

DELTA VECTOR CONTROL DISTRICT

Dr. Mustapha Debboun
General Manager

Post Office Box 310 * Visalia, California 93279-0310

Mir Bear-Johnson
Assistant Manager

1737 West Houston Avenue * Visalia, California 93291

Hector Cardenas
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Crystal Grippin
Scientific Program Manager

www.deltavcd.com

Sheri D. Davis
Administrative Assistant

Andrea Troupin
Biologist

Mark Dyngge
Systems Administrator

Mark Nakata
Biologist

DATE: Friday, March 5, 2021

TO: Board of Trustees, Delta Vector Control District

FROM: Dr. Mustapha Debboun, General Manager

SUBJECT: Regular Meeting of the District's Board of Trustees

TIME: Wednesday, March 10, 2021 at 4:30 p.m.

PLACE: District Boardroom, 1737 West Houston Avenue, Visalia

AGENDA:

1. Roll Call

2. New Employee Introduction

The General Manager will introduce Ms. Andrea Troupin to the Board of Trustees.

ACTION

3. Consent Calendar

- a. February Minutes
- b. February Special Payroll (Board Order #20)
- c. February Bills (Board Order #21, #22)
- d. March Payroll (Board Order #23)

4. Public Forum

Members of the public may address the Board.

5. Staff Presentations

The staff will present the posters they presented during MVCAC and AMCA Annual Virtual Conferences.

6. Agency Spotlight

The General Manager will discuss the submission of the Delta Vector Control District's (DVCD) application for the Mosquito and Vector Control Association of California (MVCAC) Agency Spotlight.

7. Staff Report

The General Manager will report on items of operational interest.

8. Surveillance 2021

The Assistant Manager will report on the new plan for the Urban Vector Control Program, 2021 mosquito trapping and testing program.

ACTION

9. Request to Increase Credit Card Limit

The Administrative Assistant will provide information on the need for an increased limit on District credit cards to handle heavy use months.

ACTION

10. Proposed New Classification – Community Education and Outreach Coordinator

The General Manager will provide the proposed position, chain of command and associated cost benefits for approval.

11. Assessment Benefit Analysis for Invasive *Aedes aegypti*.

The General Manager will provide an update on the Assessment Benefit Analysis.

ACTION

12. Enterprise Fleet Management

The General Manager will request approval to pay delivery charges from Clovis to Visalia for the new vehicles.

13. Adjournment

Adjourn meeting of the Board of Trustees to reconvene on Wednesday, April 14, 2021 at 4:30 p.m. in the Delta Vector Control District Boardroom, 1737 W. Houston Ave., Visalia, CA.

Note: Items designated for information are appropriate for Board action if the Board wishes to take action.

1. Roll Call

2. New Employee Introduction

The General Manager will introduce Ms. Andrea Troupin to the Board of Trustees.

3. Consent Calendar

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Mark Nakata
Biologist

Javier Valdivias
Biologist

Minutes of the Board of Trustees – Wednesday, February 10, 2021

1. Roll Call:

Present: Greg Gomez, President; Belen Gomez, Secretary, Michael Cavanagh, Linda Gutierrez, Rosemary Hellwig, Larry Roberts, and Kevin Caskey.

Staff: Dr. Mustapha Debboun, General Manager; Sheri Davis, Administrative Assistant; Mir Bear-Johnson, Assistant Manager.

2. Oath of Office:

Administrative Assistant, Sheri Davis, swore in the re-appointed Trustees, Belen Gomez and Kevin Caskey.

3. Election:

Following discussion, it was moved by Larry Roberts, seconded by Kevin Caskey and the Board members unanimously voted to keep the Officers Greg Gomez as President and Belen Gomez as Secretary for the 2021 calendar year.

4. Consent Calendar:

The Administrative Assistant provided information on the following items:

Board Order #20 – Biologist Jesse Erandio final pay; incoming Biologist Andrea Troupin pro-rated February payroll.

Board Order #21 – New Operations Program Manager Cardenas pro-rated February payroll.

5. Public Forum:

None.

6. Staff Report:

The General Manager reported on winter work, COVID-19 procedures and new hires, and answered questions from the Board.

7. Quarterly Expense/Revenue Report:

The Administrative Assistant presented the financial information through December 31, 2020. The District incurred additional expenses due to the mosquitofish hatchery building project, but our contingencies and capital reserve should cover any overage. Tulare County provided updated revenue estimates, and the current secured property tax is projected to have approximately \$95,000.00 in unanticipated revenue. We will have a clearer picture of this projection after April distributions.

8. Financial Audit 2019/20:

The Administrative Assistant reported that Price Paige & Company completed a very thorough audit with no reported material weaknesses or misstatements.

Following discussion, it was moved by Michael Cavanagh, seconded by Rosemary Hellwig, and the Board members unanimously approved the June 30, 2020 Financial Audit.

9. Enterprise Fleet Management & Assessment Benefit Analysis for Invasive *Aedes aegypti*:

The General Manager informed the Board of Trustees that the status of the vehicles on order from Enterprise have been shipped on Wednesday, February 10, 2021.. The District anticipates possession of the trucks by mid to late March. Discussion followed regarding the sale of the 5 trucks being replaced. Following past procedures the vehicles will be sold at public auction.

The second revision has been completed on the official Initial *Aedes aegypti* Assessment Survey documents. They are scheduled to be finalized by February 23, 2021, and mailed to constituents by the end of the month.

10. Inspection Warrant:

The General Manager has been in communication with legal counsel, Dale Bacigalupi, regarding the Inspection Warrant for 2021. The General Manager and Mr. Bacigalupi will meet with Judge Hillman to secure the warrant, scheduled for Thursday, February 18, 2021.

11. COVID-19 Prevention Program (CPP):

Due to Cal/OSHA requirements employers must implement a written COVID-19 Prevention Program (CPP). The General Manager presented the written CPP for adoption.

Following discussion, it was moved by Michael Cavanagh, seconded by Larry Roberts, and the Board members unanimously approved the CPP as presented.

12. Virus Testing for Tulare and Kings Mosquito Abatement Districts:

The General Manager requested approval to test birds and mosquito samples for Tulare and Kings Mosquito Abatement Districts. Delta Vector Control District will charge the same rate as that of the California Department of Public Health. A deposit of 50% of estimated tests from each District will be required to cover the upfront costs. The deposit will be applied to actual amount due, and billed monthly once deposit is exhausted.

Following discussion, it was moved by Rosemary Hellwig, seconded by Larry Roberts, and the Board members approved the virus testing for Tulare and Kings Mosquito Abatement Districts. Trustee Michael Cavanagh abstained from the vote.

13. Adjournment:

The meeting of the Board of Trustees was adjourned at 5:13 p.m.

Dr. Mustapha Debboun, Recording Secretary

CLAIM #	PAYEE	DESCRIPTION	Budget Line/Item	AMOUNT
35024	HECTOR CARDENAS	OPERATIONS PROGRAM MANAGER (start date 2/22/21)		1,422.59
35025	DELTA VECTOR CONTROL DIST - EFTPS	Social Security/Medicare/Federal Income Tax		329.32
35026	DELTA VECTOR CONTROL DIST - EFTPS	State Income Tax		19.37
35027	DELTA VECTOR CONTROL DIST - EFTPS	CalPERS Retirement		372.59
		TOTAL PAYROLL		\$2,143.87
35028	ADAPCO	BVA Oil - 3,111 gallons	Spray Material	24,935.19
35029	ADVANCED AUTO & SMOG	Smog Vehicles - T5, T100, T36, T38, T32, T7, T35, T39	Auto Supplies/Maint	240.00
35030	AT&T	Long Distance/Toll Free	Telephones/Cell Phones	22.51
35031	CENTRAL VALLEY BUSINESS FORMS			662.48
		Face Masks w/Logo	545.39	Safety Supplies
		Business Cards - Harlien, Troupin	117.09	Office Supplies
35032	FRONTIER PRECISION, INC			39,178.53
		Field Seeker Mesa Tablet - Capital	2,432.00	Spray Equip - Capital
		Filed Seeker Data Collection	36,746.53	Subscriptions
35033	HARBOR FREIGHT	Ear Muffs, Welding Gloves		49.65
35034	KEY EVIDENCE	Keys		83.00
35035	MISSION LINEN SUPPLY			325.40
		Uniforms	167.52	Uniforms
		Janitorial	157.88	Janitorial
35036	SBC	Office Phone/Fax		193.75
35037	SO CALIF GAS COMPANY	Utilities		703.17
35038	US BANK			2,976.87
		Calif Office Liquidators - Desk for Supervisor	216.50	Office Supplies
		Google Suites	132.00	Subscriptions
		Best Buy - AC Power Adapter	21.69	Bldg/Yard Supplies
		Idea Printing - Conference Poster	141.05	Office Supplies
		Target - Clorox, Wipes, Sterilite Container	31.40	Bldg/Yard Supplies
		FAA Drone Zone - Phantom 4 Pro Registration	5.00	Professional Services
		PSI Services - Drone Test (Mark)	96.00	Professional Services
		Army Surplus World - Backpack Shoulder Straps	112.05	Sprayer Supplies
		Walmart - ATV Helmets	80.07	Safety Supplies
		Cycle Gear - ATV Helmets	37.96	Safety Supplies
		Argo ATV Parts - Blower Motor T47	137.41	Auto Supplies
		Mini PCR - Micro Pipette Set, Tips	204.00	Lab Supplies
		Indeed - Job Ads (Jan & Feb)	607.50	Public Relations
		AMCA - Andrea Troupin Membership Dues	145.00	Dues
		Panera - Bagels for Staff Appreciation	17.49	Misc. Expense
		Amazon - Cases and Screen Protectors for New Phones	400.38	Telephone/Cell Phones
		Amazon - Goggles, Forehead Thermometer, First Aid Supplies	251.67	Safety Supplies
		Amazon - Classification Folders, Pens, Pencils, etc.	87.36	Office Supplies
		Buckhorn Pumps - Ceramic Cylinder T27	88.00	Auto Supplies
		VOIP Supply - 2 Phones for New Employees	164.34	Office Supplies
35039	LIFE TECHNOLOGIES CORP	Magmax Binding Solution, Taqman Virus Kits		4,876.66
		TOTAL BILLS		\$74,247.21
		TOTAL BOARD ORDER #22		\$76,391.08

March 2021 Payroll

Board Order No. 23
Consent Calendar Exhibit V

VOUCHER	PAYEE	DESCRIPTION	Budget Line Item	AMOUNT
35040	MUSTAPHA DEBBOUN	MANAGER		7,434.89
35041	MIR BEAR-JOHNSON	ASSISTANT MANAGER		4,649.24
35042	CRYSTAL GRIPPIN	SCIENTIFIC PROGRAM MANAGER		4,614.37
35043	HECTOR CARDENAS	OPERATIONS PROGRAM MANAGER		5,081.37
35044	MARK NAKATA	BIOLOGIST		5,166.38
35045	JAVIER VALDIVIAS	BIOLOGIST		4,231.48
35046	ANDREA TROUPIN	BIOLOGIST		4,618.00
35047	MARK DYNGE	SYSTEMS ADMINISTRATOR		6,738.12
35048	SHERI DAVIS	ADMINISTRATIVE ASSISTANT		5,042.17
35049	MARY ELLEN GOMEZ	ADMINISTRATIVE ANALYST		3,875.06
35050	PAUL HARLIEN	FOREMAN		4,967.90
35051	RICK ALVAREZ	VECTOR CONTROL SUPERVISOR		5,136.21
35052	BRYAN RUIZ	VECTOR CONTROL TECHNICIAN III		4,216.42
35053	BRYAN FERGUSON	VECTOR CONTROL TECHNICIAN III/MECHANIC		4,250.24
35054	MARIO SANCHEZ	VECTOR CONTROL TECHNICIAN III/MECHANIC		3,698.02
		<i>Sub-Total Full-Time Payroll</i>		\$73,719.87
35055	VSP	Vision Plan Premium for March 2021		350.67
35056	DELTA DENTAL PLAN	Dental Plan Premium for March 2021		1,153.70
35057	LINCOLN FINANCIAL GROUP	Life/STD & LTD Insurance for March 2021		1,079.58
35058	DELTA VECTOR CONTROL DIST - EFTPS	CalPERS Health Insurance Premium for March 2021		15,940.67
35059	DELTA VECTOR CONTROL DIST - EFTPS	Social Security/ Medicare/ Federal Income Tax	Employee 71% - District 29%	30,365.60
35060	DELTA VECTOR CONTROL DIST - EFTPS	State Income Tax	Employee 100%	4,754.31
35061	DELTA VECTOR CONTROL DIST - EFTPS	CalPERS Retirement	Employee 40% - District 60%	20,615.93
35062	DELTA VECT CONT DIST	Flex Benefit Plan	Employee 100%	808.31
35063	ICMA RETIREMENT TRUST	Deferred Retirement Trust	Employee 77% - District 23%	1,172.80
		<i>Sub-Total for Payroll Taxes & Benefits</i>		\$76,241.57
		<i>Total Regular Payroll & Benefits</i>		\$149,961.44
35064	ADMINISTRATIVE SOLUTIONS INC	Flexible Benefit Plan Admin Fee	Professional Services	71.50
35065	ADVANCED AUTO & SMOG	Smog T6, T11, T26, T33	Auto Supplies/Maint	120.00
35066	AUTOZONE	Parking Brake Cable T35	Auto Supplies/Maint	30.51
35067	CITY OF VISALIA	Solid Waste Disposal	Utilities	126.85
35068	COMCAST BUSINESS	Internet	Telephone/Cell Phones	210.73
35069	DELL FINANCIAL SERVICES	4 Desktop Computers (Sheri, Hector, Auto Shop, Mark N)	Office Supplies	2,362.24
35070	HARBOR FREIGHT	Blades, Drill Bits, Cable Ties, Gravity Texture Gun	Bldg/Yard Supplies	92.72
35071	HOME DEPOT	Paint, Stencils, Office Remodel Dr. & Mark, Sign Project, Cat 6 Cable, Gazebo Repairs	Bldg/Yard Supplies	876.18
35072	KAST & COMPANY	The Good Life - Mar/Apr 2021	Public Relations	475.00
35073	LOWE'S	Office Remodel Dr. & Mark, Shop Lights, Totes, Paint Supplies, etc.	Bldg/Yard Supplies	1,523.98
35074	NAPA AUTO PARTS	Brake Drums T35, Rearview Mirror J31, Degreaser, Wheel Seals T43	Auto Supplies/Maint	215.03
35075	OFFICE DEPOT	3 Sets Computer Speakers, Envelopes, Report Covers, Desk Organizer	Office Supplies	156.30
35076	PACIFIC WEST CONTROLS	Monthly Service Contract	Maint Contracts	250.00
35077	SMART & FINAL	Cleaning Supplies, Paper Products, Hand Soap, Storage Bags	Bldg/Yard Supplies	208.43
35078	SO CALIF EDISON	Utilities	Utilities	1,441.38
35079	STUART'S JOHANSON & THOMAS	Square Tubes, FMS	Bldg/Yard Supplies (new offices)	97.36
35080	TF TIRE SERVICE	Tires T1	Auto Supplies/Maint	567.74
35081	VALLEY PACIFIC PETROLEUM	Gasoline	Gasoline	330.38
		<i>Total Bills</i>		\$9,156.33
		TOTAL BOARD ORDER #23		\$159,117.77
	<u>Bills Added After 3/5/2021</u>			
	GIOTTO'S ALARM TECH	Replace Quonset Motion Detector	Maint Contract	178.64
	LIFE TECHNOLOGIES CORP	Magmax Virus Kits	Lab Supplies	6,365.61
	VALLEY INDUSTRIAL MED GROUP	Pre-Employment Exams	Professional Services	375.00
	WESTAMERICA BANK	Lease Payment	Long Term Debt	58,914.03
		<i>Total to Add to Board Order #24</i>		\$65,833.28

4. Public Forum

Members of the public may address the Board.

5. Staff Presentations

The staff will present the posters they presented during MVCAC and AMCA Annual Virtual Conferences.

6. Agency Spotlight

The General Manager will discuss the submission of the Delta Vector Control District's (DVCD) application for the Mosquito and Vector Control Association of California (MVCAC) Agency Spotlight.



Spotlight on the Opening of a New Mosquitofish Facility to Serve Delta Vector Control District Residents



Delta Vector Control District Laboratory and Mosquitofish Facility.

Delta Vector Control District (DVCD) is proud to spotlight its latest innovation, the new Alburn Fish Hatchery named after the General Manager, Michael Alburn. This three-year building project included an 86 square meter indoor mosquitofish facility, two 20 square meter office spaces, and renovating the existing 65 square meter semi-covered outdoor mosquitofish facility.



(A) Indoor mosquitofish rearing facility (B) Semi-covered outdoor mosquitofish holding facility.

In 2018, we realized it was becoming more difficult to stock our holding tanks by April and May, when most of our District service requests for mosquitofish, *Gambusia affinis*, were requested. This decline in mosquitofish stock resulted from the challenges of overwintering and fishing in nearby outdoor ponds and reservoirs, as well as the increasing amount of parasites and bacterial infections in wild

harvested mosquitofish. Thus, we decided to solve these issues by raising mosquitofish in a closed aquatic system similar to many other Districts.

We teamed up with *Gambusia* Solutions, a Division of Sacramento Koi and an industry leader in filtration and tank systems, for their mosquitofish expertise and latest equipment and products. In total, we purchased seven tanks and five filter systems to meet our District's needs. The 3000 liter tanks consist of a fiberglass body with reinforced steel covered in a UV resistant gel coat. The filter system consists of a bead filter, an 80W ultraviolet light, and 1/4 hp Performance Pro pump. Our outdoor facility contains three tanks connected to one filter system and are serving as holding tanks for mosquitofish that are ready to be distributed to the field or residents when requested. Our indoor mosquitofish facility contains four tanks, each running on their own filter system to prevent cross contamination with an added 5.5kW titanium electric heater and a chlorine carbon water filter to handle any harmful impurities from our water municipality. These tanks serve as our birthing and grow out tanks.



Biologist, Mark Nakata, vacuuming and netting fish from the Elite Tank System

The new indoor facility is designed with mosquitofish in mind with other notable equipment purchases including mosquitofish feeders, lighting, and dehumidifiers. We are using the 3L Pentair AES vibratory feeders mounted on a custom extruded t-slot aluminum frame that are powered by a custom controller built from an open-sourced sprinkler controller and wireless RF transmitters. For lighting, we have fifteen Peerless BRM9L's mounted on the ceiling. These lights have tunable white LEDs to simulate warm white for sunrise/sunset and cooler whites for daylight. Each fixture is rated at 90+ CRI and can put out about 3,000 lumens. Humidity in the facility is being controlled by three Quest 506 dehumidifiers mounted on the ceiling, high humidity mildew resistant paint for the interior walls, and water-resistant spray foam insulation. Each of the dehumidifiers are rated to remove about 230 liters of water per day, allowing the facility to maintain 35% humidity which is low enough to prevent the walls and windows from condensating.

As we develop our program and grow beneficial bacteria for our filtration system over the next couple of years, we will engage in some of these exciting future projects. First are equipment modification projects, which will include calibrating the fish feeder system, tank modifications to target dead zones, and skimmer modifications to prevent mosquitofish from getting trapped. Second are technological equipment modifications, which will include building custom Arduino based sensors with a variety of

probes to measure temperature, pH, light, salinity, conductivity, and oxygen to maintain adequate water quality. Finally, we can then conduct biological experiments to test mosquitofish stocking densities, diet, water parameters, and environmental factors to determine how they affect mosquitofish development.

Delta Vector Control District strives to continue moving forward with the latest technological and advanced control measures to provide the best practices and integrated vector management services to its residents. The Alburn Fish Hatchery is a huge milestone for us as we continue to advance, grow, and protect our residents from mosquito bites and mosquito-borne diseases.

For questions, comments, and additional information on our new state of the art mosquitofish facility, please reach out to the biologist, Mark Nakata at mnakata@deltavcd.com.

7. Staff Report

The General Manager will report on items of operational interest.

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REPORT OF THE MANAGER FEBRUARY 2021

I. Water and Weather

The temperature remained low throughout the month of February. The average high temperature was 64.9°F with an average low of 41.2°F. Preliminary data from the Delta Vector Control District (DVCD) Weather Station reported 0.48 inches of rainfall. The National Oceanic and Atmospheric Administration 1981-2010 seasonal averages for high and low temperatures in February were 61.3°F and 51.7°F respectively, with average rainfall of 1.85 inches.

Water storage at Pine Flat Reservoir increased to 241,204 acre-feet by the end of the month. By February 28, 2021 Pine Flat Reservoir's inflow had increased to 499 cubic feet per second (CFS) and its release decreased minutely to 112 CFS. The Lake Kaweah Reservoir ended the month with more water than the previous month, with 22,531 acre-feet on the 28th of February. Lake Kaweah's inflow decreased slightly to 110 CFS and its release was increased to 18 CFS.

II. Narrative

Maintenance work continued throughout February, with equipment calibrations still ongoing. In February, offices were moved and updated to create the appropriate space for the Operations Program Manager in the office and the Biologists in one of the new Fish Hatchery facility offices. Hector Cardenas began work on February 22, 2021 as the Operation Program Manager.

Administrative and laboratory staff attended the 2021 Mosquito and Vector Control Association of California (MVCAC) Virtual Annual Conference, providing three oral presentations and three posters. Biologists Mark Nakata and Javier Valdivias, and Scientific Program Manager Crystal Grippin gave pre-recorded oral presentations for the virtual meeting, and Crystal Grippin and Biologist Jesse Erandio presented posters. Additionally, Jesse Erandio gave a presentation at the Wyoming Mosquito Management Association annual meeting, by request.

Andrea Troupin began work on February 8, 2021 and Jesse Erandio's last day was February 18, 2021 allowing overlap and training to take place to help ensure preparedness for the mosquito season. Preparation for the 2021 mosquito season began in earnest in February. Andrea Troupin and Javier Valdivias completed training for arbovirus testing in the first half of the month. Protocols and safety data sheets are being updated and adult mosquito traps were repaired. The proficiency panel arrived at the very end of the month, and will be completed by Andrea Troupin.

Advertisements for seasonal employees were placed near the end of February, with hiring starting in March for March and April start dates. Supervisor meetings with Frontier Precision staff are ongoing to dial in the new Field Seeker system and ensure functionality prior to the start of the season.

Throughout February, employees continued to take the temperature, complete the online screening of COVID-19 survey, and take paid time off to seek test results when required. No employee tested positive for COVID-19 in February. The District will continue to be proactive in keeping employees and the public safe, with no planned rollback of any of the safety precautions that have been put in place. Starting in February staff were able to begin to be vaccinated. Staff are encouraged to be vaccinated and allowed to take work time to do so.

There were two service requests in February:

2021 Service Request Summary

2020	Fish	Inspection	Mosquito	Source	Other	Total
January	0	0	2	1	0	3
February	0	0	0	2	0	2
Total	0	0	2	3	0	5

III. Vector and Disease Surveillance

Delta VCD Summaries

Humans: There were no human cases of an arbovirus reported by the local public health department for the month of February.

Birds: No dead birds were reported in the month of February. Although the Dead Bird Hotline will remain closed until April 2021, residents can still report dead birds online or directly to the District.

Mosquitoes: No mosquito testing was conducted in the month of February.

State Surveillance:

Humans: No new human cases of West Nile virus (WNV) or Saint Louis Encephalitis virus (SLEV) were reported in 2021. The California Department of Public Health updated the number of human infections in 2020 to 229 with 11 WNV-related fatalities.

Birds: No dead birds were reported in February.

Mosquitoes: No mosquito samples were reported in February.

IV. Expenditures & Revenues – 2020/21

TOTAL BUDGET \$3,516,071.89

EXPENDITURES – July 1, 2020 – February 28, 2021

Salaries	\$1,621,291.36
Services & Supplies	\$400,862.15
Tax Admin Fee	\$30,690.00
Capital	\$7,333.74
Building Improvements	\$292,968.66
TOTAL EXPENDITURES	\$2,353,145.91

REVENUE RECEIVED – July 1, 2020 – February 28, 2021

July	\$1,011.30
August	\$0.00
September	\$22,679.32
October	\$4,651.34
November	\$62.67
December	\$1,551,138.77
January	\$296,201.40
February	\$2,081.40
TOTAL REVENUE TO DATE	\$1,877,827.20

V. Time Sheet Summary

Month	Available Work Hrs	Sick Hrs Used	Total Hrs Available for Work	Pct. Of Hrs Avail for Work
July	5,632	50.25	5,581.75	99.10
August	5,376	133.25	5,242.75	97.53
September	4,816	99.75	4,716.25	97.93
October	3,520	123.25	3,396.75	96.50
November	2,016	132.00	1,884.00	93.46
December	1,960	100.00	1860	94.90

January	1,950	146.00	1,804.00	92.52
February	2,100	30.25	2,069.75	98.55

The District has a vacation policy that requires 24 hour notice in order to ensure the operational integrity of the workforce. Sick leave for doctor, dentist and/ or family medical necessity also requires advance notice- in so much as it is possible. Illness is unplanned and therefore unscheduled. Attendance records for the current year are shown in the table.



2020 Annual Report



2020 AT A GLANCE	2
ABOUT THE DISTRICT	3
Our Vision	3
Our Mission	3
Our Goals	3
The Board of Trustees	3
District Personnel	4
Professional Associations	5
Publications, Presentations, and Posters	5
Facility Upgrades	5
SERVICE REQUESTS	6
INTEGRATED VECTOR MANAGEMENT	8
Surveillance	8
Control	11
Community Education and Outreach	13
Financial Reports	15
Budgetary Comparison Schedule General Fund	15
Governmental Fund Balance Sheet	16

2020 AT A GLANCE

Mosquito Abundance

Total Abundance: 129,737 mosquitoes collected

15 total species caught, top 3 were:

- 76.7% *Culex quinquefasciatus*
- 13.4% *Aedes aegypti*
- 5.2% *Culex tarsalis*

Mosquito Samples Tested for Mosquito-borne Diseases

Total Samples Tested: 2,785

139 samples tested positive for West Nile virus.

37 samples tested positive for St. Louis encephalitis virus.

Mosquito samples may contain up to 50 mosquitoes.

Dead Birds

Total Tested: 10

Of the 10 bird carcasses tested, 4 tested positive for West Nile virus.

Human Cases

Cases Reported: 1

The single human West Nile virus infection within the District boundaries was symptomatic with the individual surviving the infection.

Control

Total Inspections: 45,699

3,214 Mosquitofish used to treat 184 sources.

554 Sources controlled with physical methods.

16,818 Chemical treatments were made.

Community Education & Outreach

Total Outreach Events: 4

Participants: 196

Radio Spots: 408

Newspaper Ads: 4

Vehicle PSA Magnets: 24

Service Requests

Total Service Requests: 1,671

684 Mosquito issues reported

530 Inspections requests

319 Potential mosquito-breeding sources reported

92 Mosquitofish requests

ABOUT THE DISTRICT

The Delta Vector Control District was established in 1922 to protect residents from malaria, a mosquito-borne disease that was common to the central valley then. The Visalia Women's Club played a key role in the formation of the District. Today, the District is responsible for control of mosquito vectors of West Nile virus, St. Louis encephalitis, Western equine encephalitis, Chikungunya, and Zika viruses. The District covers 712 square miles including the cities of Dinuba, Exeter, Farmersville, Visalia, and Woodlake and the communities of Cutler, Orsi, Goshen, Traver, and Ivanhoe, all within Tulare County.

Our Vision

The Delta Vector Control District is the authority for vector control and vector-borne disease prevention in northern Tulare County.

Our Mission

The Delta Vector Control District is committed to protecting the public's health from vector-borne diseases and discomfort by delivering exceptional services which preserve and enhance the quality of life and desirability of the area to make northern Tulare County a safe place to live, work, and raise a family.

Our Goals

1. Provide continual surveillance of mosquitoes to determine the threat of mosquito-borne disease transmission and annoyance levels.
2. Use safe, integrated vector management (IVM) methods to keep mosquito populations suppressed.
3. Promote cooperation and communication with property owners, residents, social and political groups, and governmental agencies.

The Board of Trustees

As an independent special district, Delta Vector Control District serves its residents under the guidance of the Board of Trustees. The seven-member Board of Trustees consists of one resident from each of the incorporated cities in northern Tulare County and two representatives for the county-at-large.

Trustees are appointed by their respective City Council or the County Board of Supervisors to govern the District knowledgeably and effectively. Board members serve two or four-year terms according to the rules of their appointing body.

The regular Board meetings are held on the second Wednesday of each month at 1737 W. Houston Avenue in Visalia at 4:30 PM. The meetings are open to the public.

Board Member	Position	Representing
Greg Gomez	President	Farmersville
Belen Gomez	Secretary	Woodlake
Kevin Caskey	Trustee	County-at-large
Linda Guttierrez	Trustee	County-at-large
Larry Roberts	Trustee	Dinuba
Rosemary Hellwig	Trustee	Exeter
Michael Cavanagh	Trustee	Visalia

District Personnel

Administration

Dr. Mustapha Debboun, *General Manager*
Mir Bear-Johnson, *Assistant Manager*
Sheri Davis, *Administrative Assistant*
Mark Dynge, *System Administrator*
Mary Ellen Gomez, *Administrative Analyst I*

Laboratory

Crystal Grippin, *Scientific Program Manager*
Javier Valdivias, *Biologist*
Jesse Erandio, *Biologist*
Mark Nakata, *Biologist*

Operations

Paul Harlien, *Foreman*
Rick Alvarez, *Supervisor of House Mosquito Program*
Bryan Ruiz, *Vector Control Technician III*
Bryan Ferguson, *Vector Control Technician III-Mechanic*

2020 Retirements

The District acknowledges the following individuals for their dedication to serving District residents and wish them the best during their retirement.

Employee	Position	Years of Service
Michael Alburn	General Manager	33
Paul Jobe	Superintendent	29
Darin Dula	Foreman	28
Tim Christian	Vector Control Technician III-Mechanic	24

Professional Associations

Delta Vector Control District participates in various professional organizations that promote best practices in vector and vector-borne disease control, research, and management of special districts. The District is a member of Mosquito and Vector Control Association of California (MVCAC), American Mosquito Control Association (AMCA), Society for Vector Ecology (SOVE), Entomological Society of America (ESA), National Association of County and City Health Officials (NACCHO), California Special District Association (CSDA), and the Tulare County Health Emergency Coalition (TCHEC).

Publications, Presentations, and Posters

Characterization of actions of p-menthane -3-8-diol repellent formulations against *Aedes aegypti* mosquitoes. *Trans Royal Society of Tropical Medicine and Hygiene*.

L. Goodyere, M. Grootveld, K. Deohankar, **M. Debboun**, M. Philip

Effects of storage temperature and freeze-thaw cycles on the stability of West Nile virus positive mosquito homogenate in the Ambion® MagMAX™ lysis/binding solution. *AMCA and MVCAC*.

Jesse Erandio, Crystal Grippin, Mark Nakata, Mir Bear-Johnson

Yeast fermentation as a cost affordable CO₂ source for BG-Sentinel traps. *AMCA and MVCAC*.

Mark Nakata, Crystal Grippin, Jesse Erandio, Mir Bear-Johnson

Prioritizing door-to-door yard inspections based on prior breeding status to control *Aedes aegypti*. *AMCA and MVCAC*.

Crystal Grippin, Mark Nakata, Jesse Erandio, Mir Bear-Johnson

Facility Upgrades

Construction started on the Alburn Fish Hatchery (AFH) with two additional offices in mid-2020. The indoor mosquitofish hatchery facility contains four 3,000-liter tanks that will be used to rear mosquitofish. The outdoor mosquitofish holding facility was also updated with three 3,000-liter tanks to hold mosquitofish that are ready for distribution to residents throughout the District. This construction project will raise mosquitofish in an advanced closed Elite Filtration and Tank System to keep water clean and mosquitofish healthy and allow the District to keep up with the demand for mosquitofish during the summer months and provide needed space for staff.

SERVICE REQUESTS

The District provides services directly to residents in addition to routine surveillance and control efforts. Services include inspecting properties for mosquito-breeding sources, mosquitofish for backyard water features, and investigating reports of increased mosquito activity or standing water.

There were 1,671 service requests in 2020 (Figure 1). This was a 182% increase over the previous five-year average but only a 9% increase from 2019. Part of this increase was due to an increase in inspection requests and reports of mosquito presence, likely from the invasive *Aedes aegypti* mosquito. *Aedes aegypti* are aggressive, day-biting mosquitoes that prefer to lay their eggs in small, man-made containers, allowing them to thrive in common backyard environments. The number of mosquitofish requests nearly tripled from the five-year average, indicating an increase in the awareness of their use as an important control method for backyard water features.

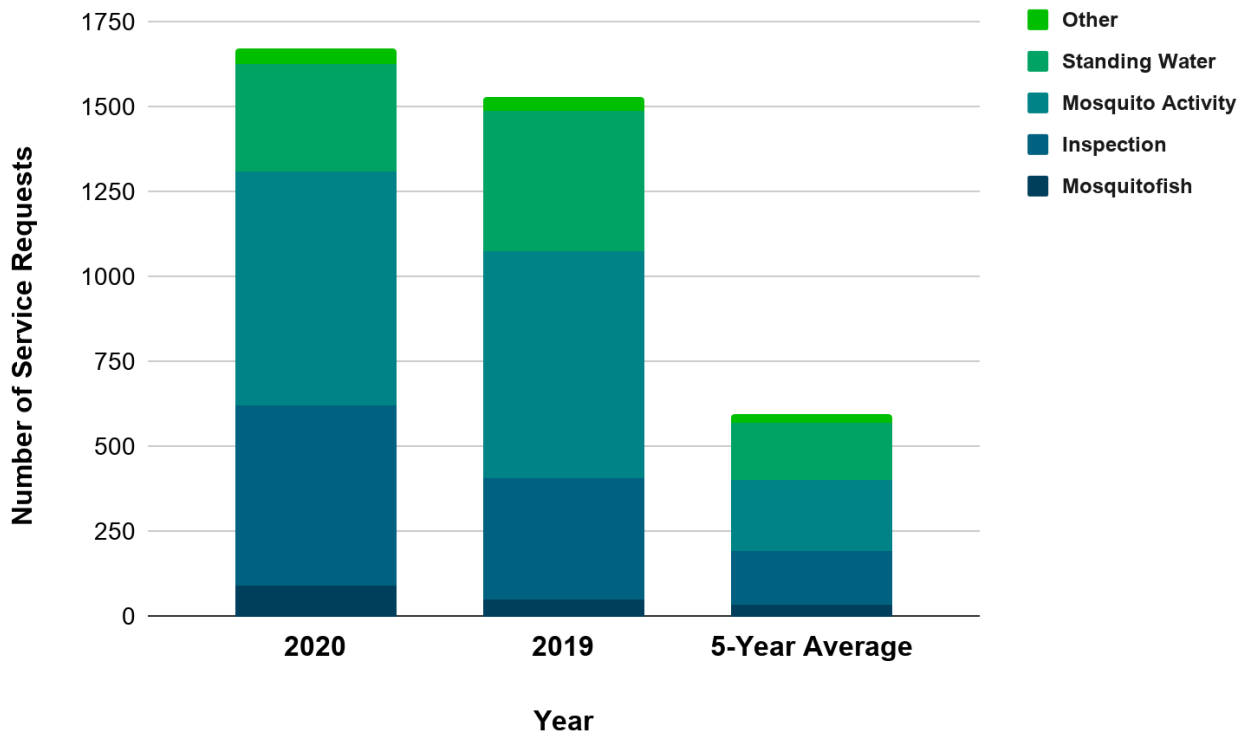


Figure 1. Service requests by category, i.e. 2020, 2019, and 5-year average.

Although service requests were received every month, the majority were between June and September (Figure 2). This corresponds to the warmest summer temperatures of the year in the District. Warm weather increases mosquito abundance, leading to an increase in service requests during the hot summer months. The majority of households who requested services learned about the District from a friend or family member. This was closely followed by households who had requested District services in the past (Figure 3).

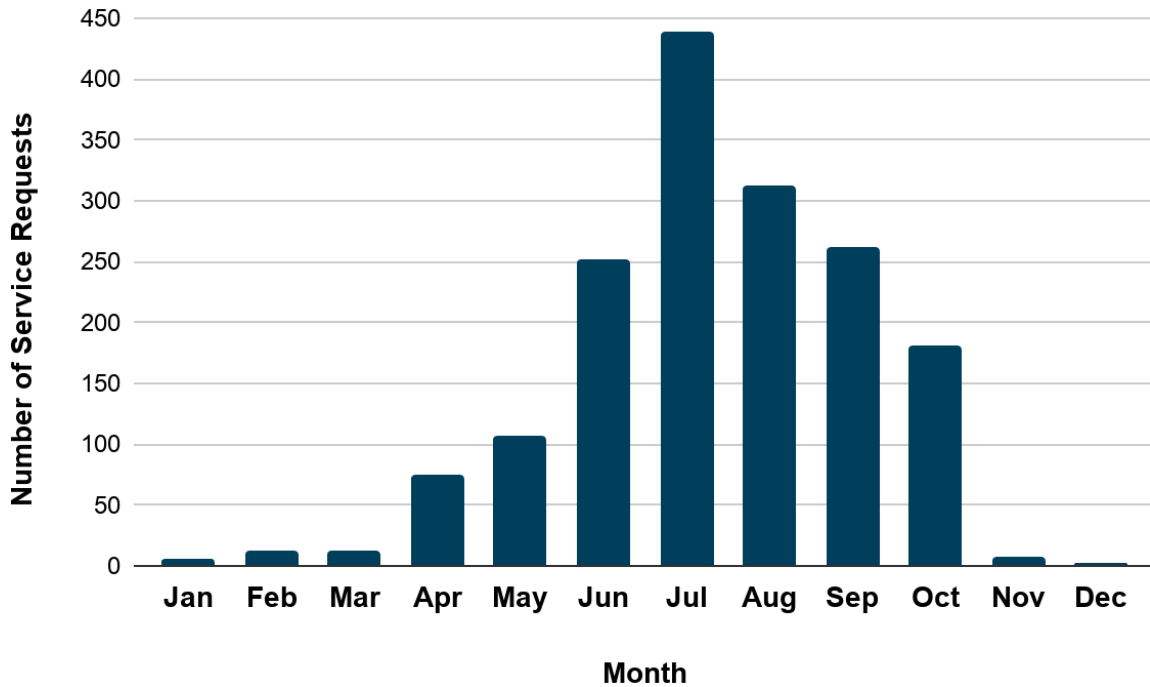


Figure 2. Monthly service requests in 2020.

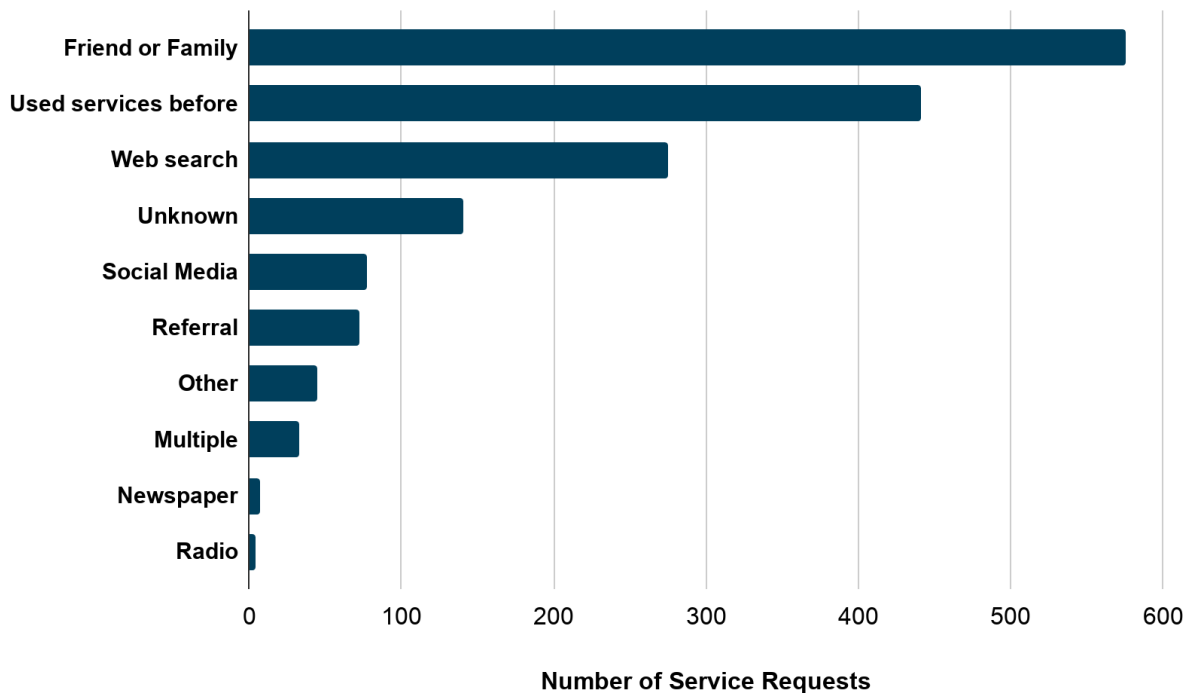


Figure 3. Individuals who requested services learned about DVCD through a variety of ways.

INTEGRATED VECTOR MANAGEMENT

The District uses evidence-based IVM principles to protect residents from vectors and vector-borne diseases. The IVM combines surveillance, control, and community outreach techniques to improve the effectiveness, ecological soundness, and sustainability of vector control programs.

Surveillance

The District monitors vector abundance and arbovirus activity through a variety of adult mosquito traps and by testing mosquitoes and dead birds for West Nile virus (WNV), St. Louis Encephalitis Virus (SLEV), and Western Equine Encephalitis Virus (WEEV). Human cases are also reported and investigated alongside the Tulare County Public Health Department.

Districtwide, the average number of female mosquitoes per trap night was 17.9 for the 2020 mosquito season. Female mosquitoes can transmit diseases of public health concern because they require a blood meal to lay eggs. During 6,697 collections, the District caught a total of 129,737 mosquitoes, of which 92.3% were female (Table 1). Of the 15 mosquito species represented, *Culex quinquefasciatus* contributed the most to total mosquito abundance at 76.7% followed by *Aedes aegypti* at 13.4% and *Cx. tarsalis* at 5.2%.

Table 1. Mosquito abundance species and sex in 2020.

SPECIES	FEMALES	MALES	TOTAL
<i>Culex quinquefasciatus</i>	96,049	3,425	99,474
<i>Aedes aegypti</i>	11,192	6,138	17,330
<i>Culex tarsalis</i>	6,439	323	6,762
<i>Culex stigmatosoma</i>	3,298	104	3,402
<i>Culex erythrothorax</i>	1,549	8	1,557
<i>Anopheles freeborni</i>	829	4	833
<i>Aedes nigromaculis</i>	103	0	103
<i>Anopheles franciscanus</i>	84	0	84
<i>Culiseta particeps</i>	64	1	65
<i>Aedes vexans</i>	39	0	39
<i>Anopheles punctipennis</i>	37	2	39
<i>Culiseta incidens</i>	14	1	15
<i>Culiseta inornata</i>	15	0	15
<i>Aedes sierrensis</i>	11	2	13
<i>Aedes melanimon</i>	6	0	6

Every mosquito sample contains 10 to 50 female mosquitoes of a single species that were caught in the same trap. The four *Culex* species tested are *Cx. quinquefasciatus*, *Cx. tarsalis*, *Cx. stigmatosoma*, and *Cx. erythrothorax*. A total of 2,785 mosquito samples composed of 87,520 individual mosquitoes were tested in 2020. While no samples were positive for WEEV, 139 tested positive for WNV and 37 for SLEV (Figure 4).

In 2020, 47 dead birds were reported to the District. Of those, 10 were viable for disease testing. Dead bird carcasses are considered testable only if they have died within the past 48 hours, have no obvious physical trauma that led to death, and are of an accepted species for testing. Of the 10 tested birds, 4 tested positive for WNV (Figure 5).

The Tulare County Public Health Department reports human arbovirus infections to the District. In 2020, the single human WNV infection within the District boundaries was symptomatic with the person surviving the infection. There were no asymptomatic cases reported.

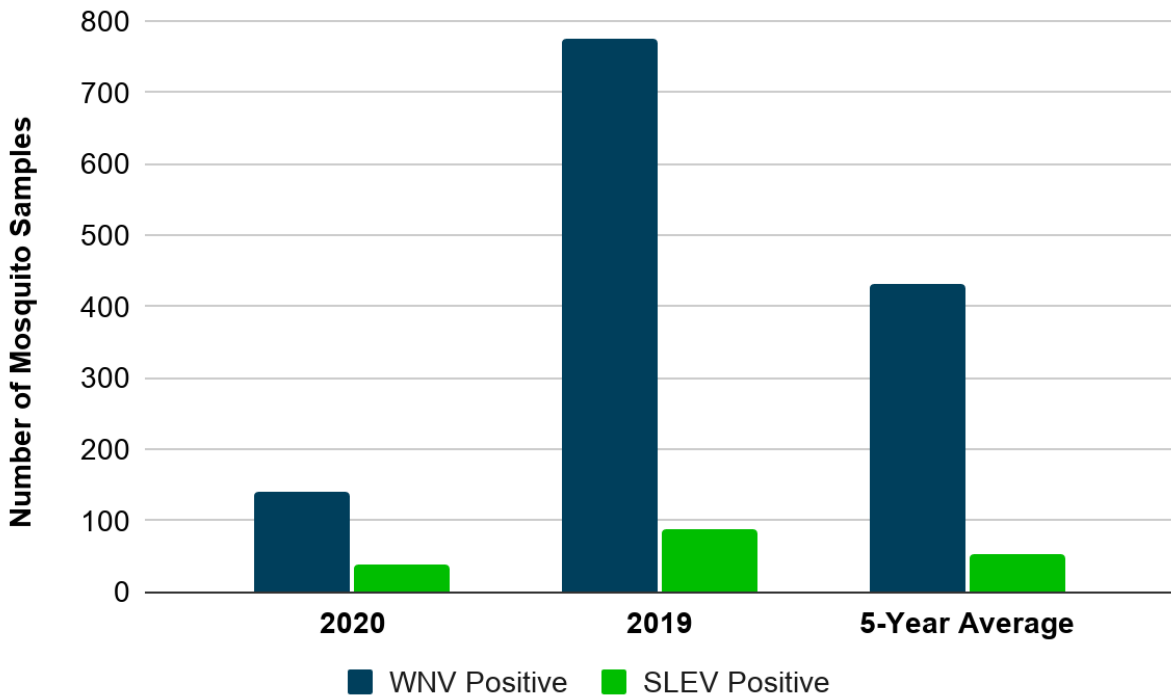


Figure 4. Mosquito samples positive for WNV and SLEV, i.e. 2020, 2019, and 5-year average.

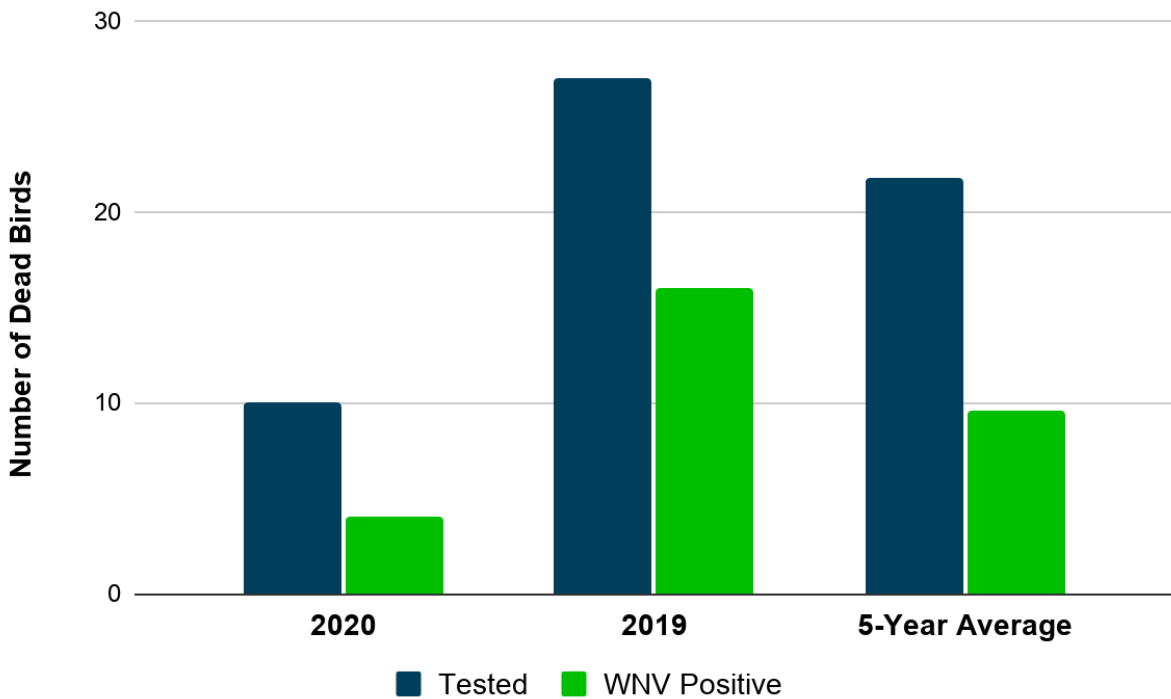


Figure 5. Number of dead birds tested and positive for WNV, i.e. 2020, 2019, and 5-year average.

Control

Delta VCD's mosquito control program is prevention focused, relying on the early identification and control of larval mosquito sources to reduce the biting adult mosquito population. Physical, biological, and chemical control methods are used to control larval sources, allowing for mosquito-specific control. Larval-based control also slows the recovery of adult mosquitoes when adulticide treatments are necessary to be used to reduce arbovirus disease risk to the public.

In 2020, technicians controlled 16,818 (36.8%) mosquito-breeding sources out of 45,699 potential mosquito sources inspected (Table 2). In accordance with IVM principles, a variety of control methods were used to control these sources and prevent insecticide resistance in mosquitoes (Table 3).

Mosquitofish, *Gambusia affinis*, are a large component of maintaining permanent water sources such as ponds and troughs. More than 3,214 mosquitofish were used to treat mosquito-breeding sources in 2020 (Table 3). Free mosquitofish are provided to residents by request. Five adulticide treatments took place in 2020 to reduce the threat of mosquito-borne diseases in areas at elevated risk.

Table 2. Inspections and treatments of source types in the District in 2020.

SOURCE TYPE	INSPECTED	TREATED
Catch Basins	12,200	12,200
Historical Sources	28,383	2,402
Property Inspections	3,253	353
Wastewater Sites	1,358	1,358
Other	505	505

Table 3. Operational data for control efforts in 2020.

PHYSICAL CONTROL OPERATIONS	AMOUNT
Number of sources	554
MOSQUITOFISH OPERATIONS	
Number of sites stocked	184
Number of fish planted	3,214
ADULTICIDE OPERATIONS	
Number of operations	5
Pyronyl 525 (oz)	2,961.1
SURFACE AGENTS	
Agnique Liquid (oz)	666.5
BVA2 larvicide (gallons)	4,492.8
BIORATIONAL LARVICIDES	
<i>Bacillus thuringiensis israelensis (B.t.i.)</i>	
VectoBac 12AS (oz)	140,974
VectoBac G (lb)	41
VectoBac GR (lb)	40
VectoBac WDG (lb)	88
<i>Bacillus sphaericus (B.s.)</i>	
VectoLex Granules (lb)	45
VectoLex WSP (each)	1,512
<i>B.t.i. and B.s.</i>	
FourStar 180 (each)	7
Spinosad	
Natular 2EC (oz)	853
Natular DT (each)	237
Natular G30 (lb)	31.9
Insect growth regulator (Methoprene)	
Altosid Briquets (each)	164
Altosid Liquid (oz)	1,148
Altosid Pellets WSP (each)	69,572
Altosid Sand Mix (lb)	695.5
Altosid XRG (lb)	482

Community Education and Outreach

The goal of community education and outreach is to increase resident participation in preventing nuisance biting and vector-borne diseases by teaching residents to reduce mosquito-breeding sources and use the appropriate personal protection measures to reduce bites.

In early 2020, District staff participated in the Linwood Elementary STEAM Family Night and provided presentations to Sequoia Garden Club, Visalia Host Lions Club, and Visalia Breakfast Lions Club. In total, 196 adults and children were reached. All other scheduled events were cancelled when the stay-at-home mandate was issued on March 15, 2020 due to the COVID-19 pandemic. Although the COVID-19 pandemic limited participation in events and in-person activities, education and outreach efforts continued through other means such as radio and newspaper.

The District website, www.deltavcd.com, was updated and relaunched in early 2020. The new website increased information for residents on vector control, prevention, and the understanding of what the District does. Along with Frequently Asked Questions and downloaded brochures in both English and Spanish, residents are able to find reliable and relevant information.

Radio advertising began earlier in the season in May and ended in August. Similar to previous years, messaging focused on reducing mosquito breeding sources and bite prevention. In total, 408 thirty-second radio spots in both English and Spanish were aired on 4 local radio stations. Also, 4 print advertisements were placed in *The Good Life*, a local newspaper whose senior audience is at high risk of neuroinvasive WNV infections. In addition, 24 large vehicle magnets and decals with the District website were placed on the work trucks (Figure 6). Through routine staff activities, these items increase access to key prevention messages across the District including rural areas where traditional media may not reach them.

PREVENT THE BITE DAY & NIGHT!



TIP

standing water weekly



TOSS

unused containers



REPEL

with EPA-registered insect repellents

Figure 6. Rural areas across the District received key prevention messages with banner style truck magnets placed on work vehicles.

Delta Vector Control District collaborated with Tulare Mosquito Abatement District and Kern Mosquito and Vector Control District for the creation of a newspaper insert leaflet by N&R Publications (Figure 7). The leaflet teaches residents about basic mosquito biology, mosquito-bite prevention, and recognizing common backyard mosquito-breeding sources. These insert leaflets will be distributed through community centers, libraries, senior centers, and local newspapers.

Take Action!

LEARN HOW YOU CAN STOP MOSQUITOES FROM BREEDING AT YOUR HOUSE

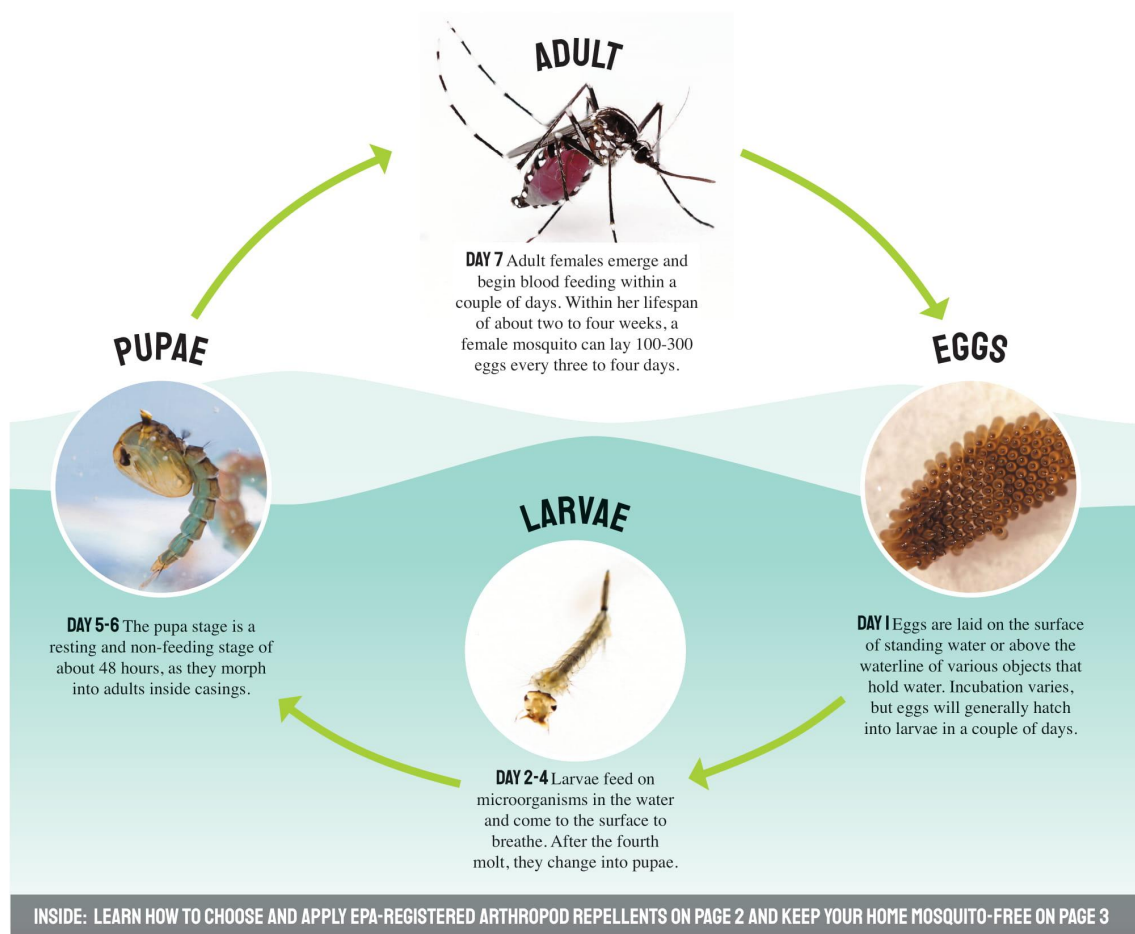


Figure 7. The newspaper insert leaflet will be distributed at community centers, libraries, senior centers, and local newspapers.

Financial Reports

Budgetary Comparison Schedule General Fund

Fiscal Year ended June 30th, 2020

	Budgeted Amounts		Actual	Variance with Final Budget
	Original	Final		
REVENUES				
Property Taxes:				
Current secured	\$ 2,309,889	\$ 2,309,889	\$ 2,302,506	\$ (7,383)
Current unsecured	130,918	130,918	136,630	5,712
Prior secured	46,828	46,828	49,884	3,056
Prior unsecured	2,098	2,098	2,283	185
State homeowner's property tax relief	19,407	19,407	18,786	(621)
Pass through income	305,019	305,019	376,813	71,794
Interest income	62,376	62,376	96,477	34,101
Charges for current services	5,081	5,081	7,064	1,983
Other governmental income	-	-	1,068	1,068
Assessments	921,969	921,969	907,095	(14,874)
Other income	-	-	119,295	119,295
Total Revenues	<u>3,803,585</u>	<u>3,803,585</u>	<u>4,017,901</u>	<u>214,316</u>
EXPENDITURES				
Current:				
Salaries and employee benefits	2,415,351	2,415,351	2,445,120	(29,769)
Services and supplies	670,230	670,230	724,421	(54,191)
Capital outlay	968,045	968,045	691,166	276,879
Total expenditures	<u>4,053,626</u>	<u>4,053,626</u>	<u>3,860,707</u>	<u>192,919</u>
Excess (deficiency) of revenues over (under) expenditures	(250,041)	(250,041)	157,194	407,235
OTHER FINANCING SOURCES (USES)				
Lease proceeds	-	-	1,000,000	1,000,000
Total other financing sources (uses)	<u>-</u>	<u>-</u>	<u>1,000,000</u>	<u>1,000,000</u>
Net change in fund balance	<u>\$ (250,041)</u>	<u>\$ (250,041)</u>	<u>1,157,194</u>	<u>\$ 1,407,235</u>
Fund balance, July 1, 2019			<u>3,747,740</u>	
Fund balance, June 30, 2020			<u>\$ 4,904,934</u>	

Governmental Fund Balance Sheet

	General Fund	Adjustments	Statement of Net Position
ASSETS			
Cash and cash equivalents	\$ 4,526,935	-	\$ 4,526,935
Accounts receivable	1,223	-	1,223
Capital assets, net of accumulated depreciation	-	3,396,001	3,396,001
Other post employment benefits asset	-	31,645	31,645
Restricted Cash:			
Fish Hatchery	444,014	-	444,014
Total Assets	<u>4,972,172</u>	<u>3,427,646</u>	<u>8,399,818</u>
DEFERRED OUTFLOWS OF RESOURCES			
Pension deferrals	-	598,561	598,561
Other post employment benefits deferrals	-	52,180	52,180
Total deferred outflows of resources	<u>-</u>	<u>650,741</u>	<u>650,741</u>
LIABILITIES			
Accounts payable	43,666	-	43,666
Accrued expenses	9,112	-	9,112
Payroll liabilities	14,460	-	14,460
Accrued interest	-	30,810	30,810
Due in one year:	-		
Compensated absences	-	72,763	72,763
Lease payable	-	89,591	89,591
Due in more than one year:	-		
Compensated absences	-	48,510	48,510
Lease payable	-	930,409	930,409
Net pension liability	-	1,954,422	1,954,422
Total Liabilities	<u>67,238</u>	<u>3,126,505</u>	<u>3,193,743</u>
DEFERRED INFLOWS OF RESOURCES			
Pension deferrals	-	177,341	177,341
Other post employment benefits deferrals	-	195,696	195,696
Total deferred inflows of resources	<u>-</u>	<u>373,037</u>	<u>373,037</u>
FUND BALANCE/NET POSITION			
Fund balance:			
Unassigned	4,907,934	(4,904,934)	-
Total fund balance	<u>4,904,934</u>	<u>(4,904,934)</u>	<u>-</u>
Net position:			
Net investment in capital assets	-	2,820,015	2,820,015
Unrestricted	-	2,663,764	2,663,764
Total fund balance/net position	<u>4,904,934</u>	<u>5,483,779</u>	<u>5,483,779</u>

8. Surveillance 2021

The Assistant Manager will report on the new plan for the Urban Vector Control Program, 2021 mosquito trapping and testing program.

Urban VCP Plan

Introduction

Delta Vector Control District (DVCD) had two separate control programs for mosquitoes within the District. The House Mosquito Program (HMP) aimed to reduce the risk of West Nile virus (WNV) by focusing on mosquito sources favored by *Culex* species such as neglected pools within urban areas. The Invasive *Aedes* Program aimed to reduce nuisance biting and disease risk by focusing on sources preferred by *Aedes aegypti* which requires extensive door-to-door inspections for small man-made containers. Once *Ae. aegypti* became established, the separation of mosquito control programs including differences in areas covered by technicians, equipment and supplies carried by technicians, and training reduced mosquito control efficiency and cost effectiveness.

Starting in 2021, these two programs will be merged into one Urban Vector Control Program (Urban VCP) to improve results and reduce costs.

Zones & Staffing

DVCD will be divided into 6 urban zones (figure 1) with a vector control technician dedicated to monitoring and controlling all mosquito sources and responding to service requests within that zone. Zones are based on the total number of service requests within that area in 2020, the highest weekly number of service requests, and the driving time to cover that area. With smaller areas, technicians will be able to maintain better control of sources and respond more quickly to service requests and control thresholds. Control thresholds often require more intensive efforts such as door-to-door inspections or drone surveillance to identify new sources.

An additional technician will be placed in a floater position to assist zone technicians keep up with seasonal fluctuations in workload and substituting for absent technicians. Returning technicians often have to take days off to remain within the maximum yearly work hour limits. Additionally, the covid-19 pandemic increases risk of employee absenteeism. This position should reduce the consequences of staffing shortages due to either of these reasons.

Two additional technicians will start later in the season to respond around areas that have reached certain control thresholds such as high trap count (HTC) or disease presence. These two positions will allow DVCD to address the areas of increased risk without neglecting the control of known sources and respond to service requests.

Suggested zone start dates are based on 2020 mosquito abundance and service request data and does not include the required training (figure 2 & 3). Training needs to take place before the technicians start in their zones and while trainers still have time to conduct the training. Zone and staffing are summarized in table 1.

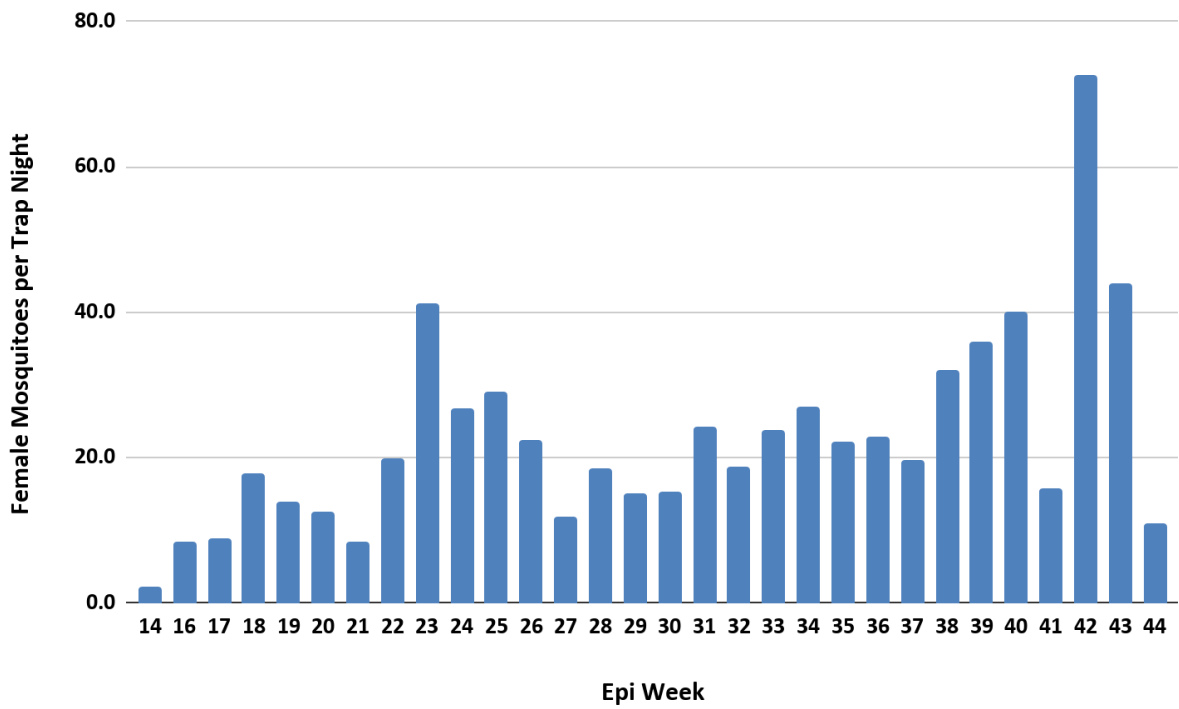


Figure 2. Average number of female mosquitoes per epidemiologic week in 2020.

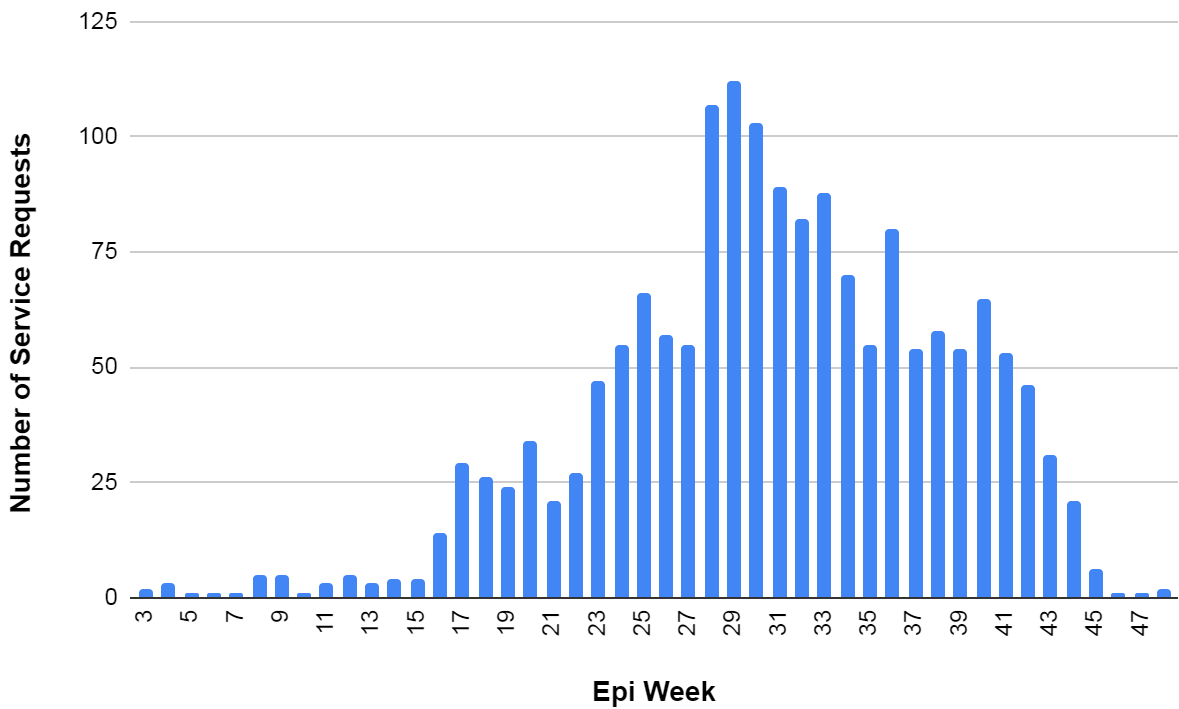


Figure 3. Service requests per epidemiologic week in 2020.

Technicians	Area	Driving Time (minutes)	2020 SR	Start Date
Zone 17	Dinuba, Cutler, Orosi, Traver, Yetttem	35+	67	2nd week of April
Zone 13	Goshen, NW Visalia	9-12	376	
Zone 15	NE Visalia, Ivanhoe	14-15	251	
Zone 14	SW Visalia	9-12	403	
Zone 16	SE Visalia	11-12	368	
Zone 18	Farmersville, Exeter, Woodlake	13-20	117	
Floater (1)	District	Varies	1,669	May
Threshold (2)	District	Varies	1,669	June

Table 1. Zones and staffing for the Urban Vector Control Program

Required Equipment and Supplies

Every technician requires the following:

- Work phone
- Required PPE:
 - Eye Protection
 - Gloves: for pesticide applications & leather to protect heads from physical damage
 - Respirators
- Required safety equipment in truck: first aid kit, eye wash, handwashing items, spill kit
- Inspection Equipment
 - Dipper
 - Turkey baster
 - Micropipette
 - Larval tray
 - Grate hook (for catch basins, water meters, valve boxes)
 - Larval sample bags
 - Sharpie/pen
 - Clipboard
 - Carrying bucket/tub
- Pesticide equipment
 - Backpack sprayer
 - Small oil can
 - 8-16 ounce chemical resistant bottle for agnique

Ongoing Source Monitoring

Technicians will be responsible for monitoring all known mosquito sources within their zone. This includes properties where *Ae. aegypti* sources have been found in the past as well as ponding basins, ponds, and neglected pools or spas. Routine monitoring involves inspecting the source for immature mosquito stages and treating appropriately.

Larval Samples

The lab uses larval samples to monitor mosquito species and distribution and identify areas with potential larvicide resistance. Technicians will provide the lab with a larval sample when:

1. Immature larval stages are found at a source for the first time
2. After the initial treatment but before treating the source a second time
3. After changing the treatment type for a source
4. To verify chemical treatments are working

Re-Inspections

Properties or sources will be re-inspected within 2 weeks after the initial inspection where only physical control has taken place, mosquitofish have been placed, or where *Ae. aegypti* have been found. If no further mosquito breeding is found on the property after the second inspection, the technician will only need to re-inspect if thresholds are reached or service requests are received in the area.

Technicians must follow label guidelines for re-inspections and treatments of properties or sources where chemical treatments were applied. If more than one chemical treatment is applied, the technician will re-inspect as many times as necessary, starting with the earliest re-treatment time.

Catch Basins

There is a dedicated catch basin technician for the Visalia area because the number of catch basins requires daily treatment to control all of them. Catch basins are visited monthly, rotating through the entire town. Outlying towns will have catch basins treated monthly, once a week, by a Zone 20 Technician using the right-hand drive jeep brought to location on a trailer. Normally outlying catch basins are treated by two individuals in a truck, but due to COVID-19 restrictions this may not be possible.

Service Requests

All service requests that require entrance into a yard will involve a complete yard inspection. This involves looking for any source of standing water, sampling for immature mosquitoes, treating appropriately, and educating the homeowner or occupant about source reduction and bite prevention.

Technicians will complete an Inspection and Correction Notice for homeowners when they are not present for the inspection or when mosquito breeding is found. Whenever possible, the technician will demonstrate how to maintain a source such as emptying and scrubbing with bleach. Re-inspections will follow the same procedure as above.

In addition to the requesting property, the technician should inspect any known sources and properties within 1,200 feet of the service request location. If a nearby source was treated recently, the technician should verify that the treatment is working correctly by checking for the presence of immature mosquitoes and providing a larval sample to the laboratory if necessary.

Requesting Mosquito Abundance Data

Sometimes technicians cannot identify the mosquito source for treatment or may be unsure if a complaint is actually mosquito related. Technicians can request additional surveillance trapping in service request areas if no trap data is available. If surveillance trapping reaches an action threshold, the technician can request a drone surveillance flight to identify potential new sources in the area. Surveillance flights are not available in all areas.

Action Thresholds

Action thresholds are set mosquito abundance levels or infection rates that require extra control efforts to reduce mosquito-borne disease risk to the public (table 2). Exact action thresholds will be determined later. Technicians will be informed of areas that reached a threshold during morning meetings.

Overall	Abundance Threshold	Disease Presence	Inspections In addition to known sources	Control
Low	< 50 <i>Culex</i> <10 <i>Aedes</i>	None	Optional property inspections for historical breeding	Larval Control
Medium	50+ <i>Culex</i> 10+ <i>Aedes</i>	Mosquitoes	Required inspections of properties with past breeding within	Larval control
High	50+ <i>Culex</i> 10+ <i>Aedes</i>	Mosquitoes & Dead Birds	Required door-to-door inspections within 600 ft	Wide-area larviciding* Consider adulticiding*
Very High	Any	Human Cases	Required door-to-door inspections within 600 ft Required inspections of properties with past breeding from 600 to 1,200 ft	Wide-area larviciding* Adulticiding*

Table 2. Example thresholds and required control actions.

Door Hangers for Required Inspections

For properties where no one answers the door, technicians must leave a door hanger requesting the homeowner or occupant to contact the district to schedule an inspection. Technicians can leave a door hanger in response to routine source monitoring, service requests, or action thresholds.

Day 0 = initial contact attempt. Leave door hanger if unsuccessful

Day 2 = make a second attempt and leave a second door hanger. Place a request for a final notice letter to be sent to address

Day 3 = Administration sends final notice letter

Day 10 = Supervisor will inspect with warrant if no inspection scheduled

In certain disease outbreak situations, technicians will be able to inspect the same day in that immediate area. The Urban VCP supervisor will provide notification to the technicians and training on procedures and protocols if this occurs.

After using our current stock of door hangers, they will be redesigned to be two-sided English/Spanish, appear professional, and provide an option for the homeowner to schedule online. If finances allow, the door hangers will be replaced sooner.

9. Request to Increase Credit Card Limit

The Administrative Assistant will provide information on the need for an increased limit on District credit cards to handle heavy use months.

**10. Proposed New Classification – Community Education and Outreach
Coordinator**

The General Manager will provide the proposed position, chain of command, and associated cost benefits for approval.

COMMUNITY EDUCATION AND OUTREACH COORDINATOR

<i>Salary Step, Monthly</i>	1	2	3	4	5
<i>Community Education and Outreach Coordinator</i>	\$5,222.38	\$5,548.77	\$5,875.17	\$6,201.57	\$6,527.97

Position Definition, Description and Characteristics:

Under the direction of the General Manager and Assistant Manager, the Community Education and Outreach Coordinator is responsible for identifying and utilizing appropriate methods for reaching the District's stakeholders; representing the District in media and community relations appearances; and developing public information programs to raise awareness and provide education about vector control and vector-related public health concerns, including creative video and graphic content for digital, broadcast, and print campaigns. This position is among those responsible for information on the District website. The position requires discretion, judgment, creativity, and will be responsible for supervising other personnel during events. Excellent verbal and written communication skills and sound judgment are required. The position constitutes an exempt employee under the Fair Labor Standards Act.

Example of Duties:

- Develops and implements the District's public relations strategies, public outreach budget, policies, and procedures.
- Oversees coordination for District staff of California Department of Public Health Vector Control Technician certification and continuing education requirements.
- Writes, edits, publishes, and disseminates newsletters and other District-produced informational publications; Coordinates, develops and creates information posted on District website and social media platforms. Photographs District events for distribution with District related press releases and feature stories.
- Attends meetings of the Board, commissions, and committees as required and serves on assigned committees, community groups, and task forces.
- Plans, schedules, and participates in community and media events, sometimes during the evenings and on weekends, such as fairs, exhibits, and attractions that profile and promote public awareness of the District's mission, activities, and function.
- Develops messaging, talking points, and media training for District staff; and serves as spokesperson for the District as assigned by Assistant Manager or the General Manager.

- Creates and develops multimedia informational/educational materials for public and District use relating to the District's activities. This includes researching, writing, taking professional photos, graphic design, and recording and editing professional videos.
- Answers inquiries by telephone or in-person to accurately provide information requested or to refer parties to the proper sources of information; responds to media questions and inquiries.
- Prepares public information response plan for emergency and disaster situations.
- Develops contacts and relationships with media to create positive media opportunities for the District and manages media-related inquiries, coordinating or giving media interviews.
- Drafts news releases, articles, position papers, public service announcements, and District reports and assists in developing ideas and opportunities for feature articles, interviews, presentations, and other public relations activities that promote awareness of District services.
- Promotes District-sponsored community events, activities and programs; acts as a liaison to citizens, schools, and community groups in providing information and promoting a positive image of the District.
- Gives informational talks to special groups, including homeowners associations, school districts, business leaders, community groups and other agencies.
- Develops and executes public outreach, awareness, and education programs to promote knowledge of the District's vector control programs to a variety of community stakeholders, including media, government agencies, communities, school districts, utility districts, and residents.
- Performs other related work as required.

Education and Experience:

A bachelor's degree from an accredited college or university in Communications, Journalism, Marketing, Video or Graphic Arts, Science, Education, or related field, and at least one year of related experience working in public relations, journalism, for a public health agency, non-profit organization, or vector abatement agency. Some experience working with the media is required.

Experience is desired working and interacting with the public and community members, giving interviews to the media, and delivering presentations to a live audience; writing and/or designing public information materials such as brochures, flyers, and articles for public dissemination; knowledge in video production/editing, digital and social media advertising and web design. The ability to write, speak, and understand both Spanish and English is desired.

Significant experience in lieu of education, or more education in lieu of experience will be considered on a case by case basis.

Licenses, Certifications, Examinations:

The applicant must have a valid California Driver's License and have and maintain a good driving record, and be insurable under the District's insurance carrier.

The applicant must possess the ability to obtain and maintain a Mosquito Control Technician Certificate, a Vertebrate Control Certificate and a Terrestrial Invertebrate Vector Control Certificate from the California State Department of Public Health.

The applicant must successfully complete a pre-placement physical examination, respirator training and drug screen.

Knowledge, Skills and Abilities:

To be successful in this position, an individual must be able to perform each essential duty and responsibility satisfactorily. The position requires outstanding verbal and written skills, preferentially in both English and Spanish; the ability to work effectively with other employees and the public; an understanding of community engagement and common outreach strategies and principles. Proficiency in standard computer software applications (Microsoft Office Suite) and graphic design. Knowledge of photography, videography, and digital design is highly desirable. Basic use of social media applications such as Facebook, Instagram, and Twitter. Must have the ability to work in and assess multi-cultural and socioeconomic challenges and barriers, and target outreach to meet specific needs. Must be self-motivated with a high degree of independence and possess a high level of organizational skills.

Working Conditions:

The Community Education and Outreach Coordinator may be exposed to: pesticides, communicable diseases and other health hazards; inclement weather conditions; and verbally abusive behavior from unfriendly individuals in the community.

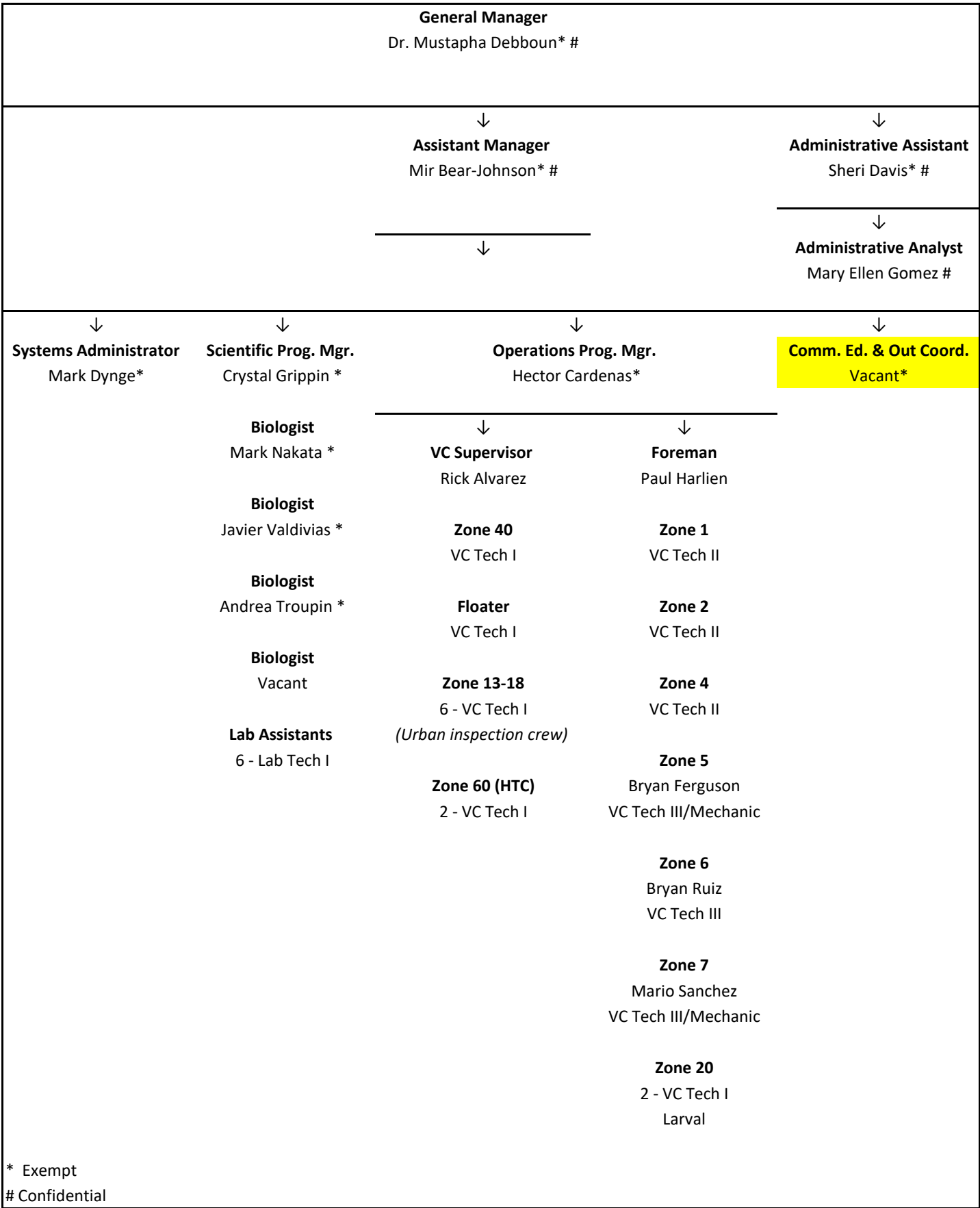
Environmental Conditions:

Occasionally, the work is performed in extremely high temperatures which may include the requirement that heavy protective gear and equipment be carried. Extreme dryness is present much of the time although some weather conditions or locations include humid conditions. The employee will be exposed to hazards which include insect bites, chemicals, fumes and dust.

Functional Requirements:

Ability to work in a standard office environment with some exposure to the outdoors; to travel to different sites and locations; attend evening and weekend meetings/events; work under pressure and potentially stressful situations. Strength, stamina, and mobility to perform light physical work, to work around machines, to operate a variety of tools and equipment, and to operate a motor vehicle; vision to read printed materials and a computer screen; hearing and speech to communicate in person and over the telephone; finger dexterity needed to access, enter, and retrieve data using a computer keyboard, and to operate tools and equipment. Incumbents in this classification frequently walk, bend, stoop, kneel, crouch, twist, reach, stand, and traverse uneven and/or slippery ground such as fields, dirt banks, stream beds and rough terrain. Incumbents must possess the ability to grasp, lift, carry, push, and pull materials and

objects weighing up to 50 pounds or heavier weights with assistance and/or the use of proper equipment.



* Exempt
 # Confidential

Manager					\$12,812.50		\$153,750.00
Assistant Manager	\$7,175.00	\$7,623.44	\$8,071.88	\$8,520.31	\$8,968.75	70.00%	\$107,625.00
Program Manager	\$6,447.25	\$6,850.20	\$7,253.16	\$7,656.11	\$8,059.06	62.90%	\$96,708.75
Systems Admin.	\$6,001.38	\$6,376.46	\$6,751.55	\$7,126.63	\$7,501.72	58.55%	\$90,020.63
Biologist	\$6,001.38	\$6,376.46	\$6,751.55	\$7,126.63	\$7,501.72	58.55%	\$90,020.63
Foreman	\$5,893.75	\$6,262.11	\$6,630.47	\$6,998.83	\$7,367.19	57.50%	\$88,406.25
Administrative Assist.	\$5,335.13	\$5,668.57	\$6,002.02	\$6,335.46	\$6,668.91	52.05%	\$80,026.88
Community Education and Outreach Coordinator	\$5,222.38	\$5,548.77	\$5,875.17	\$6,201.57	\$6,527.97	50.95%	\$78,335.63
Administrative Analyst	\$5,068.63	\$5,385.41	\$5,702.20	\$6,018.99	\$6,335.78	49.45%	\$76,029.38
V.C. Supervisor	\$4,894.38	\$5,200.27	\$5,506.17	\$5,812.07	\$6,117.97	47.75%	\$73,415.63
V.C. Tech III	\$4,448.50	\$4,726.53	\$5,004.56	\$5,282.59	\$5,560.63	43.40%	\$66,727.50
V.C. Tech III/ Mechanic	\$4,448.50	\$4,726.53	\$5,004.56	\$5,282.59	\$5,560.63	43.40%	\$66,727.50

	1	2	3	4	5	Hourly - Paid Bi-Weekly
C.V.C. Technician II	\$25.66	\$27.27	\$28.87	\$30.48	\$32.08	
C.V.C. Technician I	\$13.80	\$14.66	\$15.53	\$16.39	\$17.25	
Lab Tech I/ VCT Tech I	\$14.00	\$14.88	\$15.75	\$16.63	\$17.50	

Longevity Step

10 years	5% above current step
20 years	10% above current step
30 years	15% above current step

11. Assessment Benefit Analysis for Invasive *Aedes aegypti*

The General Manager will provide an update on the Assessment Benefit Analysis.



OFFICIAL SURVEY

DELTA VECTOR CONTROL DISTRICT

Information Fact Sheet

Local Mosquito Control in your Community

The Delta Vector Control District (“the Mosquito District”) has been protecting the public from mosquito-borne diseases, and mosquito bites in northern Tulare County including Visalia, Dinuba, Exeter, Farmersville, Woodlake, Cutler, Orosi, and Ivanhoe since 1922. The Mosquito District is the sole provider of year-round mosquito and vector control services where your property is located. It is an independent special district, not part of the County or any City, and is governed by a local seven member Board of Trustees.

Emergence of the Invasive Yellow Fever Mosquito

Beginning in 2019, there has been a significant increase in local population of *Aedes aegypti*, “the yellow fever mosquito,” in Tulare County. This mosquito can spread dengue fever, chikungunya, Zika fever, Mayaro, yellow fever viruses, and other disease agents.

Aedes aegypti can be recognized by the white markings on its legs and a marking in the form of a lyre on the upper surface of its thorax, as shown in the photo below.

Controlling *Aedes aegypti* requires focused monitoring, testing and treatment, and the Mosquito District is seeking input from the community regarding additional resources to combat this invasive mosquito. We appreciate your participation and support to control it.



Elevated mosquito abundance, such as an increase in Aedes aegypti mosquitoes, and the presence of West Nile virus in other mosquitoes require treatments to reduce risks to Public Health

Want to learn more about the surveillance, vector management, and community education the Delta Vector Control District provides?
Visit us at www.deltavcd.com



District technicians collect mosquito larvae from standing water to identify the mosquito species

Our Current Mosquito Control Services

An annual mosquito and vector control assessment would enable the Mosquito District to provide improved *Aedes aegypti* mosquito and disease control services. Following are some of these services:

- **Provide free mosquito-eating fish** to property owners for backyard ponds and other water features.
- **Control mosquito-breeding sources** with environmentally sound products wherever mosquito larvae or pupae are found.
- **Testing for diseases** that can be carried by invasive *Aedes aegypti* mosquito.
- **Respond rapidly to service requests** concerning mosquitoes, insects, and other vectors.
- **Conduct environmentally safe adult mosquito control** when necessary to protect public health.
- **Provide community education and outreach** on how to prevent and protect residents from mosquito bites and mosquito-borne diseases.

Why is funding needed?

The Mosquito District was previously funded in large by an assessment that helped cover the gap between property taxes and operational expenses. This assessment expired in 2019 leaving the Mosquito District without this crucial source of funding. If a local ballot measure is approved, the Mosquito District would be able to continue providing and improving year round control of invasive mosquitoes, such as the emerging *Aedes aegypti*, and the diseases they carry.



ENCUESTA OFFICIAL

EL DISTRITO DE CONTROL DE VECTORES DEL DELTA

Hoja de datos de información



Un técnico tratando un campo inundado para evitar que las larvas de mosquitos se conviertan en mosquitos adultos que pican

Control Local de Mosquitos en su Comunidad

El Distrito de Control de Vectores del Delta (“el Distrito de mosquitos”) ha protegido al público de enfermedades transmitidas por mosquitos, molestias y picaduras en el norte del Condado de Tulare incluyendo Visalia, Dinuba, Exeter, Farmersville, Woodlake, Cutler, Orosi, y las áreas de Ivanhoe desde 1922. El Distrito de mosquitos es el único proveedor de servicios de control de mosquitos y vectores durante el año a donde su propiedad está localizada. Es un distrito especial independiente, que no forma parte del condado ni de ninguna ciudad, y está gobernado por el consejo de administración de siete miembros.

La aparición del Mosquito Invasor de la fiebre amarilla

Comenzando en 2019, ha habido un aumento significativo en la población local de *Aedes aegypti*, “el mosquito de la fiebre amarilla”, en el Condado de Tulare. Este mosquito puede transmitir el dengue, el chikungunya, la fiebre Zika, Mayaro, la fiebre amarilla, y otros agentes patógenos.

Aedes aegypti se puede reconocer por las marcas blancas en sus patas y una marca en forma de lira en la superficie superior de su tórax, como se muestra en la foto al revés de esta página.

El control del *Aedes aegypti* requiere un monitoreo, pruebas y tratamiento enfocados, y el Distrito de mosquitos está buscando información de la comunidad con respecto a recursos adicionales para combatir este mosquito invasor. Agradecemos su participación y apoyo para controlarlo.

Nuestros servicios actuales de control de mosquitos

Un impuesto anual para control local de mosquitos y vectores permitiría que el Distrito de mosquitos proporcione mejores servicios de control de enfermedades del *Aedes aegypti*. A continuación se muestran algunos de estos servicios:

- **Proporcionar pescados gratis que se alimentan de mosquitos** a los propietarios para los estanques del patio trasero y otras características acuáticas
- **Controlar las fuentes de reproducción de mosquitos** con productos ecológicos dondequiera que se encuentren larvas o pupas de mosquitos.
- **Pruebas para detectar enfermedades** que pueden ser transmitidas por el mosquito invasor *Aedes aegypti*.
- **Responder rápidamente a las solicitudes por un método de servicio** relacionadas con mosquitos, insectos y otros vectores.
- **Llevar a cabo un control de mosquitos adultos ambientalmente seguro** cuando sea necesario para proteger la salud pública.
- **Proporcionar educación y divulgación comunitaria** sobre cómo prevenir y proteger a los residentes de las picaduras de mosquitos y las enfermedades transmitidas por mosquitos.

Por qué se necesita financiación?

El Distrito de mosquito fue financiado previamente en gran parte por un impuesto que ayudó a cubrir la brecha entre los impuestos a la propiedad y los gastos operativos. Esta evaluación expiró en 2019, y dejó al Distrito de mosquitos sin esta fuente crucial de financiación.

Si se aprueba una medida por votación local, el Distrito de mosquitos podría continuar proporcionando y mejorando el control de los mosquitos invasores, como el *Aedes aegypti* emergente, y las enfermedades que transmiten durante todo el año.

Quiere aprender más sobre la vigilancia, manejo de vectores, y educación comunitaria que ofrece el Distrito de Control de Vectores de Delta?

Visitenos en www.deltavcd.com



OFFICIAL SURVEY

Delta Vector Control District

- Survey Instructions:**
- 1) Read each question listed below.
 - 2) Fill in the circle for your response. Please use a pen and completely fill in the circle.
 - 3) Detach the bottom portion of this sheet containing your answers.
 - 4) Place the bottom portion of this sheet in the return envelope and mail (no postage needed).

This short survey has been mailed to property owners in the Delta Vector Control District to gather information and opinions. This information will help the District make decisions about future control, surveillance, and education services. After completing the survey, simply mail it back in the postage-paid return envelope provided.

Detach Here _____ Fill Below Portion, Detach at this Line, and Mail Back in Return Envelope _____ Detach Here

To take this survey online, o para responder en Español, please visit www.inputlocal.com and enter the SURVEY NAME: "Delta1", and your SURVEY CODE: _____ to log in.

1. Property owners in your area may be asked to vote by mail on a local ballot measure. Following is a summary of the proposal:

In order to:

- Continue to provide year-round control of invasive mosquitoes, such as *Aedes Aegypti*, and other pests, and the diseases they carry;
- Continue monitoring and responding to public health issues, such as Yellow Fever and West Nile viruses and other emerging diseases,

would you support a yearly assessment on your property(s)* in the amount of _____?

- Definitely YES**
 Probably YES
 Probably NO
 Definitely NO

**Assessment amount listed is the proposed total combined annual amount for all properties you own.*

Please read the following arguments and statements regarding the proposed Mosquito and Vector Control assessment. For each one please indicate whether they make you more or less likely to support the assessment:

	Much More Likely	Somewhat More Likely	No Impact	Somewhat Less Likely	Much Less Likely
2. This measure will help prevent future outbreaks of West Nile virus and other diseases.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. This measure will continue the use of mosquito traps to measure mosquito populations, and expand focused, surveillance-based control programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. This measure will help suppress the emergence of invasive species, such as <i>Aedes aegypti</i> (Yellow Fever Mosquito), that can carry life-threatening diseases.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. The District will educate residents about how to protect themselves from diseases carried by mosquitoes and other vectors.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. This measure will reduce mosquito populations using environmentally-sound methods.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. None of the proceeds from this measure could be taken by the State or County, and can only be used directly for mosquito and vector control services.....	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please use the space below to write any other reasons why you support or oppose this proposed measure, and to describe which issues are most important to you:

12. Enterprise Fleet Management

The General Manager will request approval to pay delivery charges from Clovis to Visalia for the new vehicles.

13. Adjournment

Adjourn the meeting of the Board of Trustees to reconvene on Wednesday, April 14, 2021 at 4:30 p.m. in the Delta Vector Control District Boardroom, 1737 W. Houston Ave., Visalia, CA.