CONSOLIDATED MOSQUITO ABATEMENT DISTRICT
13151 E. Industrial Dr., Parlier, CA 93648

TELECONFERENCE DIAL-IN NUMBER
(508)924-5256
- or -
VIDEO CONFERENCE
https://join.freeconferencecall.com/cmad
Online meeting ID: cmad

AGENDA

BOARD OF TRUSTEES MEETING **1:00 PM** **September 20, 2021**

1. **ROLL CALL:**
   Introduction of Jennifer Willems, new trustee appointment City of Clovis.

2. **INTRODUCTION OF VISITORS:**
   The public may address the Board on each agenda item during consideration of that item.

3. **PUBLIC COMMENTS:**
   This is an opportunity for public comment on non-agenda items. The President reserves the right to limit the duration of each speaker to five (5) minutes. It is the policy of the Board not to answer any questions impromptu.

4. **APPROVAL OF AUGUST MINUTES:**

5. **APPROVAL OF AUGUST PAYROLL:**

6. **APPROVAL OF AUGUST BILLS:**

7. **DISPOSITION OF SURPLUS VEHICLES:**
   The Board will be asked to declare as surplus property and to sell one 2004 Chevrolet Colorado 4WD truck and one 2005 Ford Ranger 4WD truck.

8. **SALE OF SURPLUS VEHICLES:**
The Board will be asked to set minimum bid prices and to advertise for sale by sealed bid one 2004 Chevrolet Colorado 4WD truck, one 2005 Ford Ranger 4WD truck, one 2007 Chevrolet Colorado 4WD truck and two 2009 Chevrolet Colorado 4WD trucks.

9. **REVIEW OF DISTRICT INVESTMENT POLICY:**
The Board will review the District Investment Policy and consider if amendment is necessary.

10. **DISTRICT PARTICIPATION AT MEETING:**
The Board will be asked to authorize Superintendent of Operations Holeman and Science Education Coordinator Ramirez to attend the Entomological Society of America Conference in Denver, CO on October 31 – November 3.

11. **COVID-19 PREVENTION PROGRAM:**
The Board will consider development and implementation of vaccination policy as part of the District COVID-19 prevention program.

12. **COLLABORATION IN STUDY OF NOVEL CONTROL TECHNIQUE:**
The Manager will discuss potential collaboration with Oxitec Ltd to participate in an EPA EUP study to evaluate a novel mosquito control strategy.

13. **CALPERS ACTUARAL VALUATION:**
The CalPERS annual actuarial valuation reports for the District’s Miscellaneous Plan and the PEPRA Miscellaneous Plan will be presented to the Board.

14. **BOARD GENERAL DISCUSSION:**
This is an opportunity for Board Members to ask questions for clarification, provide information to staff, request staff to report back on a matter or direct staff to place a matter on a subsequent agenda.

15. **STAFF REPORTS:**
This is an opportunity for staff to report on District activities.

16. **ADJOURNMENT:**

MINUTES OF THE BOARD OF TRUSTEES OF
THE CONSOLIDATED MOSQUITO ABATEMENT DISTRICT
AUGUST 16, 2021

Th regular meeting of the Board of Trustees of the Consolidated Mosquito Abatement District was held at the District Office, in Parlier, and by teleconference at l:00 PM on August 16, 2021.

1. **Roll Call:**

Trustees Present at the Parlier Office:

Tok Fukuda	Kingsburg
Bruce Taylor	County of Fresno

Trustees Present by Teleconference:

Peggy Brisendine	Fresno	Arrived at 1:25 PM
Pete Esraelian	Selma	
Charles Lockhart	Orange Cove	
Dan Munk	Reedley	
Karen Steinhauer	Sanger	

Trustees Absent:

David Cardenas	Fowler
Mary Anne Hill	County of Fresno
Joe Reyna	Parlier

Trustee Vacancy:

Vacant	Clovis

Others Present at the Parlier Office:

Steve Mulligan	District Manager
Karan Cox	Office Administrator

2. **President Fukuda called the meeting to order at 1:06 PM:**

3. **Public Comments:** None.

4. **Approval of July Minutes:** A motion was made by Trustee Munk, seconded by Trustee Lockhart and passed by 6 – 0 – 4 roll call vote (Brisendine, Cardenas, Hill, Reyna absent) to approve the minutes of the July 19, 2021 Board meeting.

5. **Approval of July Payroll:** A motion was made by Trustee Taylor, seconded by Trustee Esraelian and passed by 6 – 0 - 4 roll call vote (Brisendine, Cardenas, Hill, Reyna absent) to approve the July payroll checks having District numbers, 26337 – 26387, 26389 – 26392, 26411 – 26454 and 26466 in the total amount of $166,992.40.

6. **Approval of July Bills:** A motion was made by Trustee Taylor, seconded by Trustee Steinhauer and passed by 6 – 0 – 4 roll call vote (Brisendine, Cardenas, Hill, Reyna absent) to approve the July commercial checks having District numbers, 26388 – 26390, 26393 – 26410, 26450 – 26451, 26455 – 26464, and 26466 - 26498 in the total amount of $337,965.33.

7. **Sale of Surplus Vehicles:** Trustee Brisendine arrived. Sealed bids for the sale of one 2003 Ford F250 truck, one 2005 Ford F150 truck, one 2006 Chevrolet Silverado truck, one 2007 Chevrolet Colorado 4WD truck and two 2009 Chevrolet Colorado 4WD trucks were received and opened. These bids are listed in Attachment A. A motion was made by Trustee Taylor, seconded by Trustee Lockhart and passed by 7 – 0 – 3 roll call vote (Cardenas, Hill, Reyna absent) to accept the highest, qualified bid in chronologic order for each vehicle, as determined by the District Manager.

8. **Quarterly Investment Report:** A motion was made by Trustee Esraelian, seconded by Trustee Brisendine and passed by a 7 – 0 – 3 roll call vote (Cardenas, Hill, Reyna absent) to accept the investment report for the quarter ending June 30, 2021.

9. **Expense Reimbursement Disclosure Report:** The Manager presented the expense reimbursement disclosure report for the fiscal year ending June 30, 2021. There were no expense reimbursements to be disclosed.

10. **Purchase of Ice Machine:** Price quotations for the purchase of a commercial grade ice machine were received from CRESCO RESCO Restaurant Equipment & Supply Co. (Manitowoc UYF-09190A $2,466.00, plus $565.00 filter, plus tax) and from J&E Restaurant Supply Inc. (Ice-O-Matic ICEU220HA $2,350.00, plus $79.00 filter, plus tax). A motion was made by Trustee Munk, seconded by Trustee Taylor and passed by 7 – 0 – 3 roll call vote (Cardenas, Hill, Reyna absent) to approve the purchase of an Ice-O-Matic ice machine from J&E Restaurant Supply.

11. **Employee Appreciation Lunch:** A motion was made by Trustee Lockhart, seconded by Trustee Brisendine and passed by 7 – 0 -3 roll call vote (Cardenas, Hill, Reyna absent) to approve the expenditure of funds for an employee appreciation lunch.

12. **District Participation at Meetings:** A motion was made by Trustee Taylor, seconded by Trustee Brisendine and passed by a 7 – 0 - 3 roll call vote (Cardenas, Hill, Reyna absent) to table this item to the next meeting.

13. **Preparation for Anniversary:** The Manager and the staff anniversary planning committee recommended that the District's Anniversary Celebration be postponed due to resurgence of COVID-19 cases and uncertainty of the pandemic situation going into the fall. It was the consensus of the Board to postpone the event until 2022.

14. **Board General Discussion:** Trustee Esraelian requested that a letter from the Board be sent to Mr. Karl Peterson thanking him for his service to the District representing the City of Clovis on the Board.

15. **Staff Reports:** A Program Report on current activities was provided to the Board.

    The Manager announced that he was in charge with putting together the program for the SOVE annual meeting on September 16-17, 2021, which will be held virtually. The Manager and selected staff are registered to attend, and the Manager asked if any trustees would like to attend. President Fukuda stated he would be interested in attending.

16. **Adjournment:** The meeting was adjourned at 2:10 PM. The next Board meeting will be held on Monday, September 20, 2021.

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Mary Anne Hill
Vice President/Secretary

Consolidated Mosquito Abatement District
Payroll Expenses
August 2021

Check #	Gross Pay	Net Pay	Payee	Description
26465	$344.00	$317.69	Elijah Bojorquez	Seasonal Employee
26499	$1,320.00	$1,105.88	Adolfo Mendez	Seasonal Employee
26500	$2,603.50	$1,750.75	Amy Garcia	Full-Time Employee
26501	$1,824.00	$1,366.75	Anita Munoz	Seasonal Employee
26502	$1,280.00	$1,074.70	Arthur Velasco	Seasonal Employee
26503	$1,360.00	$1,136.06	Bobby Torres	Seasonal Employee
26504	$2,861.00	$1,936.24	Brittany Deegan	Full-Time Employee
26505	$1,400.00	$1,171.92	Capital Moua	Seasonal Employee
26506	$1,400.00	$1,171.92	Cheng Vang	Seasonal Employee
26507	$2,861.00	$2,064.69	Chris Monis	Full-Time Employee
26508	$1,480.00	$1,339.28	Clarita Ramblas	Seasonal Employee
26509	$2,417.00	$1,729.80	Conner Schaak	Full-Time Employee
26510	$1,320.00	$1,105.88	David Rodriguez	Seasonal Employee
26511	$3,086.50	$2,249.50	Derek Hill	Full-Time Employee
26512	$2,631.00	$1,813.83	Devon Cornel	Full-Time Employee
26513	$2,133.25	$1,669.04	Donald McNiel	Seasonal Employee
26514	$1,480.00	$1,146.28	Eric Ferguson	Seasonal Employee
26515	$2,861.00	$2,139.82	Gha Vang	Full-Time Employee
26516	$1,085.00	$997.56	Heidi Hubbard	Seasonal Employee
26517	$1,404.00	$1,198.92	Jacob Uribe	Seasonal Employee
26518	$1,152.00	$978.13	Jason Blackmon	Seasonal Employee
26519	$1,068.38	$986.65	Jesse Hernandez	Seasonal Employee
26520	$4,698.00	$3,000.82	Jodi Holeman	Full-Time Employee
26521	$2,861.00	$1,692.65	Jose Moreno	Full-Time Employee
26522	$2,417.00	$1,696.49	Jovana Benavides	Full-Time Employee
26523	$1,360.00	$1,136.06	Justin Lor	Seasonal Employee
26524	$3,154.00	$2,070.30	Karan Cox	Full-Time Employee
26525	$3,947.50	$2,460.42	Katherine Ramirez	Full-Time Employee
26526	$1,184.00	$1,093.43	Lewis Nunes	Seasonal Employee
26527	$1,400.00	$1,166.24	Melissa Thies	Seasonal Employee
26528	$1,637.50	$1,378.09	Michael Scotty Dunn	Seasonal Employee
26529	$1,400.00	$1,166.24	Ricardo Garcia	Seasonal Employee
26530	$1,365.00	$1,088.49	Robert Martinez	Seasonal Employee
26531	$1,400.00	$1,255.09	Roger Vang	Seasonal Employee
26532	$1,560.00	$1,183.43	Ronnie Blunt	Seasonal Employee
26533	$6,600.00	$4,395.80	Steve Mulligan	Full-Time Employee
26534	$1,404.00	$1,081.83	Tracy Autrey	Seasonal Employee
26535	$1,400.00	$1,166.24	Tuacheng Vang	Seasonal Employee
26554	$660.00	$589.30	Adolfo Mendez	Seasonal Employee
26555	$2,603.50	$1,750.74	Amy Garcia	Full-Time Employee

Consolidated Mosquito Abatement District
Payroll Expenses
August 2021

Check #	Gross Pay	Net Pay	Payee	Description
26556	$2,304.00	$1,684.03	Anita Munoz	Seasonal Employee
26557	$1,244.00	$1,048.03	Arthur Velasco	Seasonal Employee
26558	$1,368.50	$1,142.53	Bobby Torres	Seasonal Employee
26559	$2,861.00	$1,936.24	Brittany Deegan	Full-Time Employee
26560	$1,680.00	$1,382.08	Capital Moua	Seasonal Employee
26561	$1,540.00	$1,278.05	Cheng Vang	Seasonal Employee
26562	$2,861.00	$2,064.00	Chris Monis	Full-Time Employee
26563	$1,776.01	$1,595.39	Clarita Ramblas	Seasonal Employee
26564	$2,417.00	$1,729.78	Conner Schaak	Full-Time Employee
26565	$420.75	$388.57	David Rodriguez	Seasonal Employee
26566	$3,086.50	$2,246.77	Derek Hill	Full-Time Employee
26567	$2,631.00	$1,813.83	Devon Cornel	Full-Time Employee
26568	$2,162.00	$1,668.32	Donald McNiel	Seasonal Employee
26569	$1,748.25	$1,351.60	Eric Ferguson	Seasonal Employee
26570	$2,861.00	$2,139.81	Gha Vang	Full-Time Employee
26571	$1,491.88	$1,355.41	Heidi Hubbard	Seasonal Employee
26572	$1,872.00	$1,589.25	Jacob Uribe	Seasonal Employee
26573	$1,536.00	$1,269.84	Jason Blackmon	Seasonal Employee
26574	$1,332.38	$1,230.45	Jesse Hernandez	Seasonal Employee
26575	$4,698.00	$3,000.36	Jodi Holeman	Full-Time Employee
26576	$2,861.00	$1,692.20	Jose Moreno	Full-Time Employee
26577	$2,417.00	$1,696.47	Jovana Benavides	Full-Time Employee
26578	$1,598.00	$1,316.06	Justin Lor	Seasonal Employee
26579	$3,154.00	$2,291.58	Karan Cox	Full-Time Employee
26580	$3,947.50	$2,459.49	Katherine Ramirez	Full-Time Employee
26581	$1,480.00	$1,366.78	Lewis Nunes	Seasonal Employee
26582	$1,680.00	$1,376.39	Melissa Thies	Seasonal Employee
26583	$1,643.75	$1,383.28	Michael Scotty Dunn	Seasonal Employee
26584	$1,706.25	$1,395.90	Ricardo Garcia	Seasonal Employee
26585	$1,501.50	$1,189.35	Robert Martinez	Seasonal Employee
26586	$1,540.00	$1,367.30	Roger Vang	Seasonal Employee
26587	$1,872.00	$1,391.66	Ronnie Blunt	Seasonal Employee
26588	$6,600.00	$4,395.10	Steve Mulligan	Full-Time Employee
26589	$1,716.00	$1,293.50	Tracy Autrey	Seasonal Employee
26590	$1,522.50	$1,258.98	Tuacheng Vang	Seasonal Employee
Total	**$157,553.90**	**$117,611.33**		

Consolidated Mosquito Abatement District
Payroll Expenses
August 2021

Employee Deductions and Liabilities

Check #	Amount	Payee	Description
26536	$2,337.17	EDD	State Income Tax
26537	$12,498.06	CMAD	Federal, Social Security, Medicare
26538	$3,681.94	CalPERS	Retirement
26539	$785.00	ICMA	457K Retirement
26540	$200.00	Valley First Credit Union	Credit Union
26591	$2,519.77	EDD	State Income Tax
26592	$13,000.55	CMAD	Federal, Social Security, Medicare
26593	$3,820.97	CalPERS	Retirement
26594	$700.00	ICMA	457K Retirement
26595	$50.00	Valley First Credit Union	Credit Union
26596	$197.68	Aflac	Disability Insurance
26609	$151.43	Mutual of Omaha	Life Insurance
Total Deductions	**$39,942.57**		
Total Net Pay	**$117,611.33**		
Total Gross Pay	**$157,553.90**		

Consolidated Mosquito Abatement District
Maintenance and Operations Expenses
August 2021

Bank of the West Checks

Check #	Amount	Payee	Description
26537	$5,915.06	CMAD	District Social Security & Medicare
26538	$4,446.14	CalPERS	District Retirement
26541	$907.88	Central California VCJPA	Dental / Vision Coverage Premium
26542	$639.66	City of Clovis	Water Sewer Disposal
26543	$253.00	Matson Alarm Co.	Alarm Systems
26544	$21.50	Mid-Valley Disposal	Disposal
26545	$648.60	City of Parlier	Water Sewer Disposal
26546	$2,831.41	PG&E	Electricity / Heat
26547	$36.29	Republic Services	Disposal
26548	$1,500.00	Ricardo's Yard Care	Parlier Grounds Clean-up
26549	$102.08	City of Sanger	Water Sewer Disposal
26550	$11,491.71	SDRMA	Health Insurance Premium
26551	$96.12	SoCal Gas	Heat
26552	$300.00	Streamline	Website Design & Maintenance
26553	$2,631.82	J&E Restaurant Supply	Ice Machine - Clovis Facility
26592	$6,168.55	CMAD	District Social Security & Medicare
26593	$4,607.34	CalPERS	District Retirement
26597	$187.63	AT&T	Telephone / Internet
26598	$882.85	AT&T	Internet - Parlier
26599	$258.88	AT&T	Telephone - Parlier
26600	$73.98	California Water Service	Water
26601	$700.00	CalPERS	GASB Reports
26602	$41.95	DoorKing, Inc.	Gate Service
26603	$21.50	Mid-Valley Disposal	Disposal
26604	$254.75	Matson Alarm Co.	Alarm Systems
26605	$190.60	PG&E	Electricity / Heat
26606	$54.79	City of Reedley	Water Sewer Disposal
26607	$106.78	City of Sanger	Water Sewer Disposal
26608	$39.29	Waste Management	Disposal
26609	$106.40	Mutual of Omaha	Life Insurance - District
26610	$7,776.46	Adapco	Insecticides
26611	$300.00	All-Pro Janitorial Services	Janitorial Services
26612	$160.18	AutoZone, Inc.	Repair Parts / Lubricants
26613	$379.67	Battery Systems	Batteries / Surveillance Batteries
26614	$54,899.58	Clarke Mosquito Control	Insecticides
26615	$5,795.99	CitiBusiness Card	SOVE / Meals / Dues / Office Expense
26616	$299.91	East Bay Tire Co.	Tires
26617	$130.66	FedEx	Mosquito Sample Shipping
26618	$333.51	Home Depot	Shop Supplies / Field Equipment
26619	$2,448.00	Lozano Smith	Legal Fees - July & August

Consolidated Mosquito Abatement District
Maintenance and Operations Expenses
August 2021

Check #	Amount	Payee	Description
26620	$705.37	Mission Uniform Service	Uniforms & Safety
26621	$6,600.00	MVCAC	Mosquito Sample Testing
26622	$595.71	Napa	Lubricants / Repair Parts
26623	$1,022.13	Nelson's Ace Hardware	Shop Supplies / Office Equipment
26624	$66.30	Office Depot	Misc Office Supplies
26625	$317.39	O'Reilly Auto Parts	Repair Parts
26626	$97.37	PBM Supply & Mfg, Inc.	Field Equipment
26627	$2,326.15	Praxair Distribution, Inc.	Dry Ice
26628	$188.79	Redneck Trailer Supplies	Repair Parts
26629	$3,466.23	Target Specialty Products	Insecticides
26630	$350.98	Terminal Air Brake Supply	Repair Parts
26631	$72.00	Vector-Borne Disease Account	Certification Exam
26632	$12,375.21	Veseris	Insecticides
26633	$15,525.99	Wex Bank - Valero	Fuel
26634	$84.21	Wizix Technology Group, Inc.	Copier Maintenance
Total	**$161,834.35**		

County of Fresno Checks

Check #	Amount	Payee	Description
295063	$105,768.38	Consolidated Mosquito	Transfer funds to checking
295064	$96,670.50	Consolidated Mosquito	Transfer funds to checking
295065	$116,544.12	Consolidated Mosquito	Transfer funds to checking
	$318,983.00		

Summary of August Expenses

Check # 26046 Voided	($373.75)
Check # 26481 Voided	($31.50)
August 2021 Salaries & Wages	$157,553.90
August 2021 Maintenance & Operations	$161,834.35
Total August 2021 Expenditures	**$318,983.00**

Consolidated Mosquito Abatement District
Monthly Expenditures

ACCOUNT NUMBER	ACCOUNT NAME	BUDGET FY 2021/2022	SPENT TO DATE	BALANCE AUG 31, 2021
SALARIES, WAGES & EMPLOYEE BENEFITS				
6101-01	Salaried Wages	$1,150,000.00	$175,194.00	$974,806.00
6101-06	Hourly Wages & Extra Help	$615,000.00	$149,352.30	$465,647.70
6101-02	FICA Employers Contribution	$135,000.00	$27,723.41	$107,276.59
6101-03	Unemployment Insurance	$24,000.00	$1,549.21	$22,450.79
6101-04	Retirement District's Payment	$150,000.00	$18,887.20	$131,112.80
6101-05	Group Health Insurance	$260,000.00	$36,053.60	$223,946.40
6101-07	Pre-Employment & Misc. Expenses	$8,000.00	$35.00	$7,965.00
	TOTALS	**$2,342,000.00**	**$408,794.72**	**$1,933,205.28**
OPERATING & MAINTENANCE SUPPLIES & EXPENSE				
6102-01	Insecticides & Herbicides	$400,000.00	$143,390.38	$256,609.62
6102-02	Power Spray & Field Equipment	$25,000.00	$1,651.69	$23,348.31
6102-03	Misc Operating Supplies & Expense	$6,000.00	$592.80	$5,407.20
6102-04	Fish Program	$10,000.00	$104.69	$9,895.31
6102-05	Building & Ground Maintenance	$40,000.00	$4,390.55	$35,609.45
6102-06	Airplane Expense	$3,000.00	$0.00	$3,000.00
	TOTALS	**$484,000.00**	**$150,130.11**	**$333,869.89**
MOTOR VEHICLE SUPPLIES & EXPENSE				
6103-01	Fuel & Lubricants	$150,000.00	$34,087.95	$115,912.05
6103-02	Repairs & Shop Tools	$45,000.00	$2,913.22	$42,086.78
6103-03	Tires & Batteries	$12,000.00	$696.27	$11,303.73
	TOTALS	**$207,000.00**	**$37,697.44**	**$169,302.56**
UTILITIES & COMMUNICATIONS				
6104-01	Heat, Light & Power	$40,000.00	$6,316.26	$33,683.74
6104-04	Water Sewer & Disposal	$18,000.00	$2,719.49	$15,280.51
6105-01	Telephone	$22,000.00	$4,335.17	$17,664.83
6105-02	Cellular Phones	$22,000.00	$2,421.21	$19,578.79
	TOTALS	**$102,000.00**	**$15,792.13**	**$86,207.87**
OFFICE SUPPLIES & EXPENSE				
6106-02	Postage, Printing & Stationery	$6,000.00	$242.66	$5,757.34
6106-04	Repairs & Maintenance	$6,000.00	$212.28	$5,787.72
6106-05	Misc Office Supplies	$13,000.00	$1,344.39	$11,655.61
6106-06	Office Equipment & Furniture	$8,000.00	$3,391.13	$4,608.87
	TOTALS	**$33,000.00**	**$5,190.46**	**$27,809.54**
INSURANCE				
6107-01	Liability, Property & Auto	$87,000.00	$78,740.00	$8,260.00
6107-02	Workers Compensation	$76,000.00	$67,751.00	$8,249.00
	TOTALS	**$163,000.00**	**$146,491.00**	**$16,509.00**

Consolidated Mosquito Abatement District
Monthly Expenditures

ACCOUNT NUMBER	ACCOUNT NAME	BUDGET FY 2020/2021	SPENT TO DATE	BALANCE AUG 31, 2021
TRAVEL & SUBSISTENCE EXPENSE				
6108-01	Meetings & Travel Allowance	$50,000.00	$1,080.00	$48,920.00
6108-02	Trustee Allowance	$1,000.00	$0.00	$1,000.00
6108-03	Meal Allowance	$5,000.00	$751.38	$4,248.62
	TOTALS	**$56,000.00**	**$1,831.38**	**$54,168.62**
MISCELLANEOUS EXPENDITURES				
6109-01	Rent: Land, Buildings and Equipment	$2,000.00	$0.00	$2,000.00
6109-02	Dues, Subscriptions and Fees	$28,000.00	$13,239.99	$14,760.01
6109-03	Education & Publicity	$30,000.00	$1,157.60	$28,842.40
6109-04	Accounting	$14,000.00	$0.00	$14,000.00
6109-05	Legal	$14,000.00	$2,448.00	$11,552.00
6109-06	County Service Charge	$0.00	$0.00	$0.00
6109-07	Uniforms, Safety Apparel & Equipment	$30,000.00	$4,234.29	$25,765.71
6109-08	Surveillance & Research	$50,000.00	$15,719.36	$34,280.64
6109-09	Other Miscellaneous Expenditures	$20,000.00	$231.84	$19,768.16
6109-10	GIS & GPS	$60,000.00	$11,472.72	$48,527.28
	TOTALS	**$248,000.00**	**$48,503.80**	**$199,496.20**
	TOTAL OPERATIONAL EXPENDITURES	**$3,635,000.00**	**$814,431.04**	**$2,820,568.96**
CAPITAL OUTLAY				
6110-01	Office & Lab Furniture & Equipment	$15,000.00	$0.00	$15,000.00
6110-02	Auto Equipment	$300,000.00	$0.00	$300,000.00
6110-03	Shop Equipment	$10,000.00	$0.00	$10,000.00
6110-04	Field Equipment	$20,000.00	$2,600.00	$17,400.00
6110-05	Building & Ground Improvement	$50,000.00	$0.00	$50,000.00
6110-06	Loan & Lease Purchase Payments	$290,000.00	$0.00	$290,000.00
	TOTAL CAPITAL OUTLAY EXPENDITURES	**$685,000.00**	**$2,600.00**	**$682,400.00**
	TOTAL EXPENDITURES	**$4,320,000.00**	**$817,031.04**	**$3,502,968.96**
SPECIAL PROJECTS RESERVE		$250,000.00	$0.00	$250,000.00
CONTINGENT LIABILITY RESERVE		$300,000.00	$0.00	$300,000.00
BUILDING RESERVE		$900,000.00	$0.00	$900,000.00
EQUIPMENT RESERVE		$400,000.00	$0.00	$400,000.00
GENERAL RESERVE		$3,978,000.00	$0.00	$3,978,000.00
	TOTAL RESERVES	**$5,828,000.00**	**$0.00**	**$5,828,000.00**
	TOTAL EXPENDITURES AND RESERVES	**$10,148,000.00**	**$817,031.04**	**$9,330,968.96**

Consolidated Mosquito Abatement District
Monthly Expenditures

FRESNO COUNTY ACCOUNT- BANK OF THE WEST	
CASH ON HAND, JULY 31, 2021	**$5,574,954.54**
PROPERTY TAXES WITHHELD BY FRS COUNTY	$0.00
AUGUST REVENUE	$26,846.91
AUGUST INTEREST	$0.00
TAXES - FRESNO COUNTY / KINGS COUNTY	$17,273.03
TOTAL REVENUE FOR AUGUST	$44,119.94
SUB-TOTAL	**$5,619,074.48**
COUNTY ADMIN COST FOR FY WITHHELD BY COUNTY	$0.00
MONEY TRANSFERRED TO CHECKING	($318,983.00)
CASH ON HAND, AUGUST 31, 2021	**$5,300,091.48**

YEARLY REVENUE THROUGH 07-31-21	**$0.00**
AUGUST REVENUE	$44,119.94
YEARLY REVENUE THROUGH 08-31-21	**$44,119.94**

CMAD CHECKING ACCOUNT - BANK OF THE WEST	
CASH ON HAND, JULY 31, 2021	**$135,000.00**
MONEY TRANSFERRED FROM FRS CO ACCT	$318,983.00
AUGUST EXPENDITURES	($318,983.00)
CASH ON HAND, AUGUST 31, 2021	**$135,000.00**

SAVINGS ACCOUNT- CITIBANK	
CASH ON HAND, JULY 31, 2021	**$14,112.85**
INTEREST EARNED FOR AUGUST	$0.60
CASH ON HAND, AUGUST 31, 2021	**$14,113.45**

AGENDA ITEM 7: DISPOSITION OF SURPLUS VEHICLES

Background:

The District has expanded purchase of new full-size trucks to replace older trucks with high mileage and to upgrade the vehicle fleet. As such, the District no longer has need for certain older trucks and management would like to have them declared as surplus property and to sell them. These vehicles are as follows:

1) 2004 Chevrolet Colorado 4WD VIN 1GCDT146548137584 117,000 miles
2) 2005 Ford Ranger 4WD VIN 1FTYR11E65PB07223 121,522 miles

Action requested:

Declare the above trucks as surplus District property for sale.

AGENDA ITEM 8: SALE OF SURPLUS VEHICLES

Background:

On August 16, 2021, the Board reviewed bids for the sale of six surplus District trucks and approved awarding sale to the highest qualified bidder based on chronologic order. Three of the trucks were sold in that manner; however, three trucks were not sold, as all bidders for those vehicles declined to purchase. These unsold vehicles, with minimum bid, are as follows:

a)	2007 Chevrolet Colorado 4WD	VIN 1GCDT14E978206935	$4,500.00
b)	2009 Chevrolet Colorado 4WD	VIN 1GCDT14E898145466	$5,000.00
c)	2009 Chevrolet Colorado 4WD	VIN 1GCDT14EX98146604	$5,000.00

For the above vehicles, five bids received for vehicle #1, three bids for vehicle #2, and five bids for vehicle #3.

On this current agenda under agenda Item 7, the Board was asked to declare as surplus and to sell the following two vehicles:

a)	2004 Chevrolet Colorado 4WD	VIN 1GCDT146548137584	117,000 miles
b)	2005 Ford Ranger 4WD	VIN 1FTYR11E65PB07223	121,522 miles

It is requested that the Board take action to set minimum bid prices for the advertisement and sale of all five vehicles.

A copy of the Kelley Blue Book Pricing Report is enclosed for each of the five vehicles to help set a minimum price for bidding. Usually the Equipment Committee is charged with examining the surplus vehicles to set a minimum sale price for each vehicle and the vehicles are advertised for sale to the general public by bid. Since the pandemic, our Board meetings are attended virtual by most trustees and it is difficult to organize a meeting of the Equipment Committee. Because of this, the District Manager and the Mechanic have considered the vehicles, Kelley Blue Book values and most recent sale prices for surplus District vehicles and propose minimum bid price ranges to consider and aid in selection of a minimum bid price for each vehicle:

1)	2004 Chevrolet Colorado 4WD		$3,500.00 - $4,000.00
2)	2005 Ford Ranger 4WD		$4,000.00 - $4,500.00
3)	2007 Chevrolet Colorado 4WD		$4,000.00 - $4,500.00
4)	2009 Chevrolet Colorado 4WD	VIN…466	$4,500.00 - $5,000.00
5)	2009 Chevrolet Colorado 4WD	VIN…604	$4,500.00 - $5,000.00

Action requested:

The Board review the information and approve a value to set as the minimum bid price for each vehicle and to advertise and sell the vehicles by sealed bids to the highest bidders.

#32

2004 Chevrolet Colorado Regular Cab Pricing Report

Style: Pickup 2D 6 ft

Mileage: 117,000

KBB.com Consumer Rating: 4.1/5

Vehicle Highlights

Fuel Economy: City 16/Hwy 21/Comb 18 MPG

Engine: 5-Cyl, 3.5 Liter

Transmission: Automatic

Drivetrain: 4WD

Country of Assembly: United States

Country of Origin: United States

EPA Class: Small Pickup Trucks

Max Seating: 3

Doors: 2

Body Style: Pickup

Sell to Private Party

Private Party Range
$4,306 - $6,013

Private Party Value
$5,160

Valid for **ZIP code 93648** through **09/07/2021**

#46

2005 Ford Ranger Regular Cab Pricing Report

Style: XL Pickup 2D 6 ft

Mileage: 121,522

KBB.com Consumer Rating: 4.5/5

Sell to Private Party

Valid for **ZIP code 93648** through **09/07/2021**

Vehicle Highlights

Fuel Economy: City 14/Hwy 18/Comb 16 MPG

Engine: V6, 4.0 Liter

Transmission: Automatic

Drivetrain: 4WD

Country of Assembly: United States

Country of Origin: United States

EPA Class: Small Pickup Trucks

Max Seating: 3

Doors: 2

Body Style: Pickup

#30

2007 Chevrolet Colorado Regular Cab Pricing Report

Style: LT Pickup 2D 6 ft

Mileage: 123,694

KBB.com Consumer Rating: 4.1/5

Vehicle Highlights

Fuel Economy: City 15/Hwy 21/Comb 17 MPG

Engine: 4-Cyl, 2.9 Liter

Transmission: Automatic

Drivetrain: 4WD

Country of Assembly: United States

Country of Origin: United States

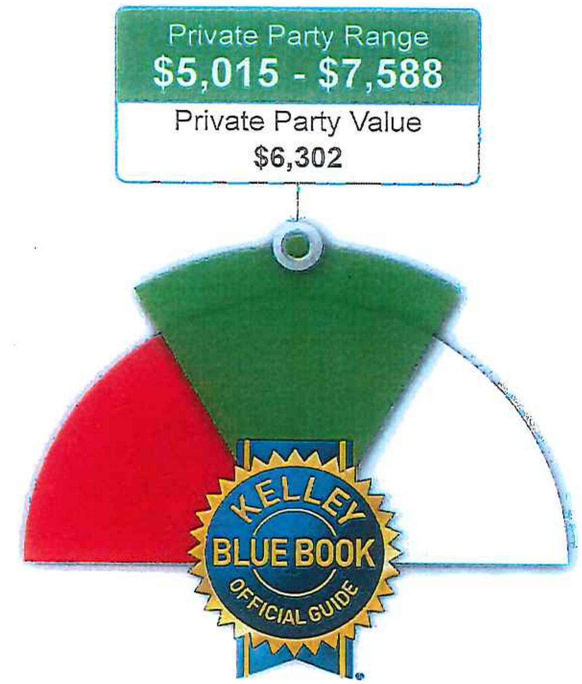
EPA Class: Small Pickup Trucks

Max Seating: 3

Doors: 2

Body Style: Pickup

Sell to Private Party



Valid for **ZIP code 93648** through **07/07/2021**

#20

2009 Chevrolet Colorado Regular Cab Pricing Report

Style: LT Pickup 2D 6 ft

Mileage: 121,172

KBB.com Consumer Rating: 4.1/5

Vehicle Highlights

Fuel Economy: City 16/Hwy 22/Comb 19 MPG

Engine: 5-Cyl, 3.7 Liter

Transmission: Automatic, 4-Spd w/Overdrive

Drivetrain: 4WD

Country of Assembly: United Kingdom

Country of Origin: United States

EPA Class: Small Pickup Trucks

Max Seating: 3

Doors: 2

Body Style: Pickup

Sell to Private Party

Private Party Range
$6,632 - $8,523

Private Party Value
$7,578

Valid for **ZIP code 93648** through **07/07/2021**

#5

2009 Chevrolet Colorado Regular Cab Pricing Report

Style: LT Pickup 2D 6 ft

Mileage: 145,769

KBB.com Consumer Rating: 4.1/5

Vehicle Highlights

Fuel Economy: City 16/Hwy 22/Comb 19 MPG

Engine: 5-Cyl, 3.7 Liter

Transmission: Automatic, 4-Spd w/Overdrive

Drivetrain: 4WD

Country of Assembly: United Kingdom

Country of Origin: United States

EPA Class: Small Pickup Trucks

Max Seating: 3

Doors: 2

Body Style: Pickup

Sell to Private Party

Private Party Range
$5,939 - $7,830

Private Party Value
$6,885

Valid for **ZIP code 93648** through **07/07/2021**

Consolidated
Mosquito Abatement District

13151 E. INDUSTRIAL DR.
MAIL: P.O. BOX 784
PARLIER, CALIFORNIA 93648
(559) 896-1085
FAX (559) 896-6425
www.mosquitobuzz.net

SALE OF SURPLUS PROPERTY: TERMS AND CONDITIONS

2004 Chevrolet Colorado 4WD
2005 Ford Ranger 4WD
2007 Chevrolet Colorado 4WD
2009 Chevrolet Colorado 4WD
2009 Chevrolet Colorado 4WD

The District Board of Trustees (Board) has declared to be surplus property and is selling, by sealed bid, five (5) pickup trucks. The vehicles are available for inspection during the hours 8am – 3pm at the Consolidated Mosquito Abatement District, 13151 E. Industrial Dr., Parlier, CA. Minimum bid required for each vehicle is as follows:

Item No.		V.I.N.	Minimum Bid
#1	2004 Chevrolet Colorado 4WD	1GCDT146548137584	
#2	2005 Ford Ranger 4WD	1FTYR11E65PB07223	
#3	2007 Chevrolet Colorado 4WD	1GCDT14E978206935	
#4	2009 Chevrolet Colorado 4WD	1GCDT14E898145466	
#5	2009 Chevrolet Colorado 4WD	1GCDT14EX98146604	

The vehicles are to be sold individually on an **"as is"** basis, without warranty of any kind by the District. The District, as a government agency, is not required to provide and shall not furnish a smog certificate of compliance with the sale of a vehicle. **Please note that the buyer is required to obtain a smog certificate of compliance for vehicle registration.**

Prospective buyers shall submit a sealed bid, to be received by the District **prior** to 3:00 pm on Friday, October 15, 2021 at the District headquarters.

Bids may be hand delivered to the District headquarters at 13151 E. Industrial Dr., Parlier, or mailed to the Consolidated Mosquito Abatement District, PO Box 784, Parlier, CA, 93648, and shall have "**VEHICLE BID**" plainly marked on the outside of the envelope.

The bids will be opened at close of bidding and the Board will consider the bids at the October 18, 2021, Board meeting. The Board reserves the right to reject any or all bids. Only the highest bidder for a vehicle will be notified. If the highest bidder does not complete the transaction, the next highest bidder will be notified, and so on, until the vehicle is sold. If two or more bidders have identical bids, the earliest submitted bid (date of receipt) will be accepted.

The prospective buyer must complete the transaction within three working days of receipt of notification of bid acceptance. The District shall release the vehicle to the buyer upon payment of the entire sum, by valid bank draft or cashier's check made out to the Consolidated Mosquito Abatement District. The District will also deliver a certificate of ownership transferring title to the buyer. The buyer shall be responsible for any and all sales tax, transfer fees and other fees or costs associated with the transfer.

Consolidated Mosquito Abatement District

Bid Offer Form 2021-03

Surplus District Vehicles

Item No.	Year	Model	VIN Number	Minimum Bid Price	Submitted Bid Price
#1	2004	Chevrolet Colorado 4WD	1GCDT146548137584	$	$____________
#2	2005	Ford Ranger 4WD	1FTYR11E65PB07223	$	$____________
#3	2007	Chevrolet Colorado 4WD	1GCDT14E978206935	$	$____________
#4	2009	Chevrolet Colorado 4WD	1GCDT14E898145466	$	$____________
#5	2009	Chevrolet Colorado 4WD	1GCDT14EX98146604	$	$____________

Bidder Information

Name: ____

Address: ____

Phone No: ____

Email: ____

Signature: ____

CONSOLIDATED MOSQUITO ABATEMENT DISTRICT

INVESTMENT POLICY

PURPOSE

The Board of Trustees of the Consolidated Mosquito Abatement District (District) has a fiduciary responsibility to maximize the use of public funds entrusted to its care and to manage those monies wisely and prudently. The purpose of this policy is to provide guidelines with regard to the investment of District funds. The District shall be guided by and comply with the applicable rules of Government Code Sections 53601 through 53610 regarding the investment of surplus money not required for the immediate necessities of the District, and Government Code Sections 53630 through 53684 regarding the deposit and investment of other District funds. This policy shall apply to all funds and investment activity under the direct authority of the District. If there is any inconsistency between a provision of this policy and an applicable statutory provision, the statute will govern.

ALLOWABLE INVESTMENT INSTRUMENTS

The Fresno County Treasury. All funds collected by the County of Fresno are placed in the Treasury in an account in the name of the District. This shall be the primary investment instrument utilized by the District. District funds may also be invested in the Treasury as Member Trust Funds through the Central California Vector Control Joint Powers Agency.

The State of California's Local Agency Investment Fund (LAIF). Funds may be invested in LAIF.

Vector Control Joint Powers Agency (VCJPA) Investment Pool. Funds may be invested in the VCJPA Member Contingency Fund.

FDIC Insured Banks or Savings and Loan Associations. Funds may be deposited in Certificates of Deposits or in Passbook Deposits in FDIC insured banks or savings and loan associations, providing that the total amount deposited in each bank or savings and loan association does not exceed the amount of insurance, and the other investment requirements of Government Code Sections 53601 through 53610 and 53630 through 53684 are met.

REPORTING REQUIREMENTS

The District Manager, acting as chief fiscal officer for the District, shall submit a quarterly investment report to the Board of Trustees within 30 days following the end of each quarter. The report shall contain those reporting requirements listed in Government Code Section 53646, but not less than the following:

A statement indicating that all cash and investments are in conformity with this investment policy.

A statement indicating that there are sufficient funds to meet the next six months' expected expenditures.

A copy of the most recent statement or statements from the institutions listed as "Allowable Investment Instruments" in which the District has funds invested.

INVESTMENT POLICY REVISION

This investment policy shall be reviewed at least annually at a regular public meeting of the Board of Trustees of the Consolidated Mosquito Abatement District. Revision of the investment policy may be made at the time or at any other Board meeting when properly placed on the agenda according to law.

Adopted: September 16, 1996
Amended: September 20, 1999
Amended: August 17, 2015
Amended: September 17, 2018

AGENDA ITEM 10: DISTRICT PARTICIPATION AT MEETING

Background: The Entomological Society of America (ESA) is holding its annual conference in Denver, CO on October 31 – November 3 (Entomology 2021). There will be 87 symposium sessions highlighting elements of academic, industry and government research, with more than 100 oral presentations and 28 posters on mosquitoes. Ten daily interactive, hands-on learning workshops will be available, and many opportunities to interact with other attendees and industry representatives regarding the latest information about mosquito surveillance, control strategies and products.

District staff relies heavily on conferences put on by organizations like ESA to stay current with research and development in the field of mosquito biology and control. In a time where science and evidence-based decision making is questioned and scrutinized it's critical that our staff continue to stay current on research in the field of mosquito biology.

ESA has always had a strong educational component to their program that looks at innovative ways to bring entomology into the classroom. This is a direct value and benefit to our program as our Scientific Education Coordinator looks to develop and build relationships with educators inside the classroom on mosquito development and control.

The District Manager recommends that Superintendent of Operations Holeman and Science Education Coordinator Ramirez attend the Conference, as it will provide four days of educational scientific sessions, many of which are directly applicable to our work. Attendance at Entomology 2021 will allow them to expand on existing knowledge and provide tools and resources to enhance job performance.

Estimated expenses:

Registration:	$646 per staff member
Hotel:	range from $159 - $200 plus taxes and fees / night for 4 nights
Airfare:	$250 - $350 RT
Meals:	$76 per day for 5 days

Action requested:

District Manager Mulligan requests that the Board approve and authorize Superintendent of Operations Holeman and Science Education Coordinator Ramirez attend the ESA Annual Conference in Denver, CO on October 31 – November 3, 2021.

California Public Employees' Retirement System
Actuarial Office
400 Q Street, Sacramento, CA 95811 | Phone: (916) 795-3000 | Fax: (916) 795-2744
888 CalPERS (or **888**-225-7377) | TTY: (877) 249-7442 | **www.calpers.ca.gov**

July 2021

Miscellaneous Plan of the Consolidated Mosquito Abatement District
(CalPERS ID: 1965051103)
Annual Valuation Report as of June 30, 2020

Dear Employer,

Attached to this letter, you will find the June 30, 2020 actuarial valuation report of your CalPERS pension plan. **Provided in this report is the determination of the minimum required employer contributions for fiscal year 2022-23**. In addition, the report contains important information regarding the current financial status of the plan as well as projections and risk measures to aid in planning for the future.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2020.

Section 2 can be found on the CalPERS website (calpers.ca.gov). From the home page, go to *"Forms & Publications"* and select *"View All"*. In the search box, enter *"Risk Pool"* and from the results list download the Miscellaneous Risk Pool Actuarial Valuation Report for June 30, 2020.

Your June 30, 2020 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you.

Actuarial valuations are based on assumptions regarding future plan experience including investment return and payroll growth, eligibility for the types of benefits provided, and longevity among retirees. The CalPERS Board of Administration adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution rates as needed. This valuation is based on an investment return assumption of 7.0% which was adopted by the board in December 2016. Other assumptions used in this report are those recommended in the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017.

Required Contribution

The exhibit below displays the minimum employer contributions for fiscal year 2022-23 along with estimates of the required contributions for fiscal year 2023-24. Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. **The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees**.

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability
2022-23	8.63%	$6,166
Projected Results		
2023-24	*8.6%*	*$10,000*

The actual investment return for fiscal year 2020-21 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 7.00%. ***To the extent the actual investment return for fiscal year 2020-21 differs from 7.00%, the actual contribution requirements for fiscal year 2023-24 will differ from those shown above.*** For additional details regarding the assumptions and methods used for these projections please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This section also contains projected required contributions through fiscal year 2027-28.

Changes from Previous Year's Valuation

There are no significant changes in actuarial assumptions or policies in your 2020 actuarial valuation. Your annual valuation report is an important tool for monitoring the health of your CalPERS pension plan. Your report contains useful information about future required contributions and ways to control your plan's funding progress. In addition to your annual actuarial report my office has developed tools for employers to plan, project and protect the retirement benefits of your employees. Pension Outlook is a tool to help plan and budget pension costs into the future with easy to understand results and charts.

You will be able to view the projected funded status and required employer contributions for pension plans in different potential scenarios for up to 30 years into the future — which will make budgeting more predictable. While Pension Outlook can't predict the future, it can provide valuable planning information based on a variety of future scenarios that you select.

Pension Outlook can help you answer specific questions about your plans, including:

- When is my plan's funded status expected to increase?
- What happens to my required contributions in a down market?
- How does the discount rate assumption affect my contributions?
- What is the impact of making an additional discretionary payment to my plan?

To get started, visit our Pension Outlook page at www.calpers.ca.gov/page/employers/actuarial-resources/pension-outlook-overview and take the steps to register online.

CalPERS will be completing an Asset Liability Management (ALM) review process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. In addition, the Actuarial Office will be completing its Experience Study to review the demographic experience within the pension system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A of the Section 2 report, "Actuarial Methods and Assumptions."

Questions

We understand that you might have questions about these results, and your assigned CalPERS actuary whose signature is on the valuation report is available to discuss. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or (**888-225-7377**).

Sincerely,

SCOTT TERANDO, ASA, EA, MAAA, FCA, CFA
Chief Actuary

Actuarial Valuation
as of June 30, 2020

for the
Miscellaneous Plan
of the
Consolidated Mosquito Abatement District

(CalPERS ID: 1965051103)

Required Contributions
for Fiscal Year
July 1, 2022 - June 30, 2023

Table of Contents

Section 1

Plan Specific Information for the Miscellaneous Plan of the Consolidated Mosquito Abatement District

(CalPERS ID: 1965051103)
(Rate Plan ID: 3366)

Table of Contents

Actuarial Certification

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2020 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2020 provided by employers participating in the Miscellaneous Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the risk pool containing your Miscellaneous Plan has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2020 and employer contribution as of July 1, 2022 have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary who satisfies the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States with regard to pensions.

TONY CUNY, ASA, MAAA
Associate Pension Actuary, CalPERS

Highlights and Executive Summary

- **Introduction**
- **Purpose of Section 1**
- **Required Employer Contributions**
- **Additional Discretionary Employer Contributions**
- **Plan's Funded Status**
- **Projected Employer Contributions**
- **Other Pooled Miscellaneous Risk Pool Rate Plans**
- **Cost**
- **Changes Since the Prior Year's Valuation**
- **Subsequent Events**

Introduction

This report presents the results of the June 30, 2020 actuarial valuation of the Miscellaneous Plan of the Consolidated Mosquito Abatement District of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for fiscal year 2022-23.

Purpose of Section 1

This Section 1 report for the Miscellaneous Plan of the Consolidated Mosquito Abatement District of CalPERS was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2020;
- Determine the minimum required employer contribution for this plan for the fiscal year July 1, 2022 through June 30, 2023; and
- Provide actuarial information as of June 30, 2020 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available on the CalPERS website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in actuarial policies; and changes in plan provisions or applicable law.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the recommendations of Actuarial Standards of Practice No. 51 and recommended by the California Actuarial Advisory Panel (CAAP) in the Model Disclosure Elements document:

- A "Scenario Test," projecting future results under different investment income returns.
- A "Sensitivity Analysis," showing the impact on current valuation results using alternative discount rates of 6.0% and 8.0%.
- A "Sensitivity Analysis," showing the impact on current valuation results assuming rates of mortality are 10% lower or 10% higher than our current post- retirement mortality assumptions adopted in 2017.
- Pension Plan maturity measures quantifying the risks the employer bears.

Required Employer Contributions

Required Employer Contributions	Fiscal Year 2022-23
Employer Normal Cost Rate	**8.63%**
Plus	
Required Payment on Amortization Bases[1]	**$6,166**
Paid either as	
1) Monthly Payment	**$513.83**
Or	
2) Annual Prepayment Option*	**$5,961**

The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll and paid as payroll is reported) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly (1) or prepaid annually (2) in dollars).

** Only the UAL portion of the employer contribution can be prepaid* ***(which must be received in full no later than July 31)***.

Development of Normal Cost as a Percentage of Payroll	Fiscal Year 2021-22	Fiscal Year 2022-23
Base Total Normal Cost for Formula	15.57%	15.56%
Surcharge for Class 1 Benefits[2]		
None	0.00%	0.00%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	15.57%	15.56%
Formula's Expected Employee Contribution Rate	6.92%	6.93%
Employer Normal Cost Rate	8.65%	8.63%

[1] The required payment on amortization bases does not take into account any additional discretionary payment made after April 30, 2021.

[2] Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

[3] The normal cost change is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for the 2022-23 fiscal year is $6,166. CalPERS allows employers to make additional discretionary payments (ADPs) at any time and in any amount. These optional payments serve to reduce the UAL and future required contributions and can result in significant long-term savings. Employers can also use ADPs to stabilize annual contributions as a fixed dollar amount, percent of payroll or percent of revenue.

Provided below are select ADP options for consideration. Making such an ADP during fiscal year 2022-23 does not require an ADP be made in any future year, nor does it change the remaining amortization period of any portion of unfunded liability. For information on permanent changes to amortization periods, see the "Amortization Schedule and Alternatives" section of the report.

If you are considering making an ADP, please contact your actuary for additional information.

Minimum Required Employer Contribution for Fiscal Year 2022-23

Estimated Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
$76,320	$6,166	$0	$6,166	$82,486

The minimum required contribution above is less than interest on the UAL. With no ADP the UAL is projected to increase over the following year. If the minimum UAL payment were split between interest and principal, the principal portion would be negative. This situation is referred to as "negative amortization."

Fiscal Year 2022-23 Employer Contribution Necessary to Avoid Negative Amortization

Estimated Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
$76,320	$6,166	$7,424	$13,590	$89,910

Alternative Fiscal Year 2022-23 Employer Contributions for Greater UAL Reduction

Funding Target	Estimated Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
20 years	$76,320	$6,166	$12,160	$18,326	$94,646
15 years	$76,320	$6,166	$15,150	$21,316	$97,636
10 years	$76,320	$6,166	$21,476	$27,642	$103,962
5 years	$76,320	$6,166	$41,184	$47,350	$123,670

[1] The ADP amounts are assumed to be made in the middle of the fiscal year. A payment made earlier or later in the fiscal year would have to be less or more than the amount shown to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected Unfunded Accrued Liability as of June 30, 2022 as determined in the June 30, 2020 actuarial valuation. New unfunded liabilities can emerge in future years due to assumption or method changes, changes in plan provisions and actuarial experience different than assumed. Making an ADP illustrated above for the indicated number of years will not result in a plan that is exactly 100% funded in the indicated number of years. Valuation results will vary from one year to the next and can diverge significantly from projections over a period of several years.

Plan's Funded Status

	June 30, 2019	June 30, 2020
1. Present Value of Projected Benefits (PVB)	$7,738,618	$7,981,511
2. Entry Age Accrued Liability (AL)	6,775,031	7,143,580
3. Plan's Market Value of Assets (MVA)	6,219,429	6,483,464
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	555,602	660,116
5. Funded Ratio [(3) / (2)]	91.8%	90.8%

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plan. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Projected Employer Contributions

The table below shows the required and projected employer contributions (before cost sharing) for the next six fiscal years. The projection assumes that all actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period. Actual contribution rates during this projection period could be significantly higher or lower than the projection shown below.

	Required Contribution	Projected Future Employer Contributions (Assumes 7.00% Return for Fiscal Year 2020-21)				
Fiscal Year	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
	Rate Plan 3366 Results					
Normal Cost %	8.63%	8.6%	8.6%	8.6%	8.6%	8.6%
UAL Payment	$6,166	$10,000	$14,000	$18,000	$21,000	$21,000

For some sources of UAL, the change in UAL is amortized using a 5-year ramp up. For more information, please see "Amortization of the Unfunded Actuarial Accrued Liability" under "Actuarial Methods" in Appendix A of the Section 2 Report. This method phases in the impact of the change in UAL over a 5-year period in order to reduce employer cost volatility from year to year. As a result of this methodology, dramatic changes in the required employer contributions in any one year are less likely. However, required contributions can change gradually and significantly over the next five years. In years when there is a large increase in UAL, the relatively small amortization payments during the ramp up period could result in a funded ratio that is projected to decrease initially while the contribution impact of the increase in the UAL is phased in.

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section.

Our online pension plan modeling and projection tool, Pension Outlook, is available in the Employers section of the CalPERS website. Pension Outlook is a tool to help plan and budget pension costs into the future with results and charts that are easy to understand.

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown below, correspond to rate plan 3366. In many cases, employers have additional rate plans within the same risk pool. For cost analysis and budgeting it is useful to consider contributions for these rate plans as a whole rather than individually. The estimated contribution amounts and rates for all of the employer's rate plans in the Miscellaneous Risk Pool are shown below and assume that the payroll for each rate plan will grow according to the overall payroll growth assumption of 2.75% per year for three years.

	Fiscal Year 2021-22	Fiscal Year 2022-23
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	$1,371,769	$1,303,255
Estimated Employer Normal Cost	$115,490	$107,611
Required Payment on Amortization Bases	$37,366	$7,449
Estimated Total Employer Contributions	$152,856	$115,060
Estimated Total Employer Contribution Rate (illustrative only)	11.14%	8.83%

Cost

Actuarial Determination of Pension Plan Cost

Contributions to fund the pension plan are comprised of two components:

- Normal Cost, expressed as a percentage of total active payroll
- Amortization of the Unfunded Accrued Liability (UAL), expressed as a dollar amount

For fiscal years prior to 2016-17, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with fiscal year 2016-17, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There continues to be an option to prepay this amount during July of each fiscal year.

The Normal Cost component is expressed as a percentage of active payroll with employer and employee contributions payable as part of the regular payroll reporting process.

The determination of both components requires complex actuarial calculations. The calculations are based on a set of actuarial assumptions which can be divided into two categories:

- Demographic assumptions (e.g., mortality rates, retirement rates, employment termination rates, disability rates)
- Economic assumptions (e.g., future investment earnings, inflation, salary growth rates)

These assumptions reflect CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 5.5% over the 20 years ending June 30, 2020, yet individual fiscal year returns have ranged from -23.6% to +20.7%. In addition, CalPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2017.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective, even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

The are no significant changes to the actuarial methods or assumptions for the 2020 actuarial valuation.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2020. Changes in the value of assets subsequent to that date are not reflected. Investment returns below the assumed rate of return will increase future required contributions while investment returns above the assumed rate of return will decrease future required contributions.

CalPERS will be completing an Asset Liability Management (ALM) process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. As part of the ALM process the Actuarial Office will be completing an Experience Study to review the demographic experience of the retirement system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

The projected employer contributions on Page 6 are calculated under the assumption that the discount rate remains at 7.0% going forward and that the realized rate of return on assets for fiscal year 2020-21 is 7.0%.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2021. Any subsequent changes or actions are not reflected.

Assets and Liabilities

- **Breakdown of Entry Age Accrued Liability**
- **Allocation of Plan's Share of Pool's Experience/Assumption Change**
- **Development of Plan's Share of Pool's Market Value of Assets**
- **Schedule of Plan's Amortization Bases**
- **Amortization Schedule and Alternatives**
- **Employer Contribution History**
- **Funding History**

Breakdown of Entry Age Accrued Liability

Active Members	$2,847,703
Transferred Members	119,504
Terminated Members	338,237
Members and Beneficiaries Receiving Payments	3,838,136
Total	$7,143,580

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$7,143,580
2.	Projected UAL balance at 6/30/2020	484,707
3.	Pool's Accrued Liability[1]	19,314,480,060
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/2020[1]	4,306,566,797
5.	Pool's 2019/20 Investment (Gain)/Loss[1]	344,968,792
6.	Pool's 2019/20 Non-Investment (Gain)/Loss[1]	60,428,629
7.	Plan's Share of Pool's Investment (Gain)/Loss: [(1) - (2)] ÷ [(3) - (4)] × (5)	153,059
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	22,350
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	175,409

[1] Does not include plans that transferred to Pool on the valuation date.

Development of the Plan's Share of Pool's Market Value of Assets

10.	Plan's UAL: (2) + (9)	$660,116
11.	Plan's Share of Pool's MVA: (1) - (10)	$6,483,464

Schedule of Plan's Amortization Bases

Note that there is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2020.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: fiscal year 2022-23.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their required employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the expected payment on the UAL for the fiscal year and adjusting for interest. The expected payment for the first fiscal year is determined by the actuarial valuation two years ago and the contribution for the second year is from the actuarial valuation one year ago. Additional discretionary payments are reflected in the Expected Payments column in the fiscal year they were made by the agency.

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Fresh Start	6/30/15	No Ramp		2.75%	1	150,511	155,690	0	0	0	0
Non-Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	1	(46,193)	(47,782)	0	0	0	0
Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	1	111,641	115,483	0	0	0	0
Assumption Change	6/30/16	100%	Up/Down	2.75%	1	116,895	120,917	0	0	0	0
Non-Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	1	(9,516)	(9,843)	0	0	0	0
Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	1	(222,507)	(230,163)	0	0	0	0
Assumption Change	6/30/17	80%	Up/Down	2.75%	1	131,125	135,637	0	0	0	0
Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	1	(68,589)	(70,949)	0	0	0	0
Assumption Change	6/30/18	60%	Up/Down	2.75%	1	205,426	212,494	0	0	0	0
Method Change	6/30/18	60%	Up/Down	2.75%	1	55,273	57,175	0	0	0	0
Non-Investment (Gain)/Loss	6/30/19	No Ramp		0.00%	1	27,976	28,938	0	0	0	0
Investment (Gain)/Loss	6/30/19	40%	Up Only	0.00%	1	32,665	33,789	0	0	0	0
Non-Investment (Gain)/Loss	6/30/20	No Ramp		0.00%	20	22,350	0	23,915	0	25,589	2,335
Investment (Gain)/Loss	6/30/20	20%	Up Only	0.00%	20	153,059	0	163,773	0	175,237	3,831
Total						**660,116**	**501,386**	**187,688**	**0**	**200,826**	**6,166**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed in "Allocation of Plan's Share of Pool's Experience/Assumption Change" earlier in this section. These (gain)/loss bases will be amortized in accordance with the CalPERS amortization policy in effect at the time the base was established.

Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to the CalPERS amortization policy. Many agencies have expressed a desire for a more stable pattern of payments or have indicated interest in paying off the unfunded accrued liabilities more quickly than required. As such, we have provided alternative amortization schedules to help analyze the current amortization schedule and illustrate the potential savings of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternative "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. To initiate a Fresh Start, please consult with your plan actuary.

The Current Amortization Schedule typically contains both positive and negative bases. Positive bases result from plan changes, assumption changes, method changes or plan experience that increase unfunded liability. Negative bases result from plan changes, assumption changes, method changes, or plan experience that decrease unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years, such as:

- When a negative payment would be required on a positive unfunded actuarial liability; or
- When the payment would completely amortize the total unfunded liability in a very short time period, and results in a large change in the employer contribution requirement.

In any year when one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy.

Amortization Schedule and Alternatives (continued)

			Alternate Schedules			
	Current Amortization Schedule		20 Year Amortization		15 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2022	200,826	6,166	200,826	18,326	200,826	21,316
6/30/2023	208,506	9,998	195,927	18,326	192,834	21,316
6/30/2024	212,759	13,829	190,685	18,326	184,283	21,316
6/30/2025	213,347	17,661	185,076	18,326	175,133	21,316
6/30/2026	210,012	21,492	179,075	18,326	165,343	21,316
6/30/2027	202,481	21,492	172,654	18,326	154,868	21,316
6/30/2028	194,424	21,492	165,783	18,326	143,659	21,316
6/30/2029	185,802	21,492	158,431	18,326	131,666	21,316
6/30/2030	176,577	21,492	150,565	18,326	118,833	21,316
6/30/2031	166,706	21,492	142,148	18,326	105,102	21,316
6/30/2032	156,144	21,492	133,142	18,326	90,410	21,317
6/30/2033	144,842	21,492	123,505	18,326	74,688	21,317
6/30/2034	132,749	21,491	113,194	18,326	57,866	21,316
6/30/2035	119,811	21,492	102,161	18,326	39,867	21,317
6/30/2036	105,966	21,491	90,356	18,326	20,607	21,316
6/30/2037	91,154	21,492	77,724	18,326		
6/30/2038	75,303	21,492	64,208	18,325		
6/30/2039	58,342	21,492	49,747	18,326		
6/30/2040	40,194	21,491	34,273	18,326		
6/30/2041	20,777	21,492	17,716	18,326		
6/30/2042						
6/30/2043						
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		**391,523**		**366,519**		**319,743**
Interest Paid		**190,697**		**165,693**		**118,917**
Estimated Savings				**25,004**		**71,780**

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan. The amounts are based on the actuarial valuation from two years prior and does not account for prepayments or benefit changes made during a fiscal year. Additional discretionary payments before July 1, 2019 or after June 30, 2020 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)	Additional Discretionary Payments
2016 - 17	7.159%	$0	N/A
2017 - 18	7.200%	9,372	N/A
2018 - 19	7.634%	16,165	N/A
2019 - 20	8.081%	18,994	100,000
2020 - 21	8.794%	24,003	
2021 - 22	8.65%	35,908	
2022 - 23	8.63%	6,166	

Funding History

The table below shows the recent history of the actuarial accrued liability, share of the pool's market value of assets, unfunded accrued liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Unfunded Accrued Liability (UAL)	Funded Ratio	Annual Covered Payroll
06/30/2011	$4,255,192	$3,192,254	$1,062,938	75.0%	$889,238
06/30/2012	4,474,251	3,239,234	1,235,017	72.4%	872,354
06/30/2013	4,533,778	3,463,567	1,070,211	76.4%	844,634
06/30/2014	5,110,508	4,159,849	950,659	81.4%	858,682
06/30/2015	5,378,411	5,247,552	130,859	97.6%	935,598
06/30/2016	5,653,700	5,098,615	555,085	90.2%	902,267
06/30/2017	5,867,005	5,371,384	495,621	91.6%	901,246
06/30/2018	6,409,967	5,849,022	560,945	91.2%	930,379
06/30/2019	6,775,031	6,219,429	555,602	91.8%	989,075
06/30/2020	7,143,580	6,483,464	660,116	90.8%	815,238

Risk Analysis

- **Future Investment Return Scenarios**
- **Discount Rate Sensitivity**
- **Mortality Rate Sensitivity**
- **Maturity Measures**
- **Maturity Measures History**
- **Hypothetical Termination Liability**

Future Investment Return Scenarios

Analysis was performed to determine the effects of various future investment returns on required employer contributions. The projections below provide a range of results based on five investment return scenarios assumed to occur during the next four fiscal years (2020-21, 2021-22, 2022-23 and 2023-24). The projections also assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

For fiscal years 2020-21, 2021-22, 2022-23, and 2023-24, each scenario assumes an alternate fixed annual return. The fixed return assumptions for the five scenarios are 1.0%, 4.0%, 7.0%, 9.0% and 12.0%.

These alternate investment returns were chosen based on stochastic analysis of possible future investment returns over the four-year period ending June 30, 2024. Using the expected returns and volatility of the asset classes in which the funds are invested, we produced five thousand stochastic outcomes for this period based on the most recently completed Asset Liability Management process. We then selected annual returns that approximate the 5th, 25th, 50th, 75th, and 95th percentiles for these outcomes. For example, of all the 4-year outcomes generated in the stochastic analysis, approximately 25% had an average annual return of 4.0% or less.

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 1.0% or greater than 12.0% over this four-year period, the likelihood of a single investment return less than 1.0% or greater than 12.0% in any given year is much greater.

Assumed Annual Return From 2020-21 through 2023-24	Projected Employer Contributions			
	2023-24	**2024-25**	**2025-26**	**2026-27**
1.0%				
Normal Cost	8.6%	8.6%	8.6%	8.6%
UAL Contribution	$20,000	$43,000	$76,000	$119,000
4.0%				
Normal Cost	8.6%	8.6%	8.6%	8.6%
UAL Contribution	$15,000	$29,000	$48,000	$72,000
7.0%				
Normal Cost	8.6%	8.6%	8.6%	8.6%
UAL Contribution	$10,000	$14,000	$18,000	$21,000
9.0%				
Normal Cost	8.8%	9.0%	9.2%	9.4%
UAL Contribution	$8,200	$8,100	$0	$0
12.0%				
Normal Cost	8.8%	9.0%	9.2%	9.4%
UAL Contribution	$0	$0	$0	$0

Discount Rate Sensitivity

The discount rate assumption is calculated as the sum of the assumed real rate of return and the assumed annual price inflation, currently 4.50% and 2.50%, respectively. Changing either the price inflation assumption or the real rate of return assumption will change the discount rate. The sensitivity of the valuation results to the discount rate assumption depends on which component of the discount rate is changed. Shown below are various valuation results as of June 30, 2020 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 7.0% as well as alternate discount rates of 6.0% and 8.0%. The rates of 6.0% and 8.0% were selected since they illustrate the impact of a 1.0% increase or decrease to the 7.0% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	**3.5%**	**4.5%**	**5.5%**
a) Total Normal Cost	19.21%	15.56%	12.74%
b) Accrued Liability	$8,014,759	$7,143,580	$6,414,378
c) Market Value of Assets	$6,483,464	$6,483,464	$6,483,464
d) Unfunded Liability/(Surplus) [(b) - (c)]	$1,531,295	$660,116	($69,086)
e) Funded Status	80.9%	90.8%	101.1%

Sensitivity to the Price Inflation Assumption

As of June 30, 2020	1% Lower Inflation Rate	Current Assumptions	1% Higher Inflation Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	**1.5%**	**2.5%**	**3.5%**
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	16.65%	15.56%	14.26%
b) Accrued Liability	$7,514,230	$7,143,580	$6,640,696
c) Market Value of Assets	$6,483,464	$6,483,464	$6,483,464
d) Unfunded Liability/(Surplus) [(b) - (c)]	$1,030,766	$660,116	$157,232
e) Funded Status	86.3%	90.8%	97.6%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2020 plan costs and funded status under two different longevity scenarios, namely assuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2017. This type of analysis highlights the impact on the plan of improving or worsening mortality over the long-term.

As of June 30, 2020	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	15.84%	15.56%	15.30%
b) Accrued Liability	$7,314,247	$7,143,580	$6,986,980
c) Market Value of Assets	$6,483,464	$6,483,464	$6,483,464
d) Unfunded Liability/(Surplus) [(b) - (c)]	$830,783	$660,116	$503,516
e) Funded Status	88.6%	90.8%	92.8%

Maturity Measures

As pension plans mature they become more sensitive to risks. Understanding plan maturity and how it affects the ability of a pension plan sponsor to tolerate risk is important in understanding how the pension plan is impacted by investment return volatility, other economic variables and changes in longevity or other demographic assumptions. Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only.

One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	**June 30, 2019**	**June 30, 2020**
1. Retired Accrued Liability	2,966,695	3,838,136
2. Total Accrued Liability	6,775,031	7,143,580
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.44	0.54

Another measure of maturity level of CalPERS and its plans is to look at the ratio of actives to retirees, also called the Support Ratio. A pension plan in its infancy will have a very high ratio of active to retired members. As the plan matures, and members retire, the ratio starts declining. A mature plan will often have a ratio near or below one. The average support ratio for CalPERS public agency plans is 1.25.

Support Ratio	**June 30, 2019**	**June 30, 2020**
1. Number of Actives	15	12
2. Number of Retirees	9	10
3. Support Ratio [(1) / (2)]	1.67	1.20

Maturity Measures (Continued)

The actuarial calculations supplied in this communication are based on various assumptions about long-term demographic and economic behavior. Unless these assumptions (e.g., terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Shown in the table below is the asset volatility ratio (AVR), which is the ratio of market value of assets to payroll. Plans that have higher AVR experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 4. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Also shown in the table below is the liability volatility ratio (LVR), which is the ratio of accrued liability to payroll. Plans that have a higher LVR experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with LVR ratio of 8 is expected to have twice the contribution volatility of a plan with LVR of 4. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The AVR, described above, will tend to move closer to the LVR as a plan matures.

Contribution Volatility	**June 30, 2019**	**June 30, 2020**
1. Market Value of Assets	$6,219,429	$6,483,464
2. Payroll	989,075	815,238
3. Asset Volatility Ratio (AVR) [(1) / (2)]	6.3	8.0
4. Accrued Liability	$6,775,031	$7,143,580
5. Liability Volatility Ratio (LVR) [(4) / (2)]	6.8	8.8

Maturity Measures History

Valuation Date	**Ratio of Retiree Accrued Liability to Total Accrued Liability**	**Support Ratio**	**Asset Volatility Ratio**	**Liability Volatility Ratio**
06/30/2017	0.49	1.67	6.0	6.5
06/30/2018	0.47	1.67	6.3	6.9
06/30/2019	0.44	1.67	6.3	6.8
06/30/2020	0.54	1.20	8.0	8.8

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2020. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed. This measure of funded status is not appropriate for assessing the need for future employer contributions in the case of an ongoing plan, that is, for an employer that continues to provide CalPERS retirement benefits to active employees.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while limiting the funding risk. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 19-month period from 12 months before the valuation date to 7 months after.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] at 0.75%	Funded Status	Unfunded Termination Liability at 0.75%	Hypothetical Termination Liability[1,2] at 2.50%	Funded Status	Unfunded Termination Liability at 2.50%
$6,483,464	$15,081,634	43.0%	$8,598,170	$11,769,679	55.1%	$5,286,215

[1] The hypothetical liabilities calculated above include a 5% mortality contingency load in accordance with Board policy. Other actuarial assumptions can be found in Appendix A of the Section 2 report.

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 1.18% on June 30, 2020, and was 1.68% on January 31, 2021.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2019	June 30, 2020
Active Members		
Counts	15	12
Average Attained Age	N/A	52.9
Average Entry Age to Rate Plan	N/A	38.7
Average Years of Credited Service	N/A	13.7
Average Annual Covered Pay	$65,938	$67,937
Annual Covered Payroll	$989,075	$815,238
Projected Annual Payroll for Contribution Year	$1,072,938	$884,362
Present Value of Future Payroll	$6,713,777	$5,786,539
Transferred Members	1	1
Separated Members	3	5
Retired Members and Beneficiaries		
Counts*	9	10
Average Annual Benefits*	N/A	$31,754

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

	Benefit Group	
Member Category	Misc	
Demographics		
Actives	Yes	
Transfers/Separated	Yes	
Receiving	Yes	
Benefit Provision		
Benefit Formula	2% @ 60	
Social Security Coverage	Yes	
Full/Modified	Modified	
Employee Contribution Rate	7.00%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits		
Optional Settlement 2	Yes	
1959 Survivor Benefit Level	No	
Special	No	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

Section 2 may be found on the CalPERS website (calpers.ca.gov) in the Forms and Publications section

California Public Employees' Retirement System
Actuarial Office
400 Q Street, Sacramento, CA 95811 | Phone: (916) 795-3000 | Fax: (916) 795-2744
888 CalPERS (or **888**-225-7377) | TTY: (877) 249-7442 | **www.calpers.ca.gov**

July 2021

PEPRA Miscellaneous Plan of the Consolidated Mosquito Abatement District
(CalPERS ID: 1965051103)
Annual Valuation Report as of June 30, 2020

Dear Employer,

Attached to this letter, you will find the June 30, 2020 actuarial valuation report of your CalPERS pension plan. **Provided in this report is the determination of the minimum required employer contributions for fiscal year 2022-23**. In addition, the report contains important information regarding the current financial status of the plan as well as projections and risk measures to aid in planning for the future.

Because this plan is in a risk pool, the following valuation report has been separated into two sections:

- Section 1 contains specific information for the plan including the development of the current and projected employer contributions, and
- Section 2 contains the Risk Pool Actuarial Valuation appropriate to the plan as of June 30, 2020.

Section 2 can be found on the CalPERS website (calpers.ca.gov). From the home page, go to *"Forms & Publications"* and select *"View All"*. In the search box, enter *"Risk Pool"* and from the results list download the Miscellaneous Risk Pool Actuarial Valuation Report for June 30, 2020.

Your June 30, 2020 actuarial valuation report contains important actuarial information about your pension plan at CalPERS. Your assigned CalPERS staff actuary, whose signature appears in the Actuarial Certification section on page 1, is available to discuss the report with you.

Actuarial valuations are based on assumptions regarding future plan experience including investment return and payroll growth, eligibility for the types of benefits provided, and longevity among retirees. The CalPERS Board of Administration adopts these assumptions after considering the advice of CalPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution rates as needed. This valuation is based on an investment return assumption of 7.0% which was adopted by the board in December 2016. Other assumptions used in this report are those recommended in the CalPERS Experience Study and Review of Actuarial Assumptions report from December 2017.

Required Contribution

The exhibit below displays the minimum employer contributions and the Employee PEPRA Rate for fiscal year 2022-23 along with estimates of the required contributions for fiscal year 2023-24. Member contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. **The employer contributions in this report do not reflect any cost sharing arrangements you may have with your employees**.

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability	PEPRA Employee Rate
2022-23	7.47%	$1,283	6.75%
Projected Results			
2023-24	*7.5%*	*$1,300*	*TBD*

The actual investment return for fiscal year 2020-21 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 7.00%. ***To the extent the actual investment return for fiscal year 2020-21 differs from 7.00%, the actual contribution requirements for fiscal year 2023-24 will differ from those shown above.*** For additional details regarding the assumptions and methods used for these projections please refer to the "Projected Employer Contributions" in the "Highlights and Executive Summary" section. This section also contains projected required contributions through fiscal year 2027-28.

Changes from Previous Year's Valuation

There are no significant changes in actuarial assumptions or policies in your 2020 actuarial valuation. Your annual valuation report is an important tool for monitoring the health of your CalPERS pension plan. Your report contains useful information about future required contributions and ways to control your plan's funding progress. In addition to your annual actuarial report my office has developed tools for employers to plan, project and protect the retirement benefits of your employees. Pension Outlook is a tool to help plan and budget pension costs into the future with easy to understand results and charts.

You will be able to view the projected funded status and required employer contributions for pension plans in different potential scenarios for up to 30 years into the future — which will make budgeting more predictable. While Pension Outlook can't predict the future, it can provide valuable planning information based on a variety of future scenarios that you select.

Pension Outlook can help you answer specific questions about your plans, including:

- When is my plan's funded status expected to increase?
- What happens to my required contributions in a down market?
- How does the discount rate assumption affect my contributions?
- What is the impact of making an additional discretionary payment to my plan?

To get started, visit our Pension Outlook page at www.calpers.ca.gov/page/employers/actuarial-resources/pension-outlook-overview and take the steps to register online.

CalPERS will be completing an Asset Liability Management (ALM) review process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. In addition, the Actuarial Office will be completing its Experience Study to review the demographic experience within the pension system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

Further descriptions of general changes are included in the "Highlights and Executive Summary" section and in Appendix A of the Section 2 report, "Actuarial Methods and Assumptions."

Questions

We understand that you might have questions about these results, and your assigned CalPERS actuary whose signature is on the valuation report is available to discuss. If you have other questions, you may call the Customer Contact Center at (888)-CalPERS or (**888-225-7377**).

Sincerely,

SCOTT TERANDO, ASA, EA, MAAA, FCA, CFA
Chief Actuary

Actuarial Valuation
as of June 30, 2020

for the
PEPRA Miscellaneous Plan
of the
Consolidated Mosquito Abatement District

(CalPERS ID: 1965051103)

Required Contributions
for Fiscal Year
July 1, 2022 - June 30, 2023

Table of Contents

Section 1

Plan Specific Information
for the
PEPRA Miscellaneous Plan
of the
Consolidated Mosquito Abatement District

(CalPERS ID: 1965051103)
(Rate Plan ID: 27250)

Table of Contents

Actuarial Certification

Section 1 of this report is based on the member and financial data contained in our records as of June 30, 2020 which was provided by your agency and the benefit provisions under your contract with CalPERS. Section 2 of this report is based on the member and financial data as of June 30, 2020 provided by employers participating in the Miscellaneous Risk Pool to which the plan belongs and benefit provisions under the CalPERS contracts for those agencies.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the risk pool containing your PEPRA Miscellaneous Plan has been performed in accordance with generally accepted actuarial principles consistent with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods are internally consistent and reasonable for the risk pool as of the date of this valuation and as prescribed by the CalPERS Board of Administration according to provisions set forth in the California Public Employees' Retirement Law.

Having relied upon the information set forth in Section 2 of this report and based on the census and benefit provision information for the plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2020 and employer contribution as of July 1, 2022 have been properly and accurately determined in accordance with the principles and standards stated above.

The undersigned is an actuary who satisfies the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States with regard to pensions.

Anthony Cuny

TONY CUNY, ASA, MAAA
Associate Pension Actuary, CalPERS

Highlights and Executive Summary

- **Introduction**
- **Purpose of Section 1**
- **Required Employer Contributions**
- **Additional Discretionary Employer Contributions**
- **Plan's Funded Status**
- **Projected Employer Contributions**
- **Other Pooled Miscellaneous Risk Pool Rate Plans**
- **Cost**
- **Changes Since the Prior Year's Valuation**
- **Subsequent Events**

Introduction

This report presents the results of the June 30, 2020 actuarial valuation of the PEPRA Miscellaneous Plan of the Consolidated Mosquito Abatement District of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the required employer contributions for fiscal year 2022-23.

Purpose of Section 1

This Section 1 report for the PEPRA Miscellaneous Plan of the Consolidated Mosquito Abatement District of CalPERS was prepared by the plan actuary in order to:

- Set forth the assets and accrued liabilities of this plan as of June 30, 2020;
- Determine the minimum required employer contribution for this plan for the fiscal year July 1, 2022 through June 30, 2023; and
- Provide actuarial information as of June 30, 2020 to the CalPERS Board of Administration and other interested parties.

The pension funding information presented in this report should not be used in financial reports subject to Governmental Accounting Standards Board (GASB) Statement No. 68 for a Cost Sharing Employer Defined Benefit Pension Plan. A separate accounting valuation report for such purposes is available on the CalPERS website.

The measurements shown in this actuarial valuation may not be applicable for other purposes. The employer should contact their actuary before disseminating any portion of this report for any reason that is not explicitly described above.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; changes in actuarial policies; and changes in plan provisions or applicable law.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the recommendations of Actuarial Standards of Practice No. 51 and recommended by the California Actuarial Advisory Panel (CAAP) in the Model Disclosure Elements document:

- A "Scenario Test," projecting future results under different investment income returns.
- A "Sensitivity Analysis," showing the impact on current valuation results using alternative discount rates of 6.0% and 8.0%.
- A "Sensitivity Analysis," showing the impact on current valuation results assuming rates of mortality are 10% lower or 10% higher than our current post- retirement mortality assumptions adopted in 2017.
- Pension Plan maturity measures quantifying the risks the employer bears.

Required Employer Contributions

	Fiscal Year
Required Employer Contributions	**2022-23**
Employer Normal Cost Rate	**7.47%**
Plus	
Required Payment on Amortization Bases[1]	**$1,283**
Paid either as	
1) Monthly Payment	**$106.92**
Or	
2) Annual Prepayment Option*	**$1,240**

The total minimum required employer contribution is the sum of the Plan's Employer Normal Cost Rate (expressed as a percentage of payroll and paid as payroll is reported) plus the Employer Unfunded Accrued Liability (UAL) Contribution Amount (billed monthly (1) or prepaid annually (2) in dollars).

** Only the UAL portion of the employer contribution can be prepaid* ***(which must be received in full no later than July 31)****.*

	Fiscal Year 2021-22	Fiscal Year 2022-23
Development of Normal Cost as a Percentage of Payroll		
Base Total Normal Cost for Formula	14.34%	14.22%
Surcharge for Class 1 Benefits[2]		
None	0.00%	0.00%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	14.34%	14.22%
Plan's Employee Contribution Rate[4]	6.75%	6.75%
Employer Normal Cost Rate	7.59%	7.47%

[1] The required payment on amortization bases does not take into account any additional discretionary payment made after April 30, 2021.

[2] Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges for each benefit.

[3] The normal cost change is phased out over a five-year period in accordance with the CalPERS contribution allocation policy.

[4] For detail regarding the determination of the required PEPRA employee contribution rate see Section on PEPRA Member Contribution Rates.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for the 2022-23 fiscal year is $1,283. CalPERS allows employers to make additional discretionary payments (ADPs) at any time and in any amount. These optional payments serve to reduce the UAL and future required contributions and can result in significant long-term savings. Employers can also use ADPs to stabilize annual contributions as a fixed dollar amount, percent of payroll or percent of revenue.

Provided below are select ADP options for consideration. Making such an ADP during fiscal year 2022-23 does not require an ADP be made in any future year, nor does it change the remaining amortization period of any portion of unfunded liability. For information on permanent changes to amortization periods, see the "Amortization Schedule and Alternatives" section of the report.

If you are considering making an ADP, please contact your actuary for additional information.

Minimum Required Employer Contribution for Fiscal Year 2022-23

Estimated Normal Cost	Minimum UAL Payment	ADP	Total UAL Contribution	Estimated Total Contribution
$31,291	$1,283	$0	$1,283	$32,574

Alternative Fiscal Year 2022-23 Employer Contributions for Greater UAL Reduction

Funding Target	Estimated Normal Cost	Minimum UAL Payment	ADP[1]	Total UAL Contribution	Estimated Total Contribution
5 years	N/A	N/A	N/A	N/A	N/A

[1] The ADP amounts are assumed to be made in the middle of the fiscal year. A payment made earlier or later in the fiscal year would have to be less or more than the amount shown to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected Unfunded Accrued Liability as of June 30, 2022 as determined in the June 30, 2020 actuarial valuation. New unfunded liabilities can emerge in future years due to assumption or method changes, changes in plan provisions and actuarial experience different than assumed. Making an ADP illustrated above for the indicated number of years will not result in a plan that is exactly 100% funded in the indicated number of years. Valuation results will vary from one year to the next and can diverge significantly from projections over a period of several years.

Plan's Funded Status

	June 30, 2019	June 30, 2020
1. Present Value of Projected Benefits (PVB)	$506,290	$725,259
2. Entry Age Accrued Liability (AL)	116,991	182,969
3. Plan's Market Value of Assets (MVA)	112,068	177,144
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	4,923	5,825
5. Funded Ratio [(3) / (2)]	95.8%	96.8%

This measure of funded status is an assessment of the need for future employer contributions based on the selected actuarial cost method used to fund the plan. The UAL is the present value of future employer contributions for service that has already been earned and is in addition to future normal cost contributions for active members. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Hypothetical Termination Liability" in the "Risk Analysis" section.

Projected Employer Contributions

The table below shows the required and projected employer contributions (before cost sharing) for the next six fiscal years. The projection assumes that all actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur during the projection period. Actual contribution rates during this projection period could be significantly higher or lower than the projection shown below.

	Required Contribution	**Projected Future Employer Contributions (Assumes 7.00% Return for Fiscal Year 2020-21)**				
Fiscal Year	**2022-23**	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
	Rate Plan 27250 Results					
Normal Cost %	7.47%	7.5%	7.5%	7.5%	7.5%	7.5%
UAL Payment	$1,283	$1,300	$1,300	$1,300	$1,300	$0

For some sources of UAL, the change in UAL is amortized using a 5-year ramp up. For more information, please see "Amortization of the Unfunded Actuarial Accrued Liability" under "Actuarial Methods" in Appendix A of the Section 2 Report. This method phases in the impact of the change in UAL over a 5-year period in order to reduce employer cost volatility from year to year. As a result of this methodology, dramatic changes in the required employer contributions in any one year are less likely. However, required contributions can change gradually and significantly over the next five years. In years when there is a large increase in UAL, the relatively small amortization payments during the ramp up period could result in a funded ratio that is projected to decrease initially while the contribution impact of the increase in the UAL is phased in.

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section.

Our online pension plan modeling and projection tool, Pension Outlook, is available in the Employers section of the CalPERS website. Pension Outlook is a tool to help plan and budget pension costs into the future with results and charts that are easy to understand.

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown below, correspond to rate plan 27250. In many cases, employers have additional rate plans within the same risk pool. For cost analysis and budgeting it is useful to consider contributions for these rate plans as a whole rather than individually. The estimated contribution amounts and rates for all of the employer's rate plans in the Miscellaneous Risk Pool are shown below and assume that the payroll for each rate plan will grow according to the overall payroll growth assumption of 2.75% per year for three years.

	Fiscal Year 2021-22	Fiscal Year 2022-23
Estimated Combined Employer Contributions for all Pooled Miscellaneous Rate Plans		
Projected Payroll for the Contribution Year	$1,371,769	$1,303,255
Estimated Employer Normal Cost	$115,490	$107,611
Required Payment on Amortization Bases	$37,366	$7,449
Estimated Total Employer Contributions	$152,856	$115,060
Estimated Total Employer Contribution Rate (illustrative only)	11.14%	8.83%

Cost

Actuarial Determination of Pension Plan Cost

Contributions to fund the pension plan are comprised of two components:

- Normal Cost, expressed as a percentage of total active payroll
- Amortization of the Unfunded Accrued Liability (UAL), expressed as a dollar amount

For fiscal years prior to 2016-17, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with fiscal year 2016-17, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There continues to be an option to prepay this amount during July of each fiscal year.

The Normal Cost component is expressed as a percentage of active payroll with employer and employee contributions payable as part of the regular payroll reporting process.

The determination of both components requires complex actuarial calculations. The calculations are based on a set of actuarial assumptions which can be divided into two categories:

- Demographic assumptions (e.g., mortality rates, retirement rates, employment termination rates, disability rates)
- Economic assumptions (e.g., future investment earnings, inflation, salary growth rates)

These assumptions reflect CalPERS' best estimate of future experience of the plan and are long term in nature. We recognize that all assumptions will not be realized in any given year. For example, the investment earnings at CalPERS have averaged 5.5% over the 20 years ending June 30, 2020, yet individual fiscal year returns have ranged from -23.6% to +20.7%. In addition, CalPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2017.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CalPERS is to recognize mandated legislative benefit changes in the first annual valuation following the effective date of the legislation. Voluntary benefit changes by plan amendment are generally included in the first valuation that is prepared after the amendment becomes effective, even if the valuation date is prior to the effective date of the amendment.

This valuation generally reflects plan changes by amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

Actuarial Methods and Assumptions

The are no significant changes to the actuarial methods or assumptions for the 2020 actuarial valuation.

Subsequent Events

The contribution requirements determined in this actuarial valuation report are based on demographic and financial information as of June 30, 2020. Changes in the value of assets subsequent to that date are not reflected. Investment returns below the assumed rate of return will increase future required contributions while investment returns above the assumed rate of return will decrease future required contributions.

CalPERS will be completing an Asset Liability Management (ALM) process in November 2021 that will review the capital market assumptions and the strategic asset allocation and ascertain whether a change in the discount rate and other economic assumptions is warranted. As part of the ALM process the Actuarial Office will be completing an Experience Study to review the demographic experience of the retirement system and make recommendations to modify future assumptions where appropriate.

Furthermore, this valuation does not reflect any impacts from the COVID-19 pandemic on your pension plan. The impact of COVID-19 on retirement plans is not yet known and CalPERS actuaries will continue to monitor the effects and where necessary make future adjustments to actuarial assumptions.

The projected employer contributions on Page 6 are calculated under the assumption that the discount rate remains at 7.0% going forward and that the realized rate of return on assets for fiscal year 2020-21 is 7.0%.

This actuarial valuation report reflects statutory changes, regulatory changes and CalPERS Board actions through January 2021. Any subsequent changes or actions are not reflected.

Assets and Liabilities

- **Breakdown of Entry Age Accrued Liability**
- **Allocation of Plan's Share of Pool's Experience/Assumption Change**
- **Development of Plan's Share of Pool's Market Value of Assets**
- **Schedule of Plan's Amortization Bases**
- **Amortization Schedule and Alternatives**
- **Employer Contribution History**
- **Funding History**

Breakdown of Entry Age Accrued Liability

Active Members	$166,838
Transferred Members	7,047
Terminated Members	9,084
Members and Beneficiaries Receiving Payments	0
Total	$182,969

Allocation of Plan's Share of Pool's Experience/Assumption Change

It is the policy of CalPERS to ensure equity within the risk pools by allocating the pool's experience gains/losses and assumption changes in a manner that treats each employer equitably and maintains benefit security for the members of the System while minimizing substantial variations in employer contributions. The Pool's experience gains/losses and impact of assumption/method changes is allocated to the plan as follows:

1.	Plan's Accrued Liability	$182,969
2.	Projected UAL balance at 6/30/2020	1,072
3.	Pool's Accrued Liability[1]	19,314,480,060
4.	Sum of Pool's Individual Plan UAL Balances at 6/30/2020[1]	4,306,566,797
5.	Pool's 2019/20 Investment (Gain)/Loss[1]	344,968,792
6.	Pool's 2019/20 Non-Investment (Gain)/Loss[1]	60,428,629
7.	Plan's Share of Pool's Investment (Gain)/Loss: [(1) - (2)] ÷ [(3) - (4)] × (5)	4,181
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	572
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	4,753

[1] Does not include plans that transferred to Pool on the valuation date.

Development of the Plan's Share of Pool's Market Value of Assets

10.	Plan's UAL: (2) + (9)	$5,825
11.	Plan's Share of Pool's MVA: (1) - (10)	$177,144

Schedule of Plan's Amortization Bases

Note that there is a two-year lag between the valuation date and the start of the contribution fiscal year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2020.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: fiscal year 2022-23.

This two-year lag is necessary due to the amount of time needed to extract and test the membership and financial data, and the need to provide public agencies with their required employer contribution well in advance of the start of the fiscal year.

The Unfunded Accrued Liability (UAL) is used to determine the employer contribution and therefore must be rolled forward two years from the valuation date to the first day of the fiscal year for which the contribution is being determined. The UAL is rolled forward each year by subtracting the expected payment on the UAL for the fiscal year and adjusting for interest. The expected payment for the first fiscal year is determined by the actuarial valuation two years ago and the contribution for the second year is from the actuarial valuation one year ago. Additional discretionary payments are reflected in the Expected Payments column in the fiscal year they were made by the agency.

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Fresh Start	6/30/20	No Ramp		0.00%	5	5,825	1,109	5,086	0	5,442	1,283
Total						**5,825**	**1,109**	**5,086**	**0**	**5,442**	**1,283**

The (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed in "Allocation of Plan's Share of Pool's Experience/Assumption Change" earlier in this section. These (gain)/loss bases will be amortized in accordance with the CalPERS amortization policy in effect at the time the base was established.

Amortization Schedule and Alternatives

The amortization schedule on the previous page shows the minimum contributions required according to the CalPERS amortization policy. Many agencies have expressed a desire for a more stable pattern of payments or have indicated interest in paying off the unfunded accrued liabilities more quickly than required. As such, we have provided alternative amortization schedules to help analyze the current amortization schedule and illustrate the potential savings of accelerating unfunded liability payments.

Shown on the following page are future year amortization payments based on 1) the current amortization schedule reflecting the individual bases and remaining periods shown on the previous page, and 2) alternative "fresh start" amortization schedules using two sample periods that would both result in interest savings relative to the current amortization schedule. To initiate a Fresh Start, please consult with your plan actuary.

The Current Amortization Schedule typically contains both positive and negative bases. Positive bases result from plan changes, assumption changes, method changes or plan experience that increase unfunded liability. Negative bases result from plan changes, assumption changes, method changes, or plan experience that decrease unfunded liability. The combination of positive and negative bases within an amortization schedule can result in unusual or problematic circumstances in future years, such as:

- When a negative payment would be required on a positive unfunded actuarial liability; or
- When the payment would completely amortize the total unfunded liability in a very short time period, and results in a large change in the employer contribution requirement.

In any year when one of the above scenarios occurs, the actuary will consider corrective action such as replacing the existing unfunded liability bases with a single "fresh start" base and amortizing it over a reasonable period.

The Current Amortization Schedule on the following page may appear to show that, based on the current amortization bases, one of the above scenarios will occur at some point in the future. It is impossible to know today whether such a scenario will in fact arise since there will be additional bases added to the amortization schedule in each future year. Should such a scenario arise in any future year, the actuary will take appropriate action based on guidelines in the CalPERS amortization policy.

Amortization Schedule and Alternatives (continued)

			Alternate Schedules			
	Current Amortization Schedule		0 Year Amortization		0 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2022	5,442	1,283	N/A	N/A	N/A	N/A
6/30/2023	4,496	1,283				
6/30/2024	3,484	1,283				
6/30/2025	2,401	1,284				
6/30/2026	1,241	1,284				
6/30/2027						
6/30/2028						
6/30/2029						
6/30/2030						
6/30/2031						
6/30/2032						
6/30/2033						
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6/30/2041						
6/30/2042						
6/30/2043						
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		**6,417**		**N/A**		**N/A**
Interest Paid		**975**		**N/A**		**N/A**
Estimated Savings				**N/A**		**N/A**

Employer Contribution History

The table below provides a recent history of the required employer contributions for the plan. The amounts are based on the actuarial valuation from two years prior and does not account for prepayments or benefit changes made during a fiscal year. Additional discretionary payments before July 1, 2019 or after June 30, 2020 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)	Additional Discretionary Payments
2016 - 17	6.555%	$17	N/A
2017 - 18	6.533%	45	N/A
2018 - 19	6.842%	125	N/A
2019 - 20	6.985%	751	5,978
2020 - 21	7.732%	1,346	
2021 - 22	7.59%	1,458	
2022 - 23	7.47%	1,283	

Funding History

The table below shows the recent history of the actuarial accrued liability, share of the pool's market value of assets, unfunded accrued liability, funded ratio, and annual covered payroll.

Valuation Date	Accrued Liability (AL)	Share of Pool's Market Value of Assets (MVA)	Unfunded Accrued Liability (UAL)	Funded Ratio	Annual Covered Payroll
06/30/2014	$7,487	$7,820	($333)	104.5%	$101,894
06/30/2015	11,454	10,745	709	93.8%	160,807
06/30/2016	20,931	18,166	2,765	86.8%	158,702
06/30/2017	44,203	41,310	2,893	93.5%	258,918
06/30/2018	73,443	70,227	3,216	95.6%	226,437
06/30/2019	116,991	112,068	4,923	95.8%	275,474
06/30/2020	182,969	177,144	5,825	96.8%	386,151

Risk Analysis

- **Future Investment Return Scenarios**
- **Discount Rate Sensitivity**
- **Mortality Rate Sensitivity**
- **Maturity Measures**
- **Maturity Measures History**
- **Hypothetical Termination Liability**

Future Investment Return Scenarios

Analysis was performed to determine the effects of various future investment returns on required employer contributions. The projections below provide a range of results based on five investment return scenarios assumed to occur during the next four fiscal years (2020-21, 2021-22, 2022-23 and 2023-24). The projections also assume that all other actuarial assumptions will be realized and that no further changes to assumptions, contributions, benefits, or funding will occur.

For fiscal years 2020-21, 2021-22, 2022-23, and 2023-24, each scenario assumes an alternate fixed annual return. The fixed return assumptions for the five scenarios are 1.0%, 4.0%, 7.0%, 9.0% and 12.0%.

These alternate investment returns were chosen based on stochastic analysis of possible future investment returns over the four-year period ending June 30, 2024. Using the expected returns and volatility of the asset classes in which the funds are invested, we produced five thousand stochastic outcomes for this period based on the most recently completed Asset Liability Management process. We then selected annual returns that approximate the 5^{th}, 25^{th}, 50^{th}, 75^{th}, and 95^{th} percentiles for these outcomes. For example, of all the 4-year outcomes generated in the stochastic analysis, approximately 25% had an average annual return of 4.0% or less.

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 1.0% or greater than 12.0% over this four-year period, the likelihood of a single investment return less than 1.0% or greater than 12.0% in any given year is much greater.

Assumed Annual Return From 2020-21 through 2023-24	**Projected Employer Contributions**			
	2023-24	**2024-25**	**2025-26**	**2026-27**
1.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$1,500	$2,100	$2,900	$4,000
4.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$1,400	$1,700	$2,100	$2,700
7.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$1,300	$1,300	$1,300	$1,300
9.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	$1,200	$0	$0	$0
12.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	$0	$0	$0	$0

Discount Rate Sensitivity

The discount rate assumption is calculated as the sum of the assumed real rate of return and the assumed annual price inflation, currently 4.50% and 2.50%, respectively. Changing either the price inflation assumption or the real rate of return assumption will change the discount rate. The sensitivity of the valuation results to the discount rate assumption depends on which component of the discount rate is changed. Shown below are various valuation results as of June 30, 2020 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 7.0% as well as alternate discount rates of 6.0% and 8.0%. The rates of 6.0% and 8.0% were selected since they illustrate the impact of a 1.0% increase or decrease to the 7.0% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	**3.5%**	**4.5%**	**5.5%**
a) Total Normal Cost	17.65%	14.22%	11.59%
b) Accrued Liability	$225,675	$182,969	$150,004
c) Market Value of Assets	$177,144	$177,144	$177,144
d) Unfunded Liability/(Surplus) [(b) - (c)]	$48,531	$5,825	($27,140)
e) Funded Status	78.5%	96.8%	118.1%

Sensitivity to the Price Inflation Assumption

As of June 30, 2020	1% Lower Inflation Rate	Current Assumptions	1% Higher Inflation Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	**1.5%**	**2.5%**	**3.5%**
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	15.20%	14.22%	13.05%
b) Accrued Liability	$195,122	$182,969	$168,044
c) Market Value of Assets	$177,144	$177,144	$177,144
d) Unfunded Liability/(Surplus) [(b) - (c)]	$17,978	$5,825	($9,100)
e) Funded Status	90.8%	96.8%	105.4%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2020 plan costs and funded status under two different longevity scenarios, namely assuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2017. This type of analysis highlights the impact on the plan of improving or worsening mortality over the long-term.

As of June 30, 2020	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	14.49%	14.22%	13.97%
b) Accrued Liability	$186,860	$182,969	$179,391
c) Market Value of Assets	$177,144	$177,144	$177,144
d) Unfunded Liability/(Surplus) [(b) - (c)]	$9,716	$5,825	$2,247
e) Funded Status	94.8%	96.8%	98.7%

Maturity Measures

As pension plans mature they become more sensitive to risks. Understanding plan maturity and how it affects the ability of a pension plan sponsor to tolerate risk is important in understanding how the pension plan is impacted by investment return volatility, other economic variables and changes in longevity or other demographic assumptions. Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only.

One way to look at the maturity level of CalPERS and its plans is to look at the ratio of a plan's retiree liability to its total liability. A pension plan in its infancy will have a very low ratio of retiree liability to total liability. As the plan matures, the ratio starts increasing. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	**June 30, 2019**	**June 30, 2020**
1. Retired Accrued Liability	0	0
2. Total Accrued Liability	116,991	182,969
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.00	0.00

Another measure of maturity level of CalPERS and its plans is to look at the ratio of actives to retirees, also called the Support Ratio. A pension plan in its infancy will have a very high ratio of active to retired members. As the plan matures, and members retire, the ratio starts declining. A mature plan will often have a ratio near or below one. The average support ratio for CalPERS public agency plans is 1.25.

Support Ratio	**June 30, 2019**	**June 30, 2020**
1. Number of Actives	7	9
2. Number of Retirees	0	0
3. Support Ratio [(1) / (2)]	N/A	N/A

Maturity Measures (Continued)

The actuarial calculations supplied in this communication are based on various assumptions about long-term demographic and economic behavior. Unless these assumptions (e.g., terminations, deaths, disabilities, retirements, salary growth, and investment return) are exactly realized each year, there will be differences on a year-to-year basis. The year-to-year differences between actual experience and the assumptions are called actuarial gains and losses and serve to lower or raise required employer contributions from one year to the next. Therefore, employer contributions will inevitably fluctuate, especially due to the ups and downs of investment returns.

Asset Volatility Ratio (AVR)

Shown in the table below is the asset volatility ratio (AVR), which is the ratio of market value of assets to payroll. Plans that have higher AVR experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a plan with an asset-to-payroll ratio of 8 may experience twice the contribution volatility due to investment return volatility than a plan with an asset-to-payroll ratio of 4. It should be noted that this ratio is a measure of the current situation. It increases over time but generally tends to stabilize as the plan matures.

Liability Volatility Ratio (LVR)

Also shown in the table below is the liability volatility ratio (LVR), which is the ratio of accrued liability to payroll. Plans that have a higher LVR experience more volatile employer contributions (as a percentage of payroll) due to investment return and changes in liability. For example, a plan with LVR ratio of 8 is expected to have twice the contribution volatility of a plan with LVR of 4. It should be noted that this ratio indicates a longer-term potential for contribution volatility. The AVR, described above, will tend to move closer to the LVR as a plan matures.

Contribution Volatility	June 30, 2019	June 30, 2020
1. Market Value of Assets	$112,068	$177,144
2. Payroll	275,474	386,151
3. Asset Volatility Ratio (AVR) [(1) / (2)]	0.4	0.5
4. Accrued Liability	$116,991	$182,969
5. Liability Volatility Ratio (LVR) [(4) / (2)]	0.4	0.5

Maturity Measures History

Valuation Date	Ratio of Retiree Accrued Liability to Total Accrued Liability	Support Ratio	Asset Volatility Ratio	Liability Volatility Ratio
06/30/2017	0.00	N/A	0.2	0.2
06/30/2018	0.00	N/A	0.3	0.3
06/30/2019	0.00	N/A	0.4	0.4
06/30/2020	0.00	N/A	0.5	0.5

Hypothetical Termination Liability

The hypothetical termination liability is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2020. The plan liability on a termination basis is calculated differently compared to the plan's ongoing funding liability. For the hypothetical termination liability calculation, both compensation and service are frozen as of the valuation date and no future pay increases or service accruals are assumed. This measure of funded status is not appropriate for assessing the need for future employer contributions in the case of an ongoing plan, that is, for an employer that continues to provide CalPERS retirement benefits to active employees.

A more conservative investment policy and asset allocation strategy was adopted by the CalPERS Board for the Terminated Agency Pool. The Terminated Agency Pool has limited funding sources since no future employer contributions will be made. Therefore, expected benefit payments are secured by risk-free assets and benefit security for members is increased while limiting the funding risk. However, this asset allocation has a lower expected rate of return than the PERF and consequently, a lower discount rate is assumed. The lower discount rate for the Terminated Agency Pool results in higher liabilities for terminated plans.

The effective termination discount rate will depend on actual market rates of return for risk-free securities on the date of termination. As market discount rates are variable, the table below shows a range for the hypothetical termination liability based on the lowest and highest interest rates observed during an approximate 19-month period from 12 months before the valuation date to 7 months after.

Market Value of Assets (MVA)	Hypothetical Termination Liability[1,2] at 0.75%	Funded Status	Unfunded Termination Liability at 0.75%	Hypothetical Termination Liability[1,2] at 2.50%	Funded Status	Unfunded Termination Liability at 2.50%
$177,144	$500,799	35.4%	$323,655	$304,755	58.1%	$127,611

[1] The hypothetical liabilities calculated above include a 5% mortality contingency load in accordance with Board policy. Other actuarial assumptions can be found in Appendix A of the Section 2 report.

[2] The current discount rate assumption used for termination valuations is a weighted average of the 10-year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date. The discount rates used in the table are based on 20-year Treasury bonds, rounded to the nearest quarter percentage point, which is a good proxy for most plans. The 20-year Treasury yield was 1.18% on June 30, 2020, and was 1.68% on January 31, 2021.

In order to terminate the plan, you must first contact our Retirement Services Contract Unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to give you a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. CalPERS advises you to consult with the plan actuary before beginning this process.

Participant Data

The table below shows a summary of your plan's member data upon which this valuation is based:

	June 30, 2019	June 30, 2020
Active Members		
Counts	7	9
Average Attained Age	N/A	39.7
Average Entry Age to Rate Plan	N/A	37.0
Average Years of Credited Service	N/A	2.5
Average Annual Covered Pay	$39,353	$42,906
Annual Covered Payroll	$275,474	$386,151
Projected Annual Payroll for Contribution Year	$298,831	$418,893
Present Value of Future Payroll	$2,833,522	$4,257,100
Transferred Members	1	1
Separated Members	5	3
Retired Members and Beneficiaries		
Counts*	0	0
Average Annual Benefits*	N/A	$0

Counts of members included in the valuation are counts of the records processed by the valuation. Multiple records may exist for those who have service in more than one valuation group. This does not result in double counting of liabilities.

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

Plan's Major Benefit Options

Shown below is a summary of the major optional benefits for which your agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

	Benefit Group	
Member Category	Misc	
Demographics		
Actives	Yes	
Transfers/Separated	Yes	
Receiving	No	
Benefit Provision		
Benefit Formula	2% @ 62	
Social Security Coverage	Yes	
Full/Modified	Full	
Employee Contribution Rate	6.75%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits		
Optional Settlement 2	Yes	
1959 Survivor Benefit Level	No	
Special	No	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	$500	
Survivor Allowance (PRSA)	No	
COLA	2%	

PEPRA Member Contribution Rates

The California Public Employees' Pension Reform Act of 2013 (PEPRA) established new benefit formulas, final compensation period, and contribution requirements for "new" employees (generally those first hired into a CalPERS-covered position on or after January 1, 2013). In accordance with Government Code Section 7522.30(b), "new members … shall have an initial contribution rate of at least 50% of the normal cost rate." The normal cost rate is dependent on the plan of retirement benefits, actuarial assumptions and demographics of the risk pool, particularly members' entry age. Should the total normal cost rate change by more than 1% from the base total normal cost rate, the new member rate shall be 50% of the new normal cost rate rounded to the nearest quarter percent.

The table below shows the determination of the PEPRA member contribution rates effective July 1, 2022, based on 50% of the total normal cost rate as of the June 30, 2020 valuation.

		Basis for Current Rate		Rates Effective July 1, 2022			
Rate Plan Identifier	**Benefit Group Name**	**Total Normal Cost**	**Member Rate**	**Total Normal Cost**	**Change**	**Change Needed**	**Member Rate**
27250	Miscellaneous PEPRA Level	13.735%	6.75%	14.22%	0.485%	No	6.75%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

Section 2 may be found on the CalPERS website (calpers.ca.gov) in the Forms and Publications section

Gordon Maxwell and Jim Huff (year unknown)

CMAD Program Report

1946 CONSOLIDATED MOSQUITO ABATEMENT DISTRICT 2021

75th Anniversary

September 2021 Board Meeting

Steve Mulligan
District Manager

Jovana Benavides, *Associate Biologist*
Devon Cornel, *Area Supervisor*
Karan Cox, *Office Administrator*
B. Deegan, *Vector Biologist*
Amy Garcia, *Data Management Associate*
Derek Hill, *Urban Program Specialist*
Jodi Holeman, *Superintendent of Operations*
Chris Monis, *Area Supervisor*
Jose Moreno, *Mechanic*
Katherine Ramirez, *Science Education Coordinator*
Conner Schaak, *GIS Coordinator*
Gha Vang, *Area Supervisor*

Table of Contents

Caged mosquitoes set out for field trials to evaluate ultra low volume applications for adult mosquito control.

GENERAL OPERATIONS

STAFF APPRECIATION

The District held the employee's appreciation lunch on August 25th. The employee appreciation lunch is an opportunity to acknowledge the hard work and dedication of District employees for the 2021 season. All staff were treated to lunch, provided by the District. Staff were also given a small goodie bag and thank you note that included their name, a crew photo, listed crew achievements for the 2021 season, and years of service; provided by the Superintendent of Operations. Staff that hit significant milestones for years of service were also provided a CMAD 75th anniversary tote, “dala” mosquito sticker and coaster as well as a Clarke mosquito control baseball cap.

Staff expressed their appreciation to the District and the Board of Trustees for the event. All milestone employees expressed gratitude for recognizing years of service to the District and protecting public health.

Clockwise from the upper left: Sanger Crew (Jason, Capital, Justin, Don and Devon), Thank You Note, Swimming Pool/*Aegypti* Crew (Bobby, Eric, Tracy, Heidi, Derek and Ronnie), Laboratory/Education Staff (Katherine, Deegan, Jovana, Ricardo, Melissa and Clarita), Clovis Crew (Art, Jesse, Robert, Scotty and Chris), Office Staff (Jose, Amy, Conner, Annie and Karan), Reedley Crew (Gha, Jacob and Roger), Westside Crew (Chris, Tua, Lewis and Adolfo).

GENERAL OPERATIONS

STAFF RECOGNITION

Staff Recognized for Years of Service*

- Gha Vang 20 years (Reedley Supervisor)
- Ronnie Blunt 20 years (Urban Operator)
- Tracy Autrey 16 years (Swimming Pool/*Aegypti* Operator)
- Karan Cox 15 years (Office Administrator)

A.

B.

C.

A. Operators Jacob Uribe and Ronnie Blunt at the employee appreciation lunch.
B. Various staff at the employee appreciation lunch.
C. Lunch boxes for staff with “Thank You” note and goodie bag.

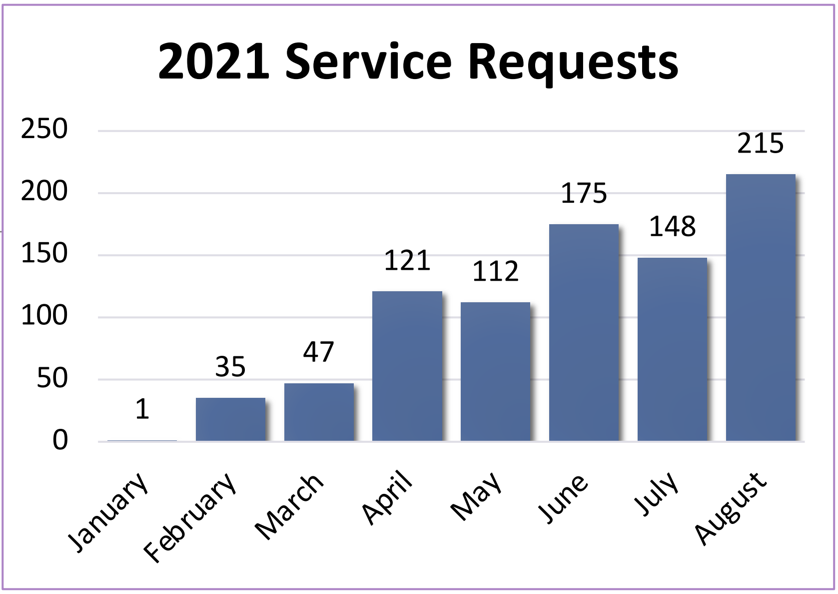
*Years of service includes any time worked as a seasonal and/or full-time employee.

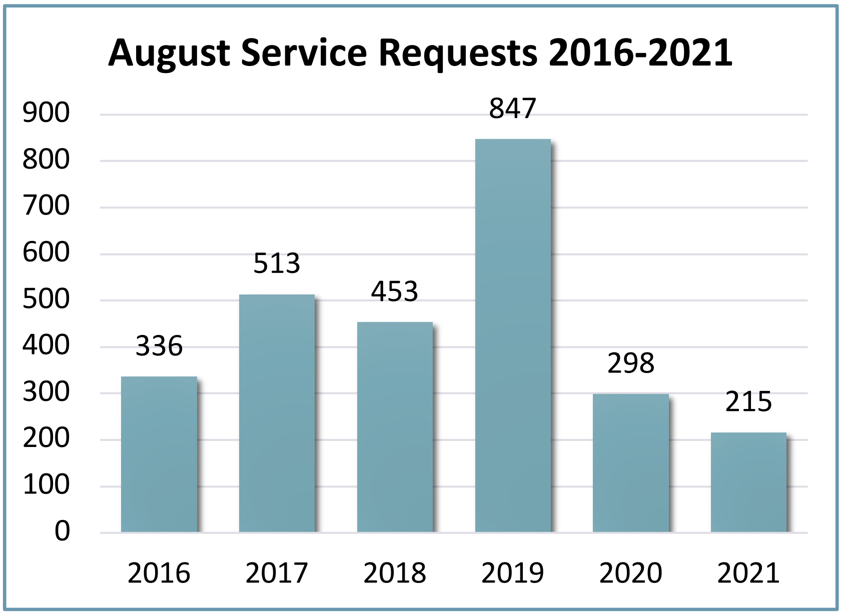
AUGUST SERVICE REQUESTS

Service Requests: 215	
Fish	15
Mosquito	183
Swimming Pools	16
Traps	1

Service Requests by City	
Caruthers	2
Clovis	63
Del Rey	0
Fowler	3
Fresno	86
Friant	0
Kingsburg	10
Laton	3
Orange Cove	0
Parlier	2
Reedley	6
Riverdale	5
Sanger	31
Selma	4

Appointments (by depot): 131	
Clovis	103
Reedley	8
Sanger	9
Selma	0
Westside	11

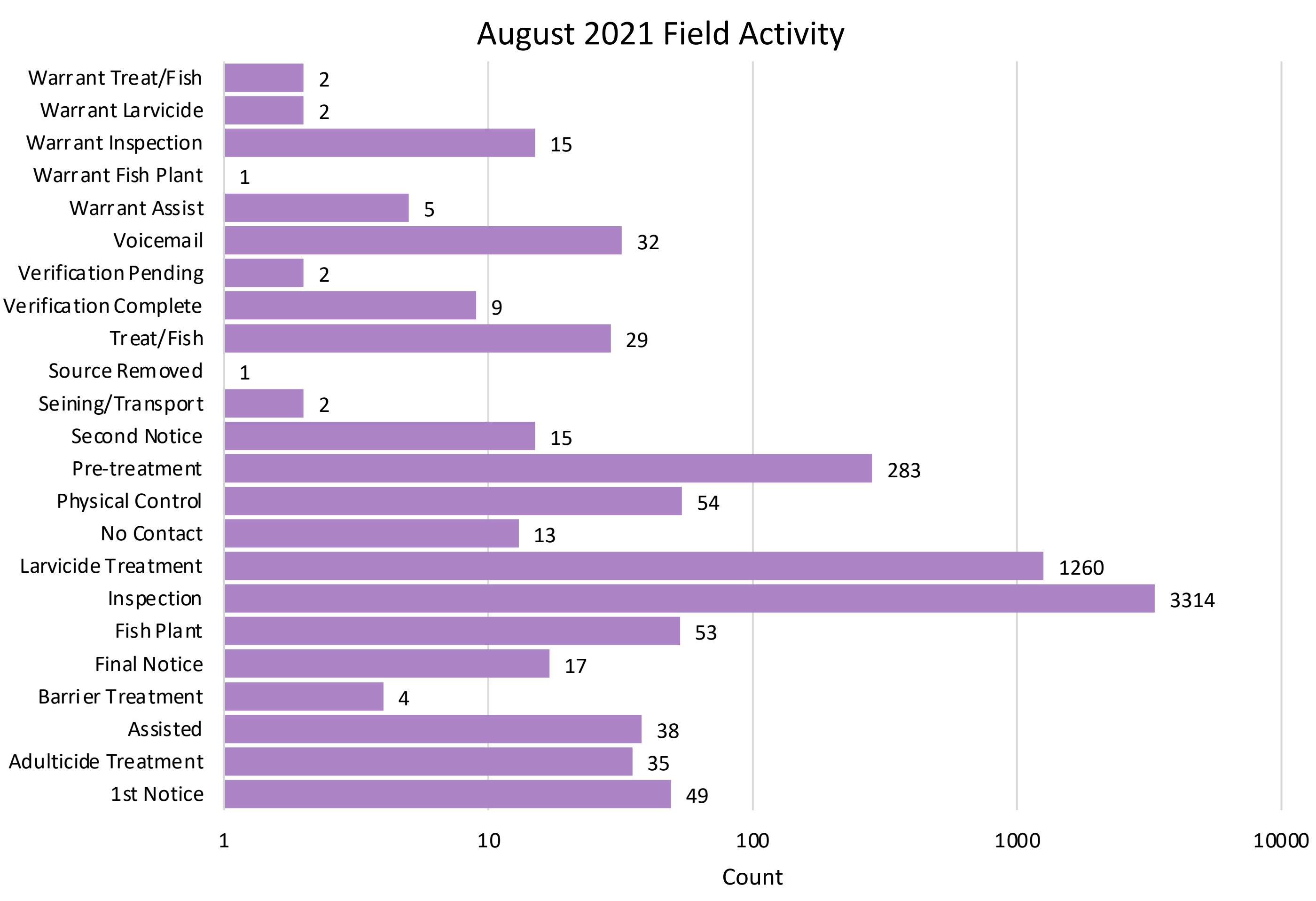




Flowerpot at Sanger Cemetery raising *Aedes aegypti.*

GENERAL OPERATIONS

Irrigation valve box along a walk path in Clovis holding water producing *Culex* mosquitoes

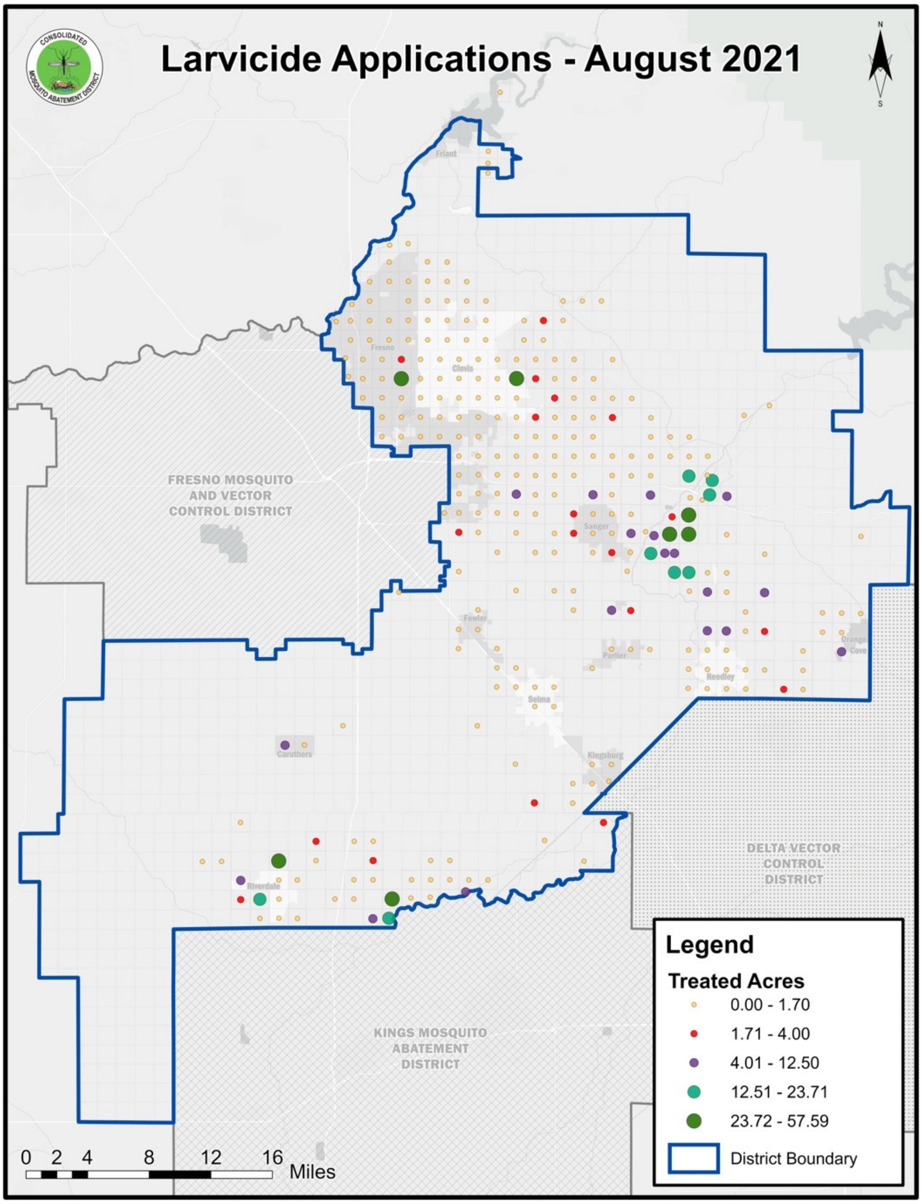


Mosquito Control Applications: 6,883

Acres Treated

- Larvicide applications: 686.15 acres
- Mosquito fish plants: 1.1 acres
- Adulticide applications: 1,718.3 acres

Product	Applications
Altosid WSP	2976
Altosid XR Briquet	19
Altosid XRG	3
Aqua-Kontrol 30-30*	9
BVA-2	737
Cocobear MLO	143
DeltaGard*	21
Fish	85
FourStar Bti Briquet 45	16
FourStar CRG	23
Kontrol 4-4*	5
MetaLarv S-PT	8
Natular 2EC	4
Natular G30	447
Natular G30 WSP	1391
Natular XRT	33
Sumilarv	36
Sumilarv WSP	734
Suspend SC*	4
VectoBac 12AS	79
VectoBac GR	50
VectoLex FG	42
VectoLex WDG	18



Map does not include adulticide, catch basin or subsurface enclosure treatments
***Adulticide products**

Field Trials

In August, the District collaborated with UC Davis Medical Entomologist/Associate Research Entomologist Dr. Anthony Cornel and Dennis Candito from Adapco to conduct field trials to determine the efficacy of adult mosquito control applications made with ultra low volume (ULV) truck mounted spray treatments targeting *Culex quinquefaciatus* and *Aedes aegypti* mosquitoes. Field trials provide the District with valuable data on treatment efficacy, product movement and insecticide resistance. Field Trial support was provided by staff members Katherine Ramirez, Devon Cornel, Chris Monis, Jodi Holeman and District Manager, Steve Mulligan.

A. Dennis Candito (Adapco) and Devon Cornel (CMAD) checking ULV fogger flow rate. B. Katherine Ramirez (CMAD) setting out caged mosquitoes. C. Steve Mulligan (CMAD) and Denise Candito (Adapco) prepping for equipment calibration.

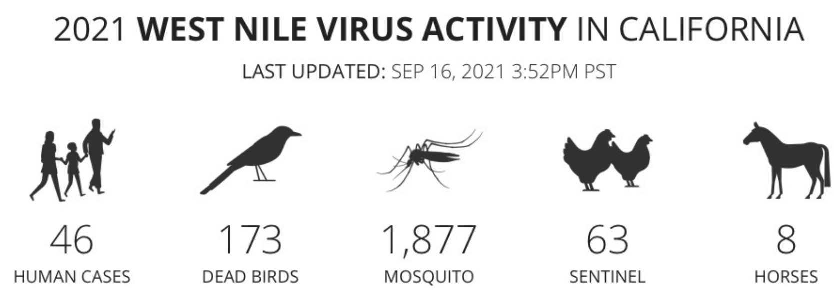
MOSQUITO AND DISEASE SURVEILLANCE

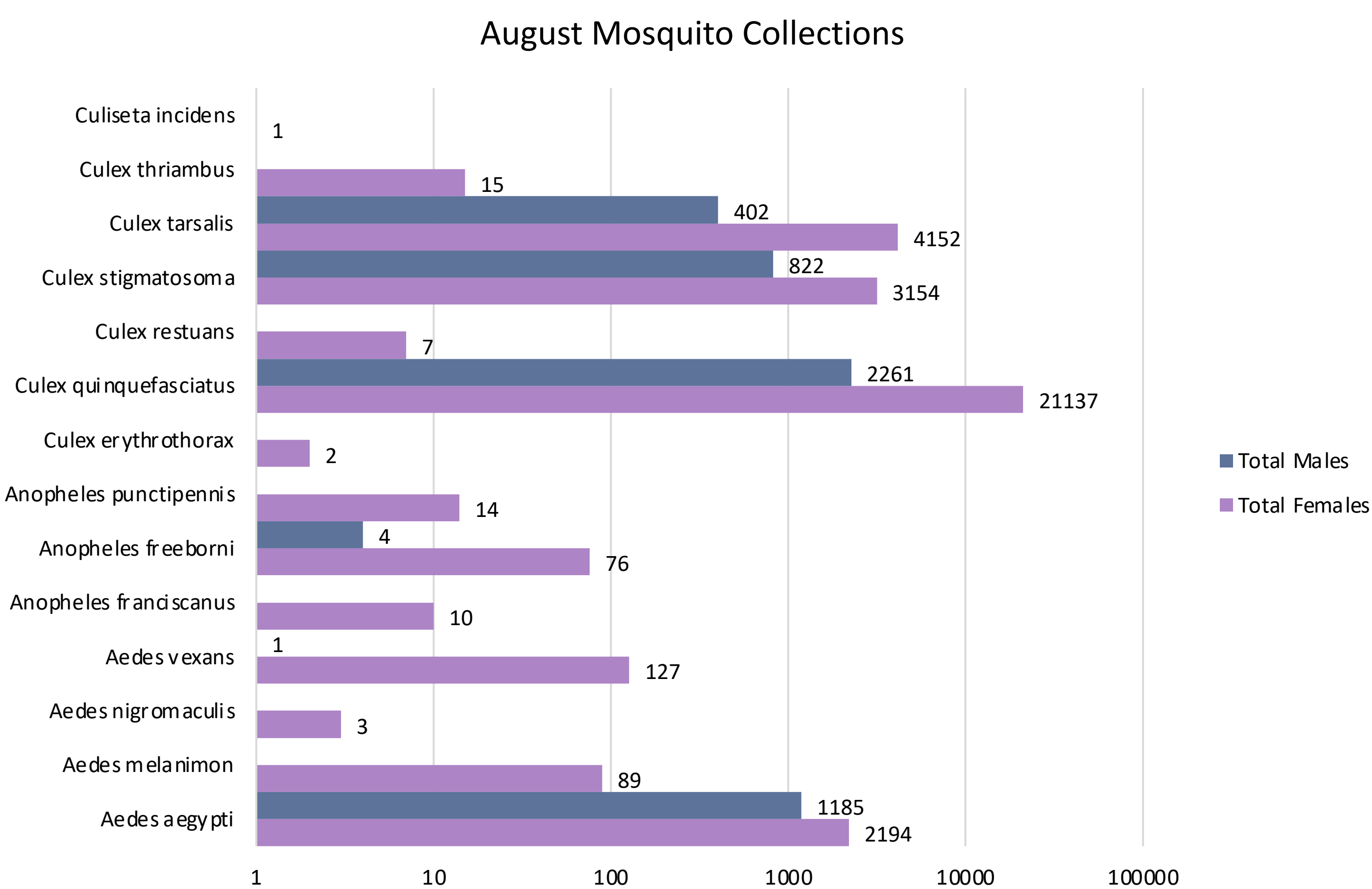
Mosquitoes: Forty-four mosquito pools* were submitted for disease testing. Twenty-three pools tested positive for WNV (106 total positive pools for 2021).

Total number of mosquitoes collected and processed by the lab in August: 35,657

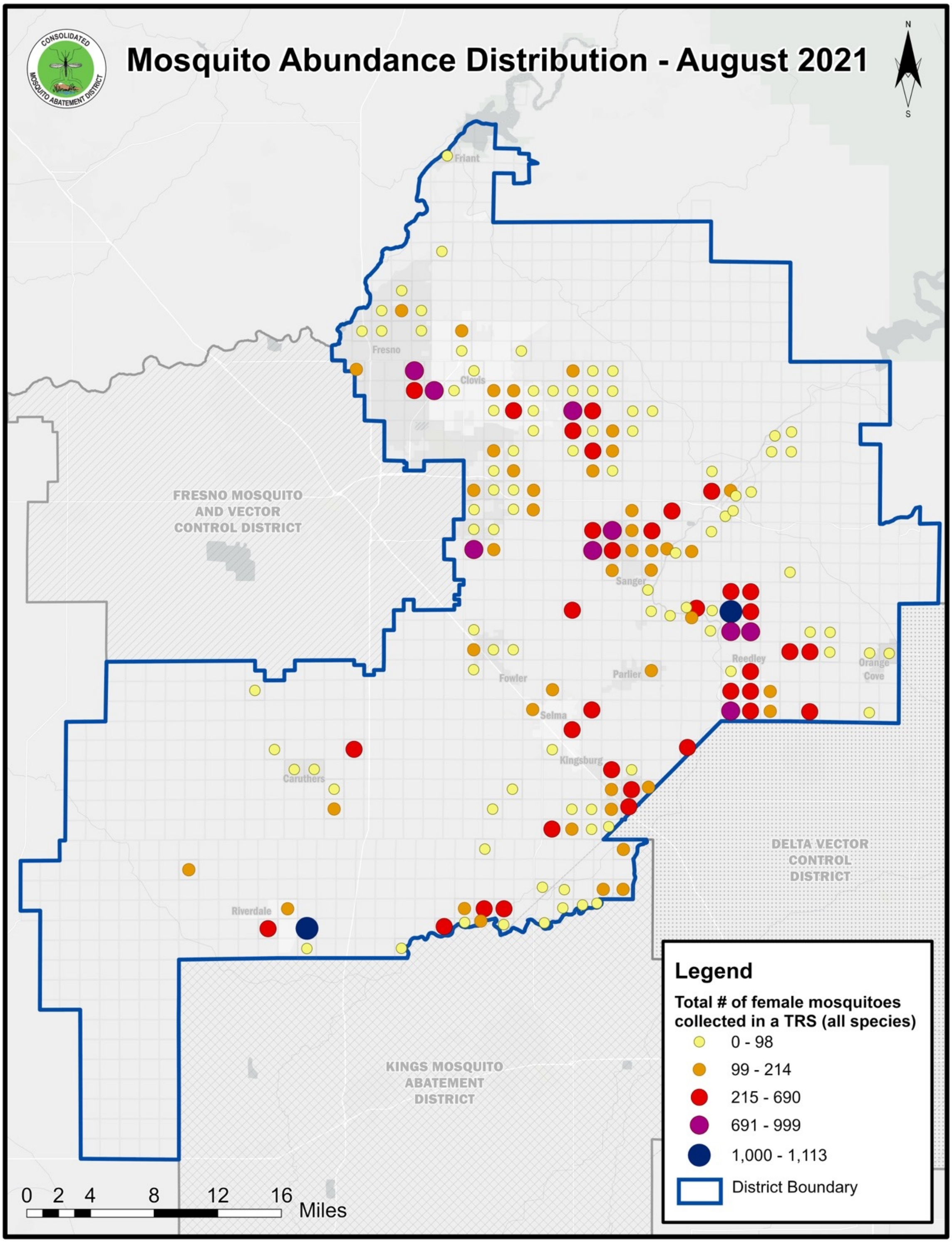
Total number of trap nights conducted by surveillance staff in August: 909

Human Cases: Fresno County reported and confirmed one human WNV case in August (3 cases confirmed for 2021).





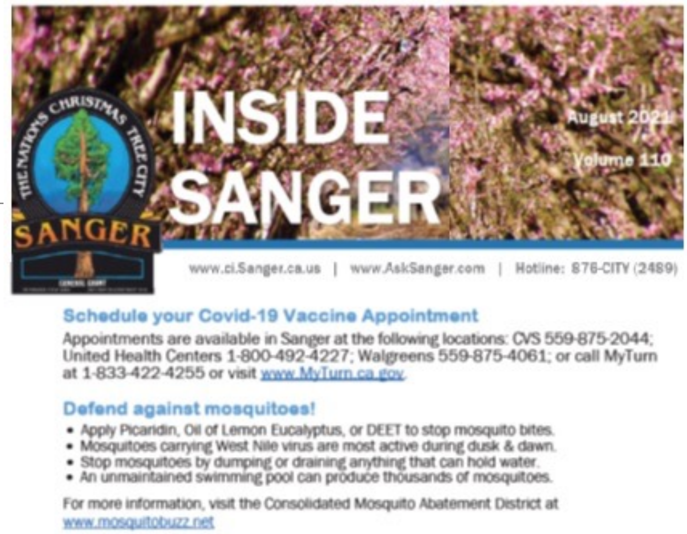
MOSQUITO COLLECTION DATA



Community Partners

Community partners contacted in August included the Belmont Country Club in Fresno; two apartment complexes in Clovis; one property management company in Fresno; Randalynn Creek HOA in Kingsburg; Reedley College; and Clovis High School.

In August, the City of Sanger reminded residents to practice mosquito safety in its monthly newsletter, ***Inside Sanger***.



INSIDE SANGER

August 2021

Volume 110

www.ci.Sanger.ca.us | www.AskSanger.com | Hotline: 876-CITY (2489)

Schedule your Covid-19 Vaccine Appointment

Appointments are available in Sanger at the following locations: CVS 559-875-2044; United Health Centers 1-800-492-4227; Walgreens 559-875-4061; or call MyTurn at 1-833-422-4255 or visit www.MyTurn.ca.gov.

Defend against mosquitoes!

- Apply Picaridin, Oil of Lemon Eucalyptus, or DEET to stop mosquito bites.
- Mosquitoes carrying West Nile virus are most active during dusk & dawn.
- Stop mosquitoes by dumping or draining anything that can hold water.
- An unmaintained swimming pool can produce thousands of mosquitoes.

For more information, visit the Consolidated Mosquito Abatement District at www.mosquitobuzz.net

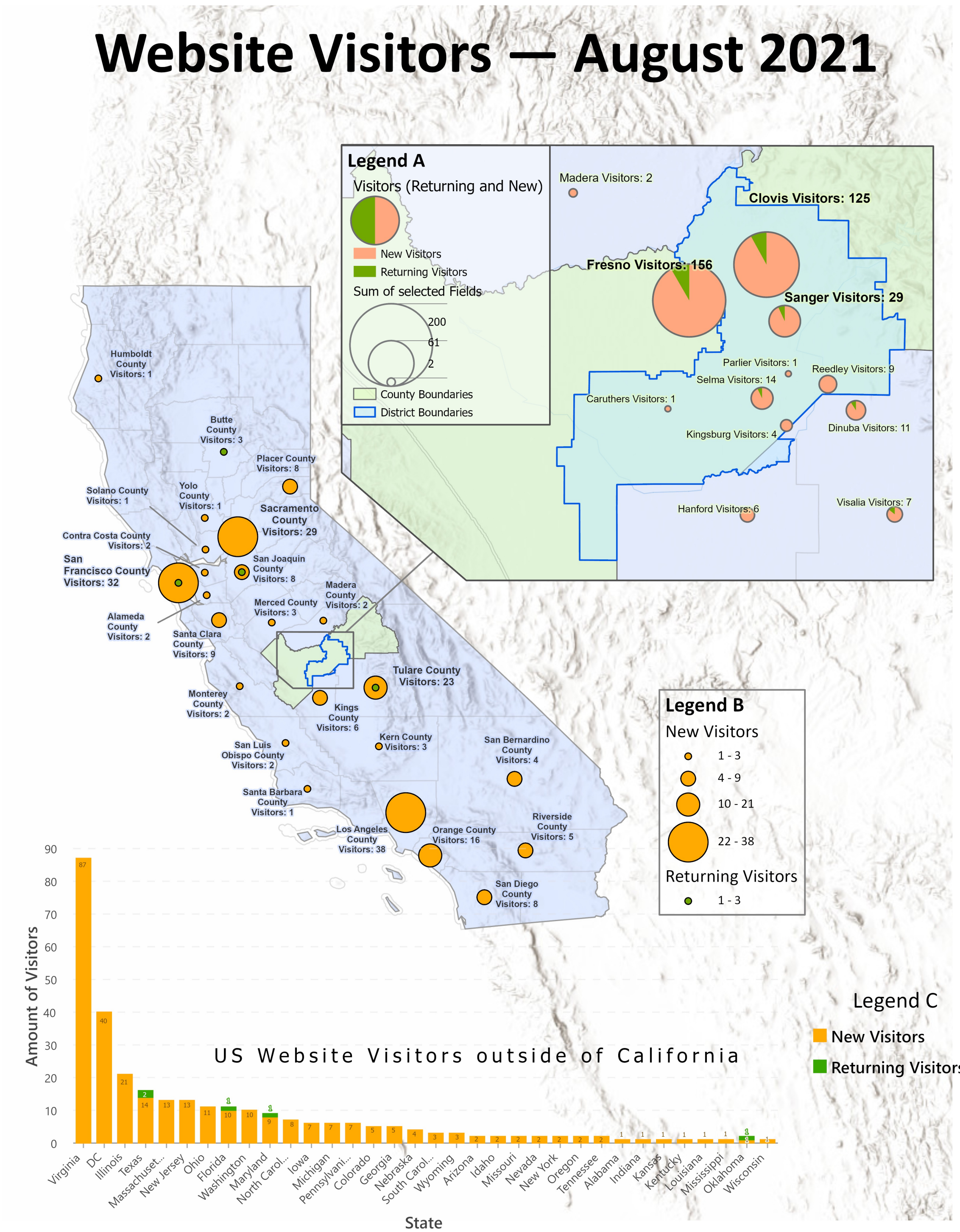
Community Presentations

On August 16th, Science Education Coordinator Katherine Ramirez gave a 25-minute presentation during the Randalynn Creek HOA board meeting. Katherine presented helpful tips on reducing *Aedes aegypti* mosquito development and reducing mosquito bites. Ten Randalynn Creek residents were present, residents not in attendance were emailed District outreach documents by the HOA president.

On August 20th, Science Education Coordinator Katherine Ramirez answered questions and reminded residents to practice mosquito safety during the weekly zoom media briefing with the Fresno County Public Health Department. During the meeting, FCDPH announced two confirmed human West Nile virus cases in Fresno county.

Digital Outreach

In August, 1,019 people visited the District website. Of those who visited the website, 89.8% were new visitors.



(84 new visitors and 1 returning visitor from Outside of the United States)

Digital Outreach

Website Analytics are used to gather performance data for various groups of pages. The District has calculated metrics for all education pages, in contrast to the total traffic received on standard website pages.

Category	*Percentage of pages viewed from total pages viewed*	*Most viewed page in category*	*Percentage of time a visitor entered our website through a page*	*Average amount of minutes a visitor viewed content on a page*
Education website pages combined	18%	How to screen your yard drains	24%	1.03
Standard website pages combined*	82.%	Homepage	76%	1.23

***A standard web page would be a page that is not part of the education section, such as the homepage.**

Social Media

Social Media Platform	**Number of Subscribers (change from previous month)**	**Number of posts**	**Engagement Rate**
Facebook	289 (↑4)	13	8.7%
Twitter	239 (↑10)	10	4.6%
Nextdoor	107,890 (↑1,247)	19	0.3%
Instagram	141 (↑7)	10	86.6%

Digital Advertising

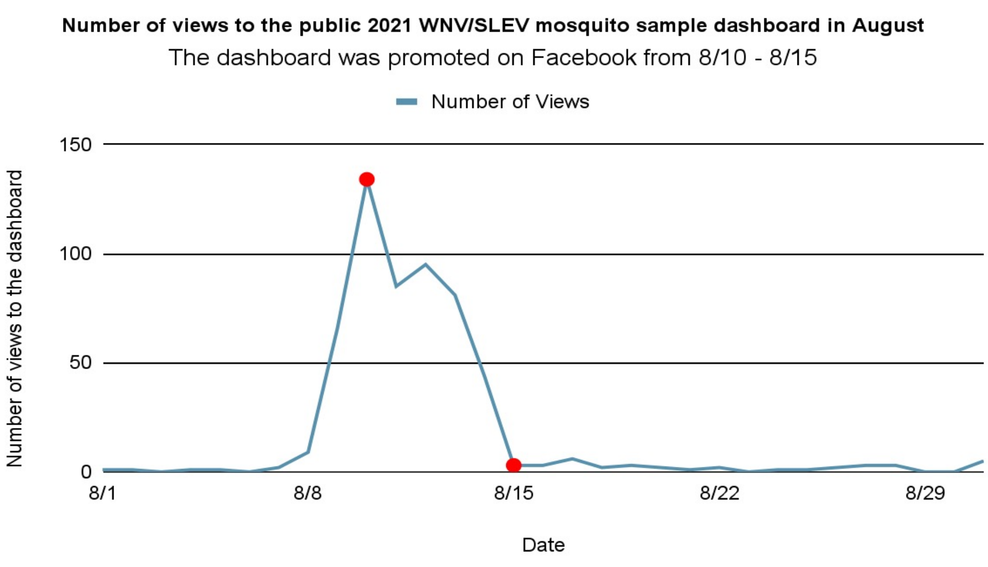
In August, the District boosted four posts on Facebook. During the advertising period, 20% of website users came directly from Facebook, and the website homepage was the most popular page viewed directly from Facebook.

Boosted post topic*	Clicks** (all)	CTR*** (all)	Cost per result^
Dump sources	232	5.76%	$0.15
2021 WNV/SLEV mosquito sample dashboard	539	15.06%	$0.09
Personal protection	11	0.53%	$2.21
Report swimming pools	76	2.53%	$0.69

*A boosted post is content that is promoted by Facebook to users that do not follow our page. **The number of all clicks on the boosted post. ***Click-Through Rate - the percentage of times people saw the boosted post and performed any type of click. ^The number of times the boosted post achieved an outcome, based on the objective and settings that were selected.

Other

District GIS coordinator, Conner Schaak created the 2021 WNV/SLEV mosquito sample dashboard for public use in June. This dashboard was boosted on Facebook during August 10 - 15. It received 557 views during August and 442 of those views were during the promotion period.



Media

On August 20th Science Education Coordinator Katherine Ramirez was interview by Fresno's Telemundo news station. The facetime interview was translated to Spanish during the newscast.