
Agnique (lbs)	436	226	96	91	78	121	80	26	24	4	21	118	16	18	7	36	5.71	16.81	12.35	1.01	0.92	1.86	1.98	11.59	
Agnique (gal)	436	226	96	90	73	112	57	7	2	4	11	110	2.14	2.44	0.98	4.83	0.51	1.26	0.70	0.04	0.00	0.25	0.02	1.32	
Agnique Granules (lb)				1	5	9	23	19	22	0	20	11				0.07	1.92	7.44	7.16	0.69	0.91	0.00	1.81	2.60	
Methoprene (lbs)	2,741	1,642	1,666	1,419	1,552	1,248	1,076	1,069	750	637	478	1,380	130	149	113	94	152.72	193.06	146.77	100.47	98.43	54.77	82.75	123.15	
Altosid Briquets (lbs)	232	156	192	126	55	75	65	235	126	41	39	130	1.21	0.84	0.30	1.90	0.47	0.70	0.59	4.36	0.00	0.34	0.27	1.07	
Altosid XR Briquets (lbs)	1329	547	504	640	55	62	26	48	0	0	0	321	37.86	9.90	10.35	15.27	0.25	0.65	0.13	0.89	0.00	0.00	0.00	7.53	
Aquaprene XL Briquets (lbs)	0	0	1	0	0	0	0	0	0	0	0	0	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Altosid Granules (lbs)	0	0	0	0	1	0	23	0	0	0	0	2	0.00	0.00	0.00	0.00	0.03	0.00	0.33	0.00	0.00	0.00	0.00	0.04	
Altosid XR Granules (lbs)	0	0	0	0	0	0	0	0	0	0	0	0	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Altosid XR Ingot (lbs)					726	400	239	138	129	41	19	279				23.63	16.79	3.76	1.83	0.00	1.20	0.26	7.87		
Altosid Pellets (lbs)	249	399	360	345	514	490	475	516	339	187	146	387	88.15	134.47	100.30	67.07	125.21	174.43	141.70	88.83	92.69	51.65	17.22	106.45	
Altosid Pellets WSP (lbs)	137	135	65	54	57	63	61	27	26	21	40	65	0.20	0.34	0.14	0.13	0.14	0.18	0.00	0.09	0.08	0.07	0.12	0.14	
Aquaprene Tossits (lbs)	9	0	1	0	0	0	0	0	0	0	0	1	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Altosid P35 (lbs)											74	na											60.14	na	
Altosid Liquid (Duplex) (gal)	785	405	543	252	135	158	187	104	107	9	41	269	0.26	0.41	0.23	0.12	0.10	0.04	0.03	0.51	0.63	0.04	0.49	0.24	
MetaLarv S-PT (lbs)				2	9	0	0	1	0	0	0	0				8.16	2.14	0.00	0.00	0.11	0.00	0.00	0.00	1.49	
VectoPrime FG (lbs)**									23	338	119	181								0.22	1.18	0.49	0.70		
Larvicidal Oils (lbs)	574	567	491	567	540	904	1138	697	1147	895	505	752	13,248	10,881	8,551	3,753	10,390	12,415	16,738	8,634	8,522	6,646	3,746	9,977.84	
Golden Bear 1111 (gal)	574	539	24	0	0	0	0	0	0	0	0	114	1783	1463	86	0	0.00	0.00	0.00	0	0	0	0	333.22	
BVA Larvicidal Oil (gal)		28	467	567	540	904	1130	694	1147	872	470	705		1	1065	505	1398.38	1663.10	2245.00	1162	1147	872	470	11,117.64	
CoCoBear (gal)							8	3	0	23	35	9							8.00	0	0	23	35	7.76	
Bti (lbs)	1,352	1,546	1,584	1,304	1,168	1,761	2,115	1,706	2,036	1,833	1,974	1,641	56	198	101	54	130.62	104.01	176.19	123.60	158.69	206.49	213.35	130.90	
Vectobac 12 AS (gal)	1311	1432	1400	762	939	856	830	591	686	364	349	917	6.72	3.15	11.45	2.80	2.58	1.06	9.16	1.59	2.93	0.09	1.31	4.15	
Vectobac Granules (lbs)	40	86	37	60	26	11	313	237	42	18	79	87	3.73	19.28	5.22	9.16	8.48	1.26	0.90	25.26	0.32	0.53	6.13	7.41	
FourStar Briquet* 45d (lbs)			27	0	9	1	0	0	0	0	0	5			0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FourStar Briquet* 90d (lbs)				1	6	1	0	0	0	0	0	1				0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FourStar Briquet* 180d (lbs)			105	405	28	554	3	44	5	3	0	143		0.84	6.38	0.19	9.54	0.01	0.17	0.01	0.00	0.00	2.14		
FourStar CRG (lbs)											9	na											0.05	na	
VectoMax CG* (lbs)	1	28	15	76	160	338	872	687	0	0	0	218	1.80	155.35	8.01	17.08	102.45	85.21	105.53	85.19	0.00	0.00	0.00	56.06	
VectoMax WSP* (lbs)							97	147	497	389	332	283						0.40	0.98	5.47	2.75	3.30		2.40	
VectoMax FG* (lbs)									783	721	1086	752									117.59	131.62	164.51	124.60	
VectoPrime FG** (lbs)									23	338	119	181									13.17	70.92	29.48	42.05	
B. sphaericus (lbs)	1,033	894	872	957	732	1,407	1,307	1,125	1,385	1,226	1,469	1,079	585	263	170	209	181.27	153.88	135.50	119.93	107.06	111.44	112.04	203.61	
Vectolex Granules (lbs)	758	710	585	331	451	381	313	237	83	106	42	396	433.95	155.97	110.40	53.10	39.50	35.20	65.30	67.65	32.05	30.70	10.93	102.38	
Vectolex WDG (lbs)	61	13	78	73	27	2	8	0	1	0	0	26	148.22	12.35	48.18	106.29	77.58	5.38	6.66	0.00	1.02	0.00	0.00	40.57	
Vectolex WSP (lbs)	214	143	62	70	54	130	14	10	16	7	0	72	1.73	1.06	1.90	1.13	1.18	4.87	0.15	0.15	0.12	0.10	0.00	1.24	
FourStar Briquet* 45d (lbs)			27	1	6	1	0	0	0	0	0	4			0.12	0.00	0.35	0.03	0.00	0.00	0.00	0.00	0.00	0.06	
FourStar Briquet* 90d (lbs)				1	6	1	0	0	0	0	0	1				0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FourStar Briquet* 180d (lbs)			105	405	28	554	3	44	5	3	0	143		5.04	38.28	1.17	57.27	0.08	1.03	0.03	0.01	0.00	0.00	12.86	
FourStar CRG (lbs)											9	na											0.42	na	
VectoMax CG* (lbs)	1	28	15	76	160	338	872	687	0	0	0	218	1.08	93.20	4.81	10.26	61.47	51.13	63.32	51.11	0.00	0.00	0.00	33.64	
VectoMax WSP* (lbs)							97	147	497	389	332	283						0.24	0.59	5.47	3.28	1.65	1.98	1.44	
VectoMax FG* (lbs)									783	721	1086	752									70.56	78.97	98.71	74.77	
Spinosad (lbs)	4	1	6	5	26	111	88	114	55	89	50	50	0.06	0.04	0.02	1.52	1.52	7.43	7.22	8.41	8.44	2.60	2.64	3.73	
Nattular T30 (lbs)	3	0	0	0	0	0	2	6	0	0	0	1	0.01	0.00	0.00	0.00	0.00	0.00	0.83	2.68	0.00	0.00	0.00	0.35	
Nattular G (lbs)	1	0	0	0	1	1	22	12	0	1	0	4	0.05	0.00	0.00	0.00	0.01	0.01	0.80	0.08	0.00	0.00	0.00	0.09	
Nattular G30 (lbs)			3	7	34	62	70	46	59	40	40	40			1.38	1.00	2.46	5.41	4.00	8.41	2.60	2.63	3.61		
Nattular G30 WSP (lbs)											3	na											0.01	na	
Nattular XRG (lbs)		1	0	1	2	50	0	5	1	0	0	7		0.04	0.00	0.13	0.45	0.50	0.00	0.05	0.00	0.00	0.00	0.13	
Nattular XRT (gal)											29	29										1.45	0.02	1.45	
Nattular 2EC (gal)			6	1	16	26	2	11	2	0	0	8			0.00	0.00	0.01	0.46	0.02	0.11	0.00	0.00	0.00	0.08	
Nattular DT (lbs)									10	6	0	5									0.51	0.02	0.00	0.01	0.18

*VectoMax and FourStar are a combination of Bti and B. sphaericus. ** VectoPrime is Bti and methoprene. Active ingredients tabulated separately.

Table 1. Larvicide usage by material type during 2019 compared with previous ten years

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	09-18 mean
Pesticide (units)												
Number of applications												
Mosquito Adulticides												
Natural Pyrethrins (lbs)	189	30	42	163	50	252	183	0	0	0	32	89
Merus (gal)												1
Pyrenone 25-5 (gal)	134	4	2	0	1	0	0	0	0	0	2	16
Pyrocidate 7396 (gal)	35	26	40	163	22	0	0	0	0	0	0	32
Pyrocidate 7067 (gal)					27	252	183	0	0	0	30	92
Synthetic Pyrethroids (lbs)	0	15	0	45	20	51	0	77	76	58	40	34
Scourge (gal)	0	15	0	45	20	32	0	0	0	16	0	13
Zenivex E4 (gal)					19	0	77	76	42	29	43	0
Suspend SC (gal)											11	na
Synergists* (lbs)	169	45	42	208	70	284	183	0	0	16	32	102
Piperonyl butoxide (gal)												
Other Insecticides												
Total (lbs)	374	542	871	632	469	503	241	636	1241	978	1337	649
Drione (lbs)	374	541	871	632	310	499	241	636	1241	978	1337	632
Delta Dust (lbs)					159	3	0	0	0	0	0	27
M-Pede (gal)	0	1	0	0	1	0	0	0	0	0	0	0
EcoPCO DX (lb)					117	0	0	0	0	0	0	20
Essentria D (lb)					17	0	0	0	0	0	0	3
Rodenticides												
Total (lbs)	1216	1018	851	444	375	386	343	522	452	444	290	605
Confrac Super-Size Box (lbs)†	1007	945	666	390	373	135	96	101	59	78	0	385
Confrac Small Box (lbs)†					24	27	1	0	14	3	0	9
Ditrac Box (lbs)‡	209	73	161	27	1	0	111	346	330	366	181	162
Ditrac Cake (lbs)												11
First Strike Box (lbs)%					11	15	115	188	0	19	0	44
Terad 3 Box (lbs)&					15	0	4	63	122	53	63	0
09-18 mean												
Pounds of active ingredient												
Natural Pyrethrins (lbs)	18.88	3.15	5.93	21.61	2.14	2.14	0.00	0.00	0.00	0.04	0.75	4.69
Pyrenone 25-5 (gal)	2.06	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pyrocidate 7396 (gal)	0.48	0.42	0.80	2.92	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.19
Pyrocidate 7067 (gal)	0.00	2.02	0.00	7.43	2.47	5.63	0.00	3.80	8.25	10.94	0.64	0.45
Synthetic Pyrethroids (lbs)	0.00	0.28	0.00	1.03	0.34	0.78	0.00	0.00	0.00	0.53	0.00	0.27
Scourge (gal)	0.00	0.28	0.00	1.03	0.34	0.78	0.00	0.00	0.00	0.53	0.00	0.27
Zenivex E4 (gal)					0.16	0.00	0.00	0.51	1.11	0.96	0.09	0.46
Suspend SC (gal)											0.02	na
Synergists* (lbs)	93.80	21.97	29.64	130.86	35.77	127.33	86.62	0.00	0.00	11.81	0.00	48.89
Piperonyl butoxide (gal)	12.88	2.97	4.01	17.68	4.83	17.21	11.71	0.00	0.00	1.60	0.00	6.61
Other Insecticides												
Total (lbs)	1.4	6.0	7.2	5.8	3.0	6.0	0.6	5.9	8.7	6.4	8.0	4.64
Drione (lbs)	1.42	4.30	7.19	5.79	2.68	6.01	0.55	5.87	8.72	6.43	7.99	4.45
Delta Dust (lbs)					0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
M-Pede (gal)	0.00	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EcoPCO DX (lb)					0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Essentria D (lb)					0.11	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Rodenticides												
Total (lbs)	0.04	0.03	0.03	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02
Confrac Super-Size Box (lbs)†	0.030	0.029	0.02230	0.01200	0.01583	0.00480	0.00390	0.00723	0.00525	0.00488	0.00000	0.01
Confrac Small Box (lbs)†					0.00008	0.00033	0.00001	0.00025	0.00001	0.00000	0.00000	0.00
Ditrac Box (lbs)‡	0.010	0.004	0.00805	0.00135	0.00005	0.00000	0.00190	0.00585	0.00895	0.00299	0.00	0.00
Ditrac Cake (lbs)											0.00130	na
First Strike Box (lbs)%					0.00018	0.00065	0.00793	0.00600	0.00119	0.00000	0.00000	0.00
Terad 3 Box (lbs)&					0.00071	0.00	0.00000	0.00000	0.00000	0.00000	0.00000	0.00
09-18 mean												

*PBO is a component of pyrethroid adulticides. Not listed separately prior to 2009

†Bromadiolone

‡Diphenone

%Difethalone

&Cholecalciferol

Table 2. Other pesticide usage by material type during 2019 compared with previous ten years

**CONTRA COSTA MOSQUITO AND VECTOR CONTROL DISTRICT
BOARD OF TRUSTEES**

2020 TRUSTEE COMMITTEES

NAME	ADVANCE	AUDIT	BUDGET	EXECUTIVE	PERSONNEL
AINSLEY					
BANA					X
CARLSTON		X		X*	X
CLAYTON					X
COWEN			X		X
DIAMOND			X*	X	
FITZSIMMONS		X*			
HOGAN	X				
HOWELL		X			X
KRIEG			X	X	
LUCACHER	X*	X			
MARKER			X		
MINTER					
MURRAY	X		X		
NGUYEN			X		
ODUNLAMI				X	X*
PAY	X	X			
PELLEGRINI	X	X		X	X
PINCKNEY					
THOMAS					
YOUNG			X		

* CHAIRPERSON

**CONTRA COSTA MOSQUITO & VECTOR CONTROL DISTRICT
BOARD OF TRUSTEES
CALENDAR FOR 2020**

MONTH	DAY	DATE	TIME	MEETING
JANUARY	Monday Monday	13 13	7:00 PM	BOARD OF TRUSTEES CCMAD FINANCING CORP
FEBRUARY	Monday TBD	10 TBD	6:00 PM 6:00 PM	EXECUTIVE COMMITTEE <i>(canceled)</i> ADVANCE PLANNING COMMITTEE <i>(canceled)</i>
MARCH	Monday Monday	9 23	7:00 PM 6:00 PM	BOARD OF TRUSTEES ADVANCE PLANNING COMMITTEE
APRIL	Monday	13	6:00 PM	BUDGET COMMITTEE
MAY	Monday Monday Monday	4 11 18	6:00 PM 7:00 PM 6:00 PM	ADVANCE PLANNING COMMITTEE BOARD OF TRUSTEES PERSONNEL COMMITTEE
JUNE	Monday Monday	8 22	6:00 PM 6:00 PM	EXECUTIVE COMMITTEE BUDGET COMMITTEE
JULY	Monday Monday	13 13	6:00 PM 7:00 PM	BUDGET COMMITTEE BOARD OF TRUSTEES
AUGUST	Monday	17	6:00 PM	AUDIT COMMITTEE
SEPTEMBER	Monday	14	7:00 PM	BOARD OF TRUSTEES
OCTOBER	Monday	12	6:00 PM	AUDIT COMMITTEE
NOVEMBER	Monday	9	7:00 PM	BOARD OF TRUSTEES
DECEMBER				