23187 Connecticut Street
Hayward, CA 94545

T: (510) 783-7744
F: (510) 783-3903

acmad@mosquitoes.org

ACMAD Finance Committee
<u>Agenda</u>
3:30 P.M-5:00 P.M. 3/9/2022
Teleconference Only, ***see below***

Committee Members:
Victor Aguilar
Subru Bhat
Preston Jordan
Tyler Savage
George Young
Courtney Welch

Topics:

1. Roll call

2. Approval of April 14th, 2021, meeting minutes. (**Action Required)**

3. Review 1st draft of 2022-2023 ACMAD Budget. (Information only)

a. CalPERS valuation reports (classic & PEPRA)
b. Capital replacement plan and depreciation schedule
c. Finance policies

4. Adjourn

**The Finance Committee is not a decision-making body and can only make recommendations to the Board. All decisions are made by the full Board at the regular meeting of the Board of Trustees.*

Please Note: Board Meetings are accessible to people with disabilities and others who need assistance. Individuals who need special assistance or a disability-related modification or accommodation (including auxiliary aids or services) to observe and/or participate in this meeting and access meeting-related materials should contact Ryan Clausnitzer at least 48 hours before the meeting at 510-783-7744 or acmad@mosquitoes.org.

IMPORANT NOTICE REGARDING COVID-19 AND TELECONFERENCED MEETINGS:
Based on the mandates by the Governor in Executive Order 33-20 and the County Public Health Officer to shelter in place and the guidance from the CDC, to minimize the spread of the coronavirus, please note the following changes to the District's ordinary meeting procedures:
- The District offices are not open to the public at this time.

- The meeting will be conducted via teleconference using Zoom. (See Executive Order 29-20)
- All members of the public seeking to observe and/or to address the local legislative body may participate in the meeting telephonically or otherwise electronically in the manner described below.

HOW TO OBSERVE THE MEETING:

Telephone: Listen to the meeting live by calling Zoom at **(669) 900-6833**
Enter the **Meeting ID#** 8 826 9637 7541 followed by the pound (#) key.
Computer: Watch the live streaming of the meeting from a computer by navigating to
https://us02web.zoom.us/j/82696377541

Mobile: Log in through the Zoom mobile app on a smartphone and enter **Meeting ID#** 826 9637 7541

HOW TO SUBMIT PUBLIC COMMENTS:

Before the Meeting: Please email your comments to acmad@mosquitoes.org, write "Public Comment" in the subject line. In the body of the email, include the agenda item number and title, as well as your comments. If you would like your comment to be read aloud at the meeting (not to exceed three minutes at staff's cadence), prominently write "Read Aloud at Meeting" at the top of the email. All comments received before 12:00 PM the day of the meeting will be included as an agenda supplement on the District's website under the relevant meeting date and provided to the Trustees at the meeting. Comments received after this time will be treated as contemporaneous comments.

Contemporaneous Comments: During the meeting, the Board President or designee will announce the opportunity to make public comments and identify the cut off time for submission. Please email your comments to acmad@mosquitoes.org, write "Public Comment" in the subject line. In the body of the email, include the agenda item number and title, as well as your comments. Once the public comment period is closed, all comments timely received will be read aloud at the meeting (not to exceed three minutes at staff's cadence). Comments received after the close of the public comment period will be added to the record after the meeting.

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ACMAD Finance Committee
Minutes
4/14/2021

Committee Members:
Victor Aguilar
Subru Bhat
Betsy Cooley
Preston Jordan
George Young

Topics:
- The General Manager called the meeting to order at 4:31 P.M.
- Trustees Aguilar, Bhat, Cooley, Jordan, and Young were present on the Zoom meeting, Ryan Clausnitzer and Michelle Robles were present on the teleconference representing the District and to record the minutes.

1. Approval of minutes of the March 10th, 2021 meeting.
   Motion: Trustee Aguilar moved to approve the minutes
   Second: Trustee Cooley
   Vote: motion carries: unanimous

2. Review 2nd draft of 2021-2022 ACMAD Budget.

Discussion:
After a presentation by the General Manager (GM), Trustees Jordan asked the following questions that were answered by the GM. What does the footnote #3 refer to on the reserve allocation page (unintentionally cut off but it mentioned that funds are deposited in reserve accounts after the conclusion of the budgeted fiscal year except for the capital reserve account which is deposited at the beginning). Why was the ad volurum budgeted amount lower in 20/21 than 19/20 (we were unsure of the effects of COVID-19 on the property values at that time). The Finance Committee should have a chair (yes, to be suggested to the policy committee after the conclusion of the legislative session). Trustee Jordan also volunteered to report out to the Board on behalf of the Finance Committee.

3. Adjourn at 4:48 P.M.

Respectfully submitted,

Approved as written and/or corrected at the Finance Committee meeting held 3/9/2022.

Trustee ________________
Finance Committee Member

REVENUES	**Budget 22/23**	**Year to year % budget change**	**Budget 21/22**	**Actual 20/21**	**A vs B**	**Budget 20/21**	**Actual 19/20**	**Budget 19/20**	**Actual 18/19**	**Budget 18/19**
Ad Valoreum Property Taxes	$ 2,755,397	6%	$ 2,580,814	$ 2,624,188	14%	$ 2,300,000	$ 2,502,132	$ 2,494,800	$ 2,325,861	$ 2,268,000
Special Tax & Benefit Assessment	$ 1,981,814	0%	$ 1,981,959	$ 1,962,192	8%	$ 1,821,600	$ 1,951,959	$ 1,986,806	$ 1,939,212	$ 1,994,499
Interest earned (restricted fund interest NOT included as revenue)	$ 20,000	-50%	$ 30,000	$ 19,208	-36%	$ 30,000	$ 176,499	$ 30,000	$ 167,488	$ 30,000
Sale of Property and Equipment & Misc.	$ 2,500	-100%	$ 5,000	$ 1,038	-79%	$ 5,000	$ 14,775	$ 5,000	$ 2,289	$ 5,000
Reimburese Retiree Health Benefits and fees from OPEB	$ 140,946	-19%	$ 168,091	$ 163,355	-1%	$ 164,913	$ 163,355	$ 163,630	$ 170,667	$ 179,229
Total Revenue	**$ 4,900,658**	3%	**$ 4,765,864**	**$ 4,769,981**	10%	**$ 4,321,513**	**$ 4,808,720**	**$ 4,680,236**	**$ 4,605,517**	**$ 4,476,728**
EXPENDITURES										
Salaries (including deferred comp.)	$ 2,340,802	4%	$ 2,236,282	$ 2,037,043	-4%	$ 2,116,177	$ 1,980,518	$ 2,035,791	$ 1,894,209	$ 1,933,182
CalPERS Retirement	$ 539,463	12%	$ 473,950	$ 423,110	0%	$ 423,350	$ 378,833	$ 360,538	$ 310,838	$ 301,812
Medicare & Social Security	$ 38,317	14%	$ 33,062	$ 27,867	-11%	$ 31,278	$ 29,651	$ 30,843	$ 25,149	$ 28,031
Fringe Benefits	$ 564,969	-3%	$ 579,596	$ 502,898	-5%	$ 527,031	$ 465,466	$ 502,043	$ 452,960	$ 508,680
Total Salaries, Retirement, & Benefits *(pgs. 2,3)*	$ 3,483,551	**5%**	**$ 3,322,891**	$ 2,990,918	-3%	**$ 3,097,836**	**$ 2,854,468**	**$ 2,929,215**	**$ 2,683,156**	**$ 2,771,705**
Service & Supplies (Clothing & Personal supplies)	$ 9,000	-11%	$ 10,000	$ 4,859	-51%	$ 10,000	$ 6,214	$ 8,000	$ 8,899	$ 6,000
Service & Supplies (Laundry services & supplies)	$ 13,000	-15%	$ 15,000	$ 9,125	-39%	$ 15,000	$ 10,648	$ 12,750	$ 12,603	$ 9,500
Utilities	$ 17,200	1%	$ 17,000	$ 15,422	29%	$ 12,000	$ 25,962	$ 12,600	$ 30,161	$ 36,500
Small tools and instruments	$ 3,000	0%	$ 3,000	$ 2,189	-27%	$ 3,000	$ 2,056	$ 3,000	$ 2,211	$ 2,500
Maintenance (Landscaping & Facility)	$ 30,000	-17%	$ 35,000	$ 20,262	-19%	$ 25,000	$ 16,679	$ 25,000	$ 13,673	$ 25,000
Maintenance (Equipment)	$ 30,000	-17%	$ 35,000	$ 22,290	-36%	$ 35,000	$ 20,600	$ 35,000	$ 43,629	$ 35,000
Transportation, travel, training, & board	$ 114,840	-11%	$ 127,630	$ 74,653	-39%	$ 122,400	$ 95,814	$ 134,260	$ 98,433	$ 134,210
Professional services	$ 152,200	-34%	$ 203,450	$ 91,623	-48%	$ 176,200	$ 112,887	$ 169,320	$ 115,324	$ 190,620
Memberships, dues, & insurance	$ 37,000	35%	$ 24,000	$ 22,906	-2%	$ 23,337	$ 26,317	$ 22,655	$ 20,774	$ 21,152
Insurance - VCJPA & EAP	$ 166,300	9%	$ 150,611	$ 141,650	3%	$ 137,524	$ 134,834	$ 133,546	$ 124,688	$ 123,351
Community education	$ 55,000	28%	$ 39,500	$ 26,317	-32%	$ 38,575	$ 22,734	$ 40,000	$ 34,861	$ 33,000
Operations	$ 227,500	-5%	$ 239,000	$ 223,362	-7%	$ 241,000	$ 179,659	$ 228,500	$ 206,731	$ 234,000
Household expenses	$ 19,950	13%	$ 17,350	$ 15,881	-5%	$ 16,750	$ 14,817	$ 15,850	$ 18,594	$ 19,000
Office expenses	$ 12,000	0%	$ 12,000	$ 9,748	-19%	$ 12,000	$ 13,761	$ 14,500	$ 11,796	$ 15,100
Information Technology/ Communication	$ 107,400	-5%	$ 112,400	$ 71,771	-36%	$ 111,400	$ 83,135	$ 117,100	$ 108,886	$ 122,200
Laboratory	$ 132,500	-9%	$ 144,000	$ 64,136	-54%	$ 139,000	$ 100,878	$ 137,000	$ 118,148	$ 118,148
Total Staff Budget *(pg. 4)*	**$ 1,126,890**	-5%	**$ 1,184,941**	$ 816,194	-27%	**$ 1,118,186**	**$ 866,995**	**$ 1,109,081**	**$ 969,411**	**$ 1,125,281**
Contingency	$ 46,000	-9%	$ 50,000	$ -		$ 50,000	$ -	$ 50,000		$ 50,000
Total Expenditures	**$ 4,656,441**	2%	**$ 4,557,832**	**$ 3,807,112**	-11%	**$ 4,266,022**	**$ 3,721,463**	**$ 4,088,296**	**$ 3,652,567**	**$ 3,946,706**
SURPLUS (DEFICIT)	$ 244,216		$ 208,032	$ 962,869		**$ 55,491**		**$ 591,940**		**$ 530,021**
CASH CARRIED OVER *(pg. 5)*	**$ 2,915,393**		**$ 1,530,673**			**$ 161,656**		**$ 485,003**		**$ 1,269,782**
SURPLUS (DEFICIT) AFTER OPERATIONAL CASH NEEDS	**$ 3,159,609**		**$ 1,738,705**			**$ 217,147**		**$ 1,076,943**		**$ 1,799,803**
RESERVE ACCOUNT ALLOCATIONS			**Transfers**			**Transfers**		**Budget 19/20**	**Actual 18/19**	**Budget**
VCJPA Contingency Fund	$ -		$ -			$ -	$ (51,332)	$ (51,332)		$ -
PARS: Pension Rate Stabililzation	$ 789,902		$ 434,676			$ -	$ 500,000	$ 500,000	$ 1,064,536	$ 500,000
CAMP: Public Health Emergency	$ -		$ -			$ -		$ -	$ 516,771	$ -
CAMP: Repair and Replace ***(pg. 6)***	$ 2,049,699		$ 1,311,625			$ 314,315	$ 1,086,170	$ 1,196,000	$ 336,821	$ 193,853
CAMP: Operating reserve	$ -		$ -			$ (25,000)		$ (619,057)	$ 1,909,413	$ 855,950
CAMP: Capital reserve	$ 320,008		$ (7,596)			$ (72,168)	$ 155,162	$ 51,332	$ 231,329	$ 131,752
Total reserve allocations *(pg. 7)*	**$ 3,159,609**		**$ 1,738,705**			**$ 217,147**	**$ 1,690,000**	**$ 1,076,943**	**$ 4,058,870**	**$ 1,799,803**
SURPLUS (DEFICIT) AFTER RESERVE ALLOCATIONS	**$ -**		**$ -**			**$ -**		**$ -**		**$ -**

Salaries 7/1/22 - 6/30/23 *(Assuming 5%)*

Date of hire	Position	2022-23	Longevity	Longivity Amount	New Salary	# mo	Subtotal	Deferred Comp.	(per pay period)
Jul-99	VS3	$10,415.50	4%	$ 416.62	$ 10,832.12	12	$ 129,985	$ 649.93	$ 27.08
Mar-14	VB2	$9,819.50	1%	$ 98.20	$ 9,917.70	12	$ 119,012	$ 595.06	$ 24.79
Aug-18	AS VC5	$8,915.85	0%	$ -	$ 8,915.85	1	$ 8,916	$ 44.58	$ 22.29
	VS1	$9,447.17	0%	$ -	$ 9,447.17	6	$ 56,683	$ 283.42	$ 23.62
	VS2	$9,919.52	0%	$ -	$ 9,919.52	5	$ 49,598	$ 247.99	$ 24.80
Apr-02	VB2	$9,819.50	4%	$ 392.78	$ 10,212.28	12	$ 122,547	$ 612.74	$ 25.53
Nov-03	VB2	$9,819.50	3%	$ 294.59	$ 10,114.09	12	$ 121,369	$ 606.85	$ 25.29
Mar-02	RPA5	$10,527.69	4%	$ 421.11	$ 10,948.80	12	$ 131,386	$ 656.93	$ 27.37
Jul-15	Mgr	$15,617.58	1%	$ 156.18	$ 15,773.75	12	$ 189,285		
Sep-15	VB2	$9,819.50	1%	$ 98.20	$ 9,917.70	12	$ 119,012	$ 595.06	$ 24.79
Jul-15	IT5	$10,477.81	1%	$ 104.78	$ 10,582.59	12	$ 126,991	$ 634.96	$ 26.46
Nov-19	MCT4	$8,483.91	0%	$ -	$ 8,483.91	10.5	$ 89,081	$ 445.41	$ 21.21
	MCT5	$8,908.10	0%	$ -	$ 8,908.10	1.5	$ 13,362	$ 66.81	$ 22.27
Jul-15	LAB5	$11,740.05	1%	$ 117.40	$ 11,857.45	12	$ 142,289	$ 711.45	$ 29.64
Jul-91	Sup 5	$11,769.12	6%	$ 706.15	$ 12,475.27	12	$ 149,703	$ 748.52	$ 31.19
Apr-14	VB2	$9,819.50	1%	$ 98.20	$ 9,917.70	12	$ 119,012	$ 595.06	$ 24.79
Jul-20	POC3	$8,669.58	0%	$ -	$ 8,669.58	0.5	$ 4,335	$ 21.67	$ 21.67
	POC4	$9,103.06	0%	$ -	$ 9,103.06	11.5	$ 104,685	$ 523.43	$ 22.76
Apr-16	Admin5	$6,580.78	1%	$ 65.81	$ 6,646.59	12	$ 79,759	$ 398.80	$ 16.62
Sep-15	VB2	$9,819.50	1%	$ 98.20	$ 9,917.70	12	$ 119,012	$ 595.06	$ 24.79
May-15	VB2	$9,819.50	1%	$ 98.20	$ 9,917.70	12	$ 119,012	$ 595.06	$ 24.79
Feb-15	Mech 5	$10,229.88	1%	$ 102.30	$ 10,332.18	12	$ 123,986	$ 619.93	$ 25.83
							$ 2,239,023	$ 11,195.11	

Seasonals:

Rate (ave)	#	Hours
$ 19.00	4	1,000
		$76,000
Unemployment	$ 12,000.00	$2,584.00
		$78,584.00

CalPERS		Wages	Employer rate	Unfunded Liability Payment	Total PERS Payments
11.61%	**Classic**	$ 1,351,580.76	$ 156,918.53	$ 310,190.00	$ 467,108.53
7.76%	*Pepra*	$ 887,441.87	$ 68,865.49	$ 3,489	$ 72,354.49
					$ 539,463.02

Salary	$ 2,239,023
CalPERS Ret.	$ 539,463
Seasonals	$ 78,584
Subtotal	*$ 2,857,070*
Mgr 457	$ 12,000.00
Staff 457	$ 11,195
Medicare tax	$ 33,605
Social Security	$4,712
Grand Total	**$ 2,913,870.06**

Employee	CalPERS Plan Code	Current Year Health Rates	Next Year Health Rates (est)	Total Health Costs	Dental Rates	Total Dental	Life Ins. Rates	Total Life Insurance	Vision Rates	Total Vision	SDI	Benefit Cost per person
	5062	1,714.12	1,816.97	21,186.52	161.05	1,932.60	4.63	55.56	20.81	249.72		23,424.40
	5331	857.06	908.48	10,593.26	94.06	1,128.72	4.63	55.56	13.40	160.80		11,938.34
	5331	857.06	908.48	10,593.26	94.06	1,128.72	4.63	55.56	13.40	160.80		11,938.34
	5333	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
	5061	857.06	908.48	10,593.26	94.06	1,128.72	4.63	55.56	13.40	160.80		11,938.34
	5333	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
	5063	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
	5062	1,714.12	1,816.97	21,186.52	161.05	1,932.60	4.63	55.56	20.81	249.72		23,424.40
	5331	857.06	908.48	10,593.26	94.06	1,128.72	4.63	55.56	13.40	160.80		11,938.34
	5482	1,714.12	1,816.97	21,186.52	161.05	1,932.60	4.63	55.56	20.81	249.72		23,424.40
	5332	1,714.12	1,816.97	21,186.52	161.05	1,932.60	4.63	55.56	20.81	249.72		23,424.40
	5333	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
	5333	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
	5331	857.06	908.48	10,593.26	94.06	1,128.72	4.63	55.56	13.40	160.80		11,938.34
	5332	1,714.12	1,816.97	21,186.52	161.05	1,932.60	4.63	55.56	20.81	249.72		23,424.40
	5333	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
	5333	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
	5333	2,228.36	2,362.06	27,542.53	251.93	3,023.16	4.63	55.56	33.01	396.12		31,017.37
Subtotal		*30,682.78*		*379,239.16*	*3,290.99*	*39,491.88*	*83.34*	*1,000.08*	*435.13*	*5,221.56*	*22,174.11*	*447,126.79*
.5% Admin Cost				1,896.20								1,896.20
Staff Totals				**381,135.36**		**39,491.88**		**1,000.08**		**5,221.56**	**22,174.11**	**449,022.98**

Annuitant	CalPERS Plan Code	Current Year Health Rates	Next Year Health Rates (est)	Total Health Costs	Dental Rates	Total Dental	Life Ins. Rates	Total Life Ins.	Vision Rates	Total Vision	SDI	Benefit Cost per person
	5361	302.53	320.68	3,739.27	-	*1,500.00*			33.01	396.12		5,635.39
		-	-	-	94.06	1,128.72			33.01	396.12		1,524.84
	5151	360.19	381.80	4,451.95	94.06	1,128.72			33.01	396.12		5,976.79
	6051	381.94	404.86	4,720.78	94.06	1,128.72			33.01	396.12		6,245.62
		-	-	-	94.06	1,128.72			33.01	396.12		1,524.84
	6082	763.88	809.71	9,441.56	161.05	1,932.60			33.01	396.12		11,770.28
	6051	381.94	404.86	4,720.78	94.06	1,128.72			33.01	396.12		6,245.62
	5331	857.06	908.48	10,593.26	161.05	1,932.60			33.01	202.80		12,728.66
	6041	381.94	404.86	4,720.78	94.06	1,128.72			33.01	396.12		6,245.62
	6051	381.94	404.86	4,720.78	-	*1,500.00*			33.01	396.12		6,616.90
	6052	763.88	809.71	9,441.56	161.05	1,932.60			33.01	396.12		11,770.28
	5362	605.06	641.36	7,478.54	161.05	1,932.60			33.01	396.12		9,807.26
	5362	605.06	641.36	7,478.54	161.05	1,932.60			33.01	396.12		9,807.26
	5362	605.06	641.36	7,478.54	161.05	1,932.60			33.01	396.12		9,807.26
	5362	605.06	641.36	7,478.54	161.05	1,932.60			33.01	396.12		9,807.26
Subtotal		*6,995.54*		86,464.87		*23,300.52*			*495.15*	*5,748.48*		115,513.87
		.5% Admin Costs=		432.32								432.32
Annuitant Totals				**86,897.20**		**23,300.52**				**5,748.48**		**115,946.20**
Grand Total				468,032.56		62,792.40		1,000.08		10,970.04	22,174.11	564,969.18
												564,969.18

A/C #	BUDGET CATEGORY	Budget 22/23	% change	Budget 21/22	% change	Actual 20/21	A vs B	Budget 20/21	Actual 19/20	Actual 18/19
	SERVICE AND SUPPLIES									
5201	Clothing and personal supplies (purchased)	$ 9,000	-10%	$ 10,000	-10%	$ 4,859	-51%	$ 10,000	$ 6,214	$ 8,899
5202	Laundry service and supplies (rented)	$ 13,000	-13%	$ 15,000	0%	$ 9,125	-39%	$ 15,000	$ 10,648	$ 12,603
	UTILITIES									
5301	Garbage (Waste Mgmt)	$ 3,700	-8%	$ 4,000	0%	$ 3,113	-22%	$ 4,000	$ 3,367	$ 3,080
5302	PG & E	$ 9,000	6%	$ 8,500	143%	$ 8,915	155%	$ 3,500	$ 19,117	$ 23,408
5303	Hayward Water & Sewage	$ 4,500	0%	$ 4,500	0%	$ 3,394	-25%	$ 4,500	$ 3,478	$ 3,673
5401	**SMALL TOOLS AND INSTRUMENTS**	$ 3,000	0%	$ 3,000	0%	$2,189	-27%	$ 3,000	$ 2,056	$ 2,211
	MAINTENANCE									
5501	Landscaping service	$ 5,000	0%	$ 5,000	0%	$ 5,012	0%	$ 5,000	$ 2,646	$ 2,855
5502	Facility Maintenance	$ 25,000	-17%	$ 30,000	50%	$ 15,250	-24%	$ 20,000	$ 14,033	$ 10,818
5503	Maintenance of equipment	$ 30,000	-14%	$ 35,000	0%	$ 22,290	-36%	$ 35,000	$ 20,600	$ 43,629
	TRANSPORTATION, TRAVEL, TRAINING, & BC									
5601	Fuel and GPS (WexMart)	$ 50,000	-7%	$ 54,000	4%	$ 38,922	-25%	$ 52,000	$ 41,906	$ 45,040
5602	Meetings, conferences, & travel	$ 30,000	-3%	$ 31,000	0%	$ 7,494	-76%	$ 31,000	$ 29,831	$ 27,927
5603	Board meeting expenses	$ 650	0%	$ 650	0%	$ -	-100%	$ 650	$ 295	$ 620
5604	Board payments in lieu	$ 16,000	-11%	$ 18,000	20%	$ 15,300	2%	$ 15,000	$ 13,000	$ 13,200
5605	Board plaques and nameplates	$ 190	6%	$ 180	-28%	$ 184	-26%	$ 250	$ 146	$ 138
5606	Continuing Education fees	$ 3,000	-21%	$ 3,800	9%	$ 2,863	-18%	$ 3,500	$ 3,660	$ 2,327
5607	Staff Training (staff dev./ college courses)	$ 15,000	-25%	$ 20,000	0%	$ 9,890	-51%	$ 20,000	$ 6,976	$ 9,181
	PROFESSIONAL SERVICES									
5701	Audit	$ 15,000	0%	$ 15,000	7%	$ 14,156	1%	$ 14,000	$ 12,170	$ 11,650
5702	Actuarial reports	$ 4,200	-11%	$ 4,700	0%	$ 1,200	-74%	$ 4,700	$ 4,200	$ 2,575
5703	Helicopter service	$ 25,000	-29%	$ 35,000	0%	$ -	-100%	$ 35,000	$ -	$ 5,154
5704	Legal Services	$ 8,000	0%	$ 8,000	60%	$ 5,263	5%	$ 5,000	$ 35,146	$ 3,363
5705	MVCAC Research Foundation	$ -	-100%	$ 5,000	0%		-100%	$ 5,000	$ -	$ 5,000
5706	Tax collection service (SCI)	$ 37,000	6%	$ 34,890	0%	$ 35,545	2%	$ 35,000	$ 34,502	$ 33,352
5707	Payroll service (OnePoint)	$ 10,000	-9%	$ 11,000	0%	$ 8,835	-20%	$ 11,000	$ 8,537	$ 8,544
5708	Environmental consultant/ EcoAtlas	$ 22,000	-56%	$ 50,000	100%	$ 4,121	-84%	$ 25,000		$ -
5709	HR Services (RGS & other)	$ 2,500	-72%	$ 9,000	-10%	$ 221	-98%	$ 10,000	$ (1,688)	$ 9,484
5710	OPEB management (PFM & US Bank)	$ 25,000	3%	$ 24,360	-3%	$ 22,187	-11%	$ 25,000	$ 19,685	$ 20,507
5711	Financial advising	$ 2,500	-50%	$ 5,000	0%	$ -	-100%	$ 5,000	$ -	$ 14,681
5712	Pre-employment physicals	$ 1,000	-33%	$ 1,500	0%	$ 95	-94%	$ 1,500	$ 335	$ 1,014
5801	**MEMBERSHIPS, DUES & SUBSCRIPTIONS**	$ 37,000	54%	$ 24,000	3%	$ 22,906	-2%	$ 23,337	$ 26,317	$ 20,774
5802	**INSURANCE - VCJPA**	$ 165,000	11%	$ 149,311	9%	$ 140,724	3%	$ 136,644	$ 133,744	$ 124,034
5803	Employee Assistant Program	$ 1,300	0%	$ 1,300	48%	$ 926	5%	$ 880	$ 1,090	$ 654
5901	**COMMUNITY EDUCATION**	$ 55,000	39%	$ 39,500	2%	$ 26,317	-32%	$ 38,575	$ 22,734	$ 34,861
	OPERATIONS									
6101	Pesticides	$ 182,000	-4%	$ 190,000	0%	$ 174,993	-8%	$ 190,000	$ 145,342	$ 168,430
6102	Field supplies (dippers etc)	$ 3,500	-30%	$ 5,000	0%	$ 2,674	-47%	$ 5,000	$ 818	$ 639
6103	Mosquitofish program	$ 3,500	0%	$ 3,500	0%	$ 2,722	-22%	$ 3,500	$ 2,232	$ 2,974
6104	Spray equipment	$ 8,000	-20%	$ 10,000	0%	$ 7,620	-24%	$ 10,000	$ 3,104	$ 5,212
6105	Safety	$ 8,500	0%	$ 8,500	0%	$ 11,160	31%	$ 8,500	$ 6,819	$ 8,148
6106	Aerial Pool Survey	$ 20,000	0%	$ 20,000	0%	$ 20,000	0%	$ 20,000	$ 20,000	$ 20,000
6107	Permits	$ 2,000	0%	$ 2,000	-50%	$ 4,193	5%	$ 4,000	$ 1,344	$ 1,328
	HOUSEHOLD EXPENSES									
6201	Janitorial service	$ 7,500	0%	$ 7,500	0%	$ 7,357	-2%	$ 7,500	$ 5,023	$ 4,920
6202	Supplies (+ emergency)	$ 2,850	0%	$ 2,850	0%	$ 2,235	-22%	$ 2,850	$ 2,012	$ 1,688
6203	Alarm service	$ 9,600	37%	$ 7,000	9%	$ 6,289	-2%	$ 6,400	$ 7,782	$ 11,986
6301	**OFFICE EXPENSES**	$ 12,000	0%	$ 12,000	0%	$ 9,748	-19%	$ 12,000	$ 13,761	$ 11,796
	IT/ COMMUNICATIONS									
6401	IT Expenses	$ 70,000	0%	$ 70,000	0%	$ 42,997	-39%	$ 70,000	$ 52,813	$ 74,516
6402	Telephone Service & Internet	$ 11,000	0%	$ 11,000	10%	$ 9,778	-2%	$ 10,000	$ 8,951	$ 10,297
6403	Website hosting	$ 2,400	0%	$ 2,400	0%	$ 2,400	0%	$ 2,400	$ 2,400	$ 2,400
6404	Cell phone service	$ 18,000	-18%	$ 22,000	0%	$ 13,149	-40%	$ 22,000	$ 16,151	$ 18,044
6405	Microsoft Office 365	$ 5,000	0%	$ 5,000	0%	$ 3,240	-35%	$ 5,000	$ 2,820	$ 3,510
6406	Azure Server Hosting	$ 1,000	-50%	$ 2,000	0%	$ 207	-90%	$ 2,000	$ -	$ 119
	LABORATORY									
6501	Mosquito and pathogen monitoring	$ 95,000	-10%	$ 105,000	5%	$ 50,024	-50%	$ 100,000	$ 69,571	$ 86,000
6502	Insecticide resistance	$ 15,500	-9%	$ 17,000	0%	$ 1,943	-89%	$ 17,000	$ 7,562	$ 15,200
6503	Research	$ 22,000	0%	$ 22,000	0%	$ 12,169	-45%	$ 22,000	$ 23,745	$ 16,948
	Total	**$ 1,126,890**	-5%	**$ 1,184,941**	6%	**$ 816,194**	-27%	**$ 1,118,186**	**$ 866,995**	**$ 969,411**

Estimate of Cash Carryover from Fiscal Year 21/22 to 22/23	debits	credits	balance	
LAIF, County, and BofW Balances as of January 31 2022			$ 4,993,788	
February check batch #1	$ 134,000		$ 4,859,788	
February check batch #2	$ 157,000		$ 4,702,788	
Balance as of February 28 2022			$ 5,006,608	
March check batch #1	$ 150,000		$ 4,856,608	estimates below
March check batch #2	$ 150,000		*$ 4,706,608*	
Balance as of March 31 2022			$ 4,706,608	
April check batch #1	$ 150,000		$ 4,556,608	
Deposit		2,100,000		
April check batch #2	$ 150,000		$ 6,506,608	
Balance as of April 30 2022			$ 6,506,608	
May check batch #1	*$ 150,000*		*$ 6,356,608*	
May check batch #2	*$ 150,000*		*$ 6,206,608*	
Balance as of May 31 2022			*$ 6,206,608*	
June check batch #1	*$ 175,000*		*$ 6,031,608*	
June check batch #2	*$ 175,000*		*$ 5,856,608*	
Balance as of June 30 2022				
Totals	*$ 1,250,000*	*$ 2,100,000*	*$ 5,856,608*	
Unused capital projects			*$ 45,000*	
Reserve transfers from prior year			*$ (876,948)*	
Operational requirement (July-December)			***$ 2,986,215***	
Estimated Cash Carried Over			***$ 2,915,393***	

CAPITAL EXPENDITURES (Outlay)						
	2018-19	**2019-20**	**2019-20**	**2020-2021**	**2021-2022**	**2022-2023**
	Capital expenses not purchased					
Curation & Larval ID Room	*$61,199*					
Remodel Project	*$21,550*					
V35 Lab Truck	*$2,000*					
Lab centrifuge						
Carports, Wash Rack, & Interior Paint	*$27,000*					
Shop & Facility Inventory Program	*$5,000*					
UAS	*$30,000*					
Total	***$146,749***					
Capital Reserve *(new assets & non-capital projects)*			***Items not purchased***			
Treatment UAS		*$52,000*	*$10,000*			
Waterproof UAS		*$11,000*	*$11,000*			
Larvicide rig		*$17,000*	*$0*			
Lab centrifuge		*$10,500*	*$10,500*			
Exterior and interior painting		*$39,000*	*$39,000*			
Interior Flooring		*$75,000*	*$33,000*			
Total		***$204,500***	***$103,500***			
Repair and Replace *(replacement assets)*						
V40 (Sarah)		*$40,000*	*$0*			
V45 (Nick)		*$40,000*	*$0*			
Total		***$80,000***	***$103,500***			
Capital Reserve (new assets & non-capital projects)						
Exterior & carport painting				$39,000		
Lobby display				$20,000		
Total				$59,000		
Items not purchased				***$20,500***		
Repair and Replace (replacement assets)						
Capital Reserve (new assets & non-capital projects)						
Lobby display					**$ 30,000**	
Repair and Replace (replacement assets)						
V42 (Jeremy)					**$ 40,000**	
Total					**$ 70,000**	
Items not purchased					**$ 45,000**	
Capital Reserve (new assets & non-capital projects)						
Fish Enclosure						**$ 250,000**
Repair and Replace (replacement assets)						
MapVision - Gen 3						**$ 70,000**
Total						**$ 320,000**

Committed Reserve Funds	Target Level	As of February 28, 2022.	Transfers[4]	Current Funded %	Proposed Funded %
VCJPA Member Contingency fund [1]	$327,918	$371,021	$0	113%	113%
CAMP: Public Health Emergency	$500,000	$526,403	$0	105%	105%
CAMP: Repair and Replace	$4,319,711	$1,355,737	$2,049,699	31%	79%
CAMP: Operating reserve	$2,734,699	$1,945,005	$0	71%	71%
CAMP: Capital reserve	$30,000	$30,008	$320,008	100%	NA
Restricted Reserve Funds					
PARS: Pension Rate Stabililzation*** [2]	$3,952,022	$1,818,488	$789,902	46%	66%
Other Post Employment Benefit fund (OPEB)** [3]	$2,776,000	$4,993,635		180%	180%
TOTAL			$3,159,609		

[1] Balance as of December 31, 2021.

[2] - Unfunded Accrued Liability as of June 30, 2020.

[3] - OPEB liability as of June 30, 2021.

[4 -] Capital Reserve transferred at start of fiscal year, all other transfers occur after the fiscal year.

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 Alameda County Mosquito Abatement District
(CalPERS ID: 5854416969)
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	11.61%	$310,190
Projected Results		
2023-24	*11.6%*	*$335,000*

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
Alameda County Mosquito Abatement District

(CalPERS ID: 5854416969)

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

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Section 1

Plan Specific Information for the Miscellaneous Plan of the Alameda County Mosquito Abatement District

(CalPERS ID: 5854416969)
(Rate Plan ID: 111)

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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.

EDDIE W. LEE, ASA, EA, FCA, MAAA
Senior 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 Alameda County 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 Alameda County 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	**11.61%**
Plus	
Required Payment on Amortization Bases[1]	**$310,190**
Paid either as	
1) Monthly Payment	**$25,849.17**
Or	
2) Annual Prepayment Option*	**$299,872**

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	17.25%	17.24%
Surcharge for Class 1 Benefits[2]		
a) FAC 1	0.54%	0.55%
b) PRSA	0.72%	0.74%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	18.51%	18.53%
Formula's Expected Employee Contribution Rate	6.91%	6.92%
Employer Normal Cost Rate	11.60%	11.61%

[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 $310,190. 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
$150,626	$310,190	$0	$310,190	$460,816

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	$150,626	$310,190	$54,894	$365,084	$515,710
15 years	$150,626	$310,190	$114,463	$424,653	$575,279
10 years	$150,626	$310,190	$240,484	$550,674	$701,300
5 years	$150,626	$310,190	$633,106	$943,296	$1,093,922

[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)	$15,650,332	$16,220,160
2. Entry Age Accrued Liability (AL)	13,968,713	14,550,670
3. Plan's Market Value of Assets (MVA)	10,373,669	10,598,648
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	3,595,044	3,952,022
5. Funded Ratio [(3) / (2)]	74.3%	72.8%

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 111 Results					
Normal Cost %	11.61%	11.6%	11.6%	11.6%	11.6%	11.6%
UAL Payment	$310,190	$335,000	$361,000	$378,000	$393,000	$403,000

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 111. 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	$1,959,548	$2,048,917
Estimated Employer Normal Cost	$199,322	$208,945
Required Payment on Amortization Bases	$270,063	$313,679
Estimated Total Employer Contributions	$469,385	$522,624
Estimated Total Employer Contribution Rate (illustrative only)	23.95%	25.51%

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	$4,610,559
Transferred Members	612,736
Terminated Members	315,646
Members and Beneficiaries Receiving Payments	9,011,729
Total	$14,550,670

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	$14,550,670
2.	Projected UAL balance at 6/30/2020	3,656,077
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)	250,421
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	45,524
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	295,945

[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)	$3,952,022
11.	Plan's Share of Pool's MVA: (1) - (10)	$10,598,648

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
Share of Pre-2013 Pool UAL	6/30/13	No Ramp		2.75%	15	716,253	59,101	705,256	60,727	691,807	62,397
Non-Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	(13,519)	(917)	(13,517)	(942)	(13,489)	(968)
Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	1,406,146	95,389	1,405,905	98,012	1,402,934	100,707
Non-Investment (Gain)/Loss	6/30/14	100%	Up/Down	2.75%	24	1,175	78	1,177	80	1,177	82
Investment (Gain)/Loss	6/30/14	100%	Up/Down	2.75%	24	(1,092,284)	(72,229)	(1,094,030)	(74,216)	(1,093,842)	(76,257)
Assumption Change	6/30/14	100%	Up/Down	2.75%	14	644,079	61,245	625,812	62,929	604,525	64,660
Non-Investment (Gain)/Loss	6/30/15	100%	Up/Down	2.75%	25	(53,896)	(2,819)	(54,753)	(3,621)	(54,840)	(3,720)
Investment (Gain)/Loss	6/30/15	100%	Up/Down	2.75%	25	671,598	35,127	682,274	45,117	683,364	46,357
Non-Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	(98,703)	(3,879)	(101,600)	(5,314)	(103,215)	(6,825)
Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	805,330	31,648	828,966	43,358	842,144	55,688
Assumption Change	6/30/16	100%	Up/Down	2.75%	16	239,868	13,060	243,149	17,892	241,662	22,979
Non-Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(20,858)	(554)	(21,745)	(855)	(22,383)	(1,171)
Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(414,566)	(11,020)	(432,186)	(16,984)	(444,871)	(23,269)
Assumption Change	6/30/17	80%	Up/Down	2.75%	17	270,097	9,849	278,816	15,180	282,631	20,797
Non-Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	60,031	820	63,385	1,685	66,079	2,597
Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	(122,875)	(1,678)	(129,741)	(3,449)	(135,255)	(5,315)
Assumption Change	6/30/18	60%	Up/Down	2.75%	18	428,020	7,980	449,727	16,399	464,245	25,276
Method Change	6/30/18	60%	Up/Down	2.75%	18	117,963	2,199	123,946	4,520	127,947	6,966
Non-Investment (Gain)/Loss	6/30/19	No Ramp		0.00%	19	57,680	0	61,718	5,632	60,212	5,632

Schedule of Plan's Amortization Bases (continued)

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
Investment (Gain)/Loss	6/30/19	40%	Up Only	0.00%	19	54,538	0	58,356	1,276	61,121	2,552
Non-Investment (Gain)/Loss	6/30/20	No Ramp		0.00%	20	45,524	0	48,711	0	52,121	4,756
Investment (Gain)/Loss	6/30/20	20%	Up Only	0.00%	20	250,421	0	267,950	0	286,707	6,269
Total						**3,952,022**	**223,400**	**3,997,576**	**267,426**	**4,000,781**	**310,190**

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		15 Year Amortization		10 Year Amortization	
Date	Balance	Payment	Balance	Payment	Balance	Payment
6/30/2022	4,000,781	310,190	4,000,781	424,653	4,000,781	550,674
6/30/2023	3,959,974	334,912	3,841,571	424,653	3,711,214	550,674
6/30/2024	3,890,733	361,321	3,671,216	424,653	3,401,377	550,673
6/30/2025	3,789,332	377,858	3,488,937	424,653	3,069,853	550,674
6/30/2026	3,663,728	393,368	3,293,898	424,653	2,715,121	550,673
6/30/2027	3,513,287	402,860	3,085,206	424,652	2,335,559	550,674
6/30/2028	3,342,494	412,617	2,861,907	424,653	1,929,427	550,674
6/30/2029	3,149,653	422,643	2,622,976	424,652	1,494,865	550,673
6/30/2030	2,932,943	432,939	2,367,321	424,653	1,029,885	550,673
6/30/2031	2,690,413	443,524	2,093,769	424,652	532,356	550,673
6/30/2032	2,419,957	437,437	1,801,069	424,653		
6/30/2033	2,136,864	430,715	1,487,879	424,652		
6/30/2034	1,840,909	416,962	1,152,767	424,652		
6/30/2035	1,538,463	394,769	794,197	424,652		
6/30/2036	1,237,802	355,361	410,527	424,652		
6/30/2037	956,860	239,222				
6/30/2038	776,388	212,768				
6/30/2039	610,646	192,004				
6/30/2040	454,779	178,451				
6/30/2041	302,023	136,623				
6/30/2042	181,842	95,182				
6/30/2043	96,114	74,393				
6/30/2044	25,888	26,779				
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		**7,082,898**		**6,369,788**		**5,506,735**
Interest Paid		**3,082,117**		**2,369,007**		**1,505,954**
Estimated Savings				**713,110**		**1,576,163**

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	9.558%	$101,476	N/A
2017 - 18	9.599%	127,933	N/A
2018 - 19	10.152%	151,625	N/A
2019 - 20	10.868%	192,789	0
2020 - 21	11.746%	223,400	
2021 - 22	11.60%	267,426	
2022 - 23	11.61%	310,190	

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	$9,172,069	$6,748,372	$2,423,697	73.6%	$1,248,836
06/30/2012	9,670,474	6,805,117	2,865,357	70.4%	1,377,265
06/30/2013	10,241,401	8,323,145	1,918,256	81.3%	1,249,694
06/30/2014	11,279,511	9,569,301	1,710,210	84.8%	1,363,267
06/30/2015	11,663,490	9,392,360	2,271,130	80.5%	897,921
06/30/2016	12,080,425	9,177,513	2,902,912	76.0%	986,978
06/30/2017	12,861,499	9,978,719	2,882,780	77.6%	955,435
06/30/2018	13,785,793	10,392,461	3,393,332	75.4%	1,100,635
06/30/2019	13,968,713	10,373,669	3,595,044	74.3%	1,139,768
06/30/2020	14,550,670	10,598,648	3,952,022	72.8%	1,195,979

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	11.6%	11.6%	11.6%	11.6%
UAL Contribution	$351,000	$409,000	$474,000	$554,000
4.0%				
Normal Cost	11.6%	11.6%	11.6%	11.6%
UAL Contribution	$343,000	$385,000	$427,000	$476,000
7.0%				
Normal Cost	11.6%	11.6%	11.6%	11.6%
UAL Contribution	$335,000	$361,000	$378,000	$393,000
9.0%				
Normal Cost	11.8%	12.1%	12.3%	12.5%
UAL Contribution	$331,000	$349,000	$354,000	$353,000
12.0%				
Normal Cost	11.8%	12.1%	12.3%	12.5%
UAL Contribution	$323,000	$325,000	$302,000	$264,000

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	23.11%	18.53%	15.02%
b) Accrued Liability	$16,391,946	$14,550,670	$13,015,829
c) Market Value of Assets	$10,598,648	$10,598,648	$10,598,648
d) Unfunded Liability/(Surplus) [(b) - (c)]	$5,793,298	$3,952,022	$2,417,181
e) Funded Status	64.7%	72.8%	81.4%

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	19.75%	18.53%	17.07%
b) Accrued Liability	$15,291,989	$14,550,670	$13,576,980
c) Market Value of Assets	$10,598,648	$10,598,648	$10,598,648
d) Unfunded Liability/(Surplus) [(b) - (c)]	$4,693,341	$3,952,022	$2,978,332
e) Funded Status	69.3%	72.8%	78.1%

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	18.86%	18.53%	18.23%
b) Accrued Liability	$14,849,342	$14,550,670	$14,275,773
c) Market Value of Assets	$10,598,648	$10,598,648	$10,598,648
d) Unfunded Liability/(Surplus) [(b) - (c)]	$4,250,694	$3,952,022	$3,677,125
e) Funded Status	71.4%	72.8%	74.2%

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	9,056,147	9,011,729
2. Total Accrued Liability	13,968,713	14,550,670
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.65	0.62

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	10	10
2. Number of Retirees	19	19
3. Support Ratio [(1) / (2)]	0.53	0.53

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	$10,373,669	$10,598,648
2. Payroll	1,139,768	1,195,979
3. Asset Volatility Ratio (AVR) [(1) / (2)]	9.1	8.9
4. Accrued Liability	$13,968,713	$14,550,670
5. Liability Volatility Ratio (LVR) [(4) / (2)]	12.3	12.2

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	0.70	0.45	10.4	13.5
06/30/2018	0.66	0.50	9.4	12.5
06/30/2019	0.65	0.53	9.1	12.3
06/30/2020	0.62	0.53	8.9	12.2

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%
$10,598,648	$32,480,335	32.6%	$21,881,687	$24,903,221	42.6%	$14,304,573

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	10	10
Average Attained Age	N/A	49.5
Average Entry Age to Rate Plan	N/A	33.9
Average Years of Credited Service	N/A	14.4
Average Annual Covered Pay	$113,977	$119,598
Annual Covered Payroll	$1,139,768	$1,195,979
Projected Annual Payroll for Contribution Year	$1,236,408	$1,297,386
Present Value of Future Payroll	$9,794,439	$9,341,366
Transferred Members	3	4
Separated Members	4	4
Retired Members and Beneficiaries		
Counts*	19	19
Average Annual Benefits*	N/A	$38,733

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:

- One Year Final Compensation (FAC 1)
- Post-Retirement Survivor Allowance (PRSA)

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	Misc	Misc	
Demographics				
Actives	Yes	No	No	
Transfers/Separated	Yes	No	No	
Receiving	Yes	Yes	Yes	
Benefit Provision				
Benefit Formula	2% @ 55			
Social Security Coverage	No			
Full/Modified	Full			
Employee Contribution Rate	7.00%			
Final Average Compensation Period	One Year			
Sick Leave Credit	Yes			
Non-Industrial Disability	Standard			
Industrial Disability	No			
Pre-Retirement Death Benefits				
Optional Settlement 2	Yes			
1959 Survivor Benefit Level	Level 3			
Special	No			
Alternate (firefighters)	No			
Post-Retirement Death Benefits				
Lump Sum	$500	$500	$500	
Survivor Allowance (PRSA)	Yes	Yes	Yes	
COLA	2%	2%	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 Alameda County Mosquito Abatement District
(CalPERS ID: 5854416969)
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	7.76%	$3,489	7.25%
Projected Results			
2023-24	*7.8%*	*$4,400*	*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
Alameda County Mosquito Abatement District

(CalPERS ID: 5854416969)

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 Alameda County Mosquito Abatement District

(CalPERS ID: 5854416969)
(Rate Plan ID: 26060)

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.

EDDIE W. LEE, ASA, EA, FCA, MAAA
Senior 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 Alameda County 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 Alameda County 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	**7.76%**
Plus	
Required Payment on Amortization Bases[1]	**$3,489**
Paid either as	
1) Monthly Payment	**$290.75**
Or	
2) Annual Prepayment Option*	**$3,373**

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]		
a) PRSA	0.64%	0.79%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	14.98%	15.01%
Plan's Employee Contribution Rate[4]	7.25%	7.25%
Employer Normal Cost Rate	7.73%	7.76%

[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 $3,489. 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
$58,319	$3,489	$0	$3,489	$61,808

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
$58,319	$3,489	$324	$3,813	$62,132

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	$58,319	$3,489	$1,653	$5,142	$63,461
15 years	$58,319	$3,489	$2,492	$5,981	$64,300
10 years	$58,319	$3,489	$4,267	$7,756	$66,075
5 years	$58,319	$3,489	$9,796	$13,285	$71,604

[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)	$1,453,361	$1,522,577
2. Entry Age Accrued Liability (AL)	423,383	466,918
3. Plan's Market Value of Assets (MVA)	387,581	413,726
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	35,802	53,192
5. Funded Ratio [(3) / (2)]	91.5%	88.6%

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 26060 Results					
Normal Cost %	7.76%	7.8%	7.8%	7.8%	7.8%	7.8%
UAL Payment	$3,489	$4,400	$5,200	$5,600	$5,900	$6,100

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 26060. 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	$1,959,548	$2,048,917
Estimated Employer Normal Cost	$199,322	$208,945
Required Payment on Amortization Bases	$270,063	$313,679
Estimated Total Employer Contributions	$469,385	$522,624
Estimated Total Employer Contribution Rate (illustrative only)	23.95%	25.51%

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	$466,918
Transferred Members	0
Terminated Members	0
Members and Beneficiaries Receiving Payments	0
Total	$466,918

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	$466,918
2.	Projected UAL balance at 6/30/2020	41,963
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)	9,768
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	1,461
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	11,229

[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)	$53,192
11.	Plan's Share of Pool's MVA: (1) - (10)	$413,726

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%	0	731	386	383	396	0	0
Non-Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	(683)	(27)	(703)	(37)	(714)	(47)
Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	6,806	267	7,006	366	7,118	471
Assumption Change	6/30/16	100%	Up/Down	2.75%	16	7,029	383	7,125	524	7,082	673
Non-Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(301)	(8)	(314)	(12)	(324)	(17)
Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(7,367)	(196)	(7,680)	(302)	(7,905)	(413)
Assumption Change	6/30/17	80%	Up/Down	2.75%	17	13,422	489	13,856	754	14,046	1,034
Non-Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	1,248	17	1,318	35	1,374	54
Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	(3,097)	(42)	(3,270)	(87)	(3,409)	(134)
Assumption Change	6/30/18	60%	Up/Down	2.75%	18	17,379	324	18,260	666	18,849	1,026
Method Change	6/30/18	60%	Up/Down	2.75%	18	3,013	56	3,166	115	3,269	178
Non-Investment (Gain)/Loss	6/30/19	No Ramp		0.00%	19	1,748	0	1,870	171	1,824	171
Investment (Gain)/Loss	6/30/19	40%	Up Only	0.00%	19	2,035	0	2,177	48	2,280	95
Non-Investment (Gain)/Loss	6/30/20	No Ramp		0.00%	20	1,461	0	1,563	0	1,672	153
Investment (Gain)/Loss	6/30/20	20%	Up Only	0.00%	20	9,768	0	10,452	0	11,184	245
Total						**53,192**	**1,649**	**55,209**	**2,637**	**56,346**	**3,489**

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)

	Current Amortization Schedule		Alternate Schedules: 15 Year Amortization		Alternate Schedules: 10 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2022	56,346	3,489	56,346	5,981	56,346	7,756
6/30/2023	56,682	4,397	54,103	5,981	52,267	7,755
6/30/2024	56,102	5,180	51,703	5,981	47,904	7,756
6/30/2025	54,673	5,580	49,135	5,980	43,234	7,755
6/30/2026	52,728	5,936	46,389	5,981	38,239	7,756
6/30/2027	50,279	6,050	43,449	5,980	32,893	7,755
6/30/2028	47,542	6,166	40,305	5,980	27,174	7,756
6/30/2029	44,491	6,287	36,941	5,981	21,053	7,755
6/30/2030	41,103	6,413	33,340	5,981	14,505	7,756
6/30/2031	37,345	6,540	29,487	5,980	7,497	7,755
6/30/2032	33,196	6,667	25,365	5,981		
6/30/2033	28,624	6,804	20,954	5,980		
6/30/2034	23,591	6,756	16,235	5,981		
6/30/2035	18,256	6,334	11,185	5,981		
6/30/2036	12,981	5,296	5,781	5,980		
6/30/2037	8,410	4,199				
6/30/2038	4,655	3,037				
6/30/2039	1,839	1,902				
6/30/2040						
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		**97,033**		**89,709**		**77,555**
Interest Paid		**40,687**		**33,363**		**21,209**
Estimated Savings				**7,324**		**19,478**

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	6.930%	$141	N/A
2017 - 18	6.908%	360	N/A
2018 - 19	7.266%	568	N/A
2019 - 20	7.072%	929	0
2020 - 21	7.874%	1,650	
2021 - 22	7.73%	2,637	
2022 - 23	7.76%	3,489	

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	$658	$687	($29)	104.5%	$61,347
06/30/2015	19,399	18,192	1,207	93.8%	212,227
06/30/2016	83,763	76,035	7,728	90.8%	516,269
06/30/2017	185,212	177,972	7,240	96.1%	574,230
06/30/2018	286,462	264,212	22,250	92.2%	577,005
06/30/2019	423,383	387,581	35,802	91.5%	666,618
06/30/2020	466,918	413,726	53,192	88.6%	692,790

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	7.8%	7.8%	7.8%	7.8%
UAL Contribution	$5,000	$7,000	$9,300	$12,000
4.0%				
Normal Cost	7.8%	7.8%	7.8%	7.8%
UAL Contribution	$4,700	$6,100	$7,500	$9,200
7.0%				
Normal Cost	7.8%	7.8%	7.8%	7.8%
UAL Contribution	$4,400	$5,200	$5,600	$5,900
9.0%				
Normal Cost	7.9%	7.6%	7.8%	8.0%
UAL Contribution	$4,300	$4,800	$4,800	$4,500
12.0%				
Normal Cost	7.9%	7.6%	7.8%	8.0%
UAL Contribution	$4,000	$3,800	$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	18.63%	15.01%	12.24%
b) Accrued Liability	$600,436	$466,918	$365,332
c) Market Value of Assets	$413,726	$413,726	$413,726
d) Unfunded Liability/(Surplus) [(b) - (c)]	$186,710	$53,192	($48,394)
e) Funded Status	68.9%	88.6%	113.2%

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	16.05%	15.01%	13.78%
b) Accrued Liability	$503,341	$466,918	$424,460
c) Market Value of Assets	$413,726	$413,726	$413,726
d) Unfunded Liability/(Surplus) [(b) - (c)]	$89,615	$53,192	$10,734
e) Funded Status	82.2%	88.6%	97.5%

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	15.30%	15.01%	14.75%
b) Accrued Liability	$475,679	$466,918	$458,788
c) Market Value of Assets	$413,726	$413,726	$413,726
d) Unfunded Liability/(Surplus) [(b) - (c)]	$61,953	$53,192	$45,062
e) Funded Status	87.0%	88.6%	90.2%

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	423,383	466,918
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	8	8
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	$387,581	$413,726
2. Payroll	666,618	692,790
3. Asset Volatility Ratio (AVR) [(1) / (2)]	0.6	0.6
4. Accrued Liability	$423,383	$466,918
5. Liability Volatility Ratio (LVR) [(4) / (2)]	0.6	0.7

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	0.3	0.3
06/30/2018	0.00	N/A	0.5	0.5
06/30/2019	0.00	N/A	0.6	0.6
06/30/2020	0.00	N/A	0.6	0.7

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%
$413,726	$1,319,322	31.4%	$905,596	$751,269	55.1%	$337,543

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	8	8
Average Attained Age	N/A	33.8
Average Entry Age to Rate Plan	N/A	29.9
Average Years of Credited Service	N/A	4.0
Average Annual Covered Pay	$83,327	$86,599
Annual Covered Payroll	$666,618	$692,790
Projected Annual Payroll for Contribution Year	$723,140	$751,531
Present Value of Future Payroll	$7,598,716	$8,271,067
Transferred Members	0	0
Separated Members	0	0
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:

- Post-Retirement Survivor Allowance (PRSA)

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	No	
Receiving	No	
Benefit Provision		
Benefit Formula	2% @ 62	
Social Security Coverage	No	
Full/Modified	Full	
Employee Contribution Rate	7.25%	
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	Level 3	
Special	No	
Alternate (firefighters)	No	
Post-Retirement Death Benefits		
Lump Sum	$500	
Survivor Allowance (PRSA)	Yes	
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
26060	Miscellaneous PEPRA Level	14.322%	7.25%	15.01%	0.688%	No	7.25%

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

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

Capital Asset Replacement Program Analysis and Report

Prepared by

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Municipal Resource Group, LLC

March 2019

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
DRAFT CAPITAL ASSET REPLACEMENT PROGRAM ANALYSIS AND REPORT

PURPOSE OF THE PROJECT

The Alameda County Mosquito Abatement District (District) owns a variety of capital assets, including buildings, vehicles, water craft, machinery and equipment. The District is in a position where it has the financial capacity to set aside sufficient cash over the next few years to finance the replacement of its major capital assets for the next 20 years.

The District's services are capital asset-dependent. The District owns more than 70 capital assets, all of which will eventually need to be replaced. Municipal Resource Group, LLC (MRG) was retained by the District to prepare this Capital Asset Replacement Program Analysis and Report (Report), which identifies the District's ongoing capital asset replacement requirements and proposes capital asset replacement funding strategies.

This Report includes a Capital Asset Replacement Schedule that identifies (i) a list of existing capital assets that will be replaced; (ii) the estimated useful life of each capital asset; and (iii) the estimated current and future replacement cost of each capital asset.

The Capital Asset Replacement Schedule forms the basis for the Report's Capital Asset Funding Strategies, with each strategy projecting costs over the next 20 years. MRG first performed a Pay-As-You-Go analysis to determine annual budget requirements as part of an Annual Budget Strategy. MRG then performed a Net Present Value Analysis to determine the amount of money required to be reserved now to pay for the eventual replacement of existing capital assets as part of a Reserve Fund Strategy.

The Report also includes a Cash Flow Analysis to ensure that adequate funds would be available on an annual basis to pay for the replacement of existing capital assets under the Net Present Value Analysis/Reserve Fund Strategy, including scenarios where the net present value cost is funded over one year, three years or four years.

I. <u>PROJECT METHODOLOGY</u>

MRG worked collaboratively with District staff in conducting the analysis and in preparing this Report. The Project Methodology included the following steps, tasks, analyses and deliverables:

1. MRG consultants met with key District staff to confirm the project objectives and discuss the project tasks, timelines and deliverables. MRG received a preliminary list of District assets, including year of purchase and purchase price for each asset.

2. MRG conducted a second site visit, during which specific assets were visually confirmed. MRG met with District staff to discuss capital assets that would be

replaced, and proposed methodologies for determining useful lives and replacement costs.

3. Working with District staff, MRG prepared a Capital Asset Replacement Schedule, identifying for each capital asset the year it was placed in service, as well as its useful life, original cost and current replacement cost. A list of existing capital assets that are not planned to be replaced was also prepared. District staff provided input on all assumptions and data.

4. MRG prepared a Draft Capital Asset Replacement Program Analysis and Report for consideration by District staff.

II. CAPITAL ASSET REPLACEMENT SCHEDULE

The District's capital assets include major building systems, vehicles, shop equipment, fish equipment, and lab equipment. Several non-capital assets were included in the schedule and analysis at the request of the District, because even though these items do not qualify as capital assets, the District has an ongoing need to finance periodic replacement of these costly items.

A Capital Asset Replacement Schedule has been prepared (**Exhibit A**), which includes approximately 70 separate capital assets, each with a current replacement cost in excess of five thousand dollars. Existing capital assets that will not be replaced and assets with a replacement cost of less than five thousand dollars are not included in the Capital Asset Replacement Schedule.

The Capital Asset Replacement Schedule provides the following information:

Year Purchased/In Service – the year in which the capital asset was either purchased or placed into service by the District.

Asset Description – a brief description and/or the brand/model of the capital asset.

Service Life – the estimated *useful* life of the capital asset. Useful lives range from five years for certain equipment to 40 years for parking lot concrete pavement.

Original Acquisition Cost – the *cost*, according to the District's financial records, of the capital asset when it was purchased.

Current Replacement Cost – the *estimated* cost to replace the capital asset in 2019.

Replacement Cost Source – the *methodology* or the source of information used to estimate the current (2019) replacement cost of the capital asset. Several methods and/or sources were used to estimate current replacement cost:

Cost + ENR-BCI – for major building systems, the analysis uses the original cost and adjusts that cost by the Engineering News Record – 20 City Average Building Construction Cost Index (ENR-BCI) from the date the capital asset was placed into service to 2019. The ENR-BCI is a commonly used index that tracks the average cost of construction. The ENR-BCI annual average over the past 20 years is 2.92%.

Cost + CPI – for some capital assets, the analysis uses the original cost and adjusts that cost by a Consumer Price Index (CPI) factor. The analysis applies a 2.79% annual CPI factor from the date the capital asset was purchased to 2019, consistent with the Consumer Price Index – All Urban Consumers – San Francisco-Oakland-San Jose, which has averaged 2.79% annually over the past 20 years.

Brand Names – MRG and/or District staff researched supplier and trade industry costs for some of the capital assets. For example, brand name assets such as "Alco HVAC," "John Deere," "Mar-Len," "Fisher Scientific" and other brands were researched to determine actual current prices (including sales tax).

District – replacement cost is based on District staff's experience in acquiring capital assets.

MRG – replacement cost is based on MRG's experience in conducting similar analyses.

A. Assets Not Included in the Capital Asset Replacement Schedule

The District has a "capitalization" standard of five thousand dollars, meaning that any asset purchase in an amount less than five thousand dollars is "expensed" and not carried in the District's financial statements as an asset. The Capital Asset Replacement Schedule does not include existing assets with a current replacement cost of less than five thousand dollars.

District staff identified certain capital assets that will not be replaced, because of obsolescence or for other reasons. These capital assets are also not included in the Capital Asset Replacement Schedule.

When the District purchases a new vehicle, the older vehicle it has replaced is sometimes placed in a fleet "pool" and is used by staff as a back-up vehicle, until it is eventually disposed of at auction in accordance with surplus property procedures. These pool vehicles are not subsequently replaced, and are not included in the Capital Asset Replacement Schedule.

While major building systems that will require eventual replacement are included in the Capital Asset Replacement Schedule (such as roofs and HVAC systems), complete replacement of the District's permanent buildings is not included in the Capital Asset Replacement Schedule, for several reasons. First, assets that "depreciate" are typically included in a replacement schedule; buildings do not necessarily depreciate over time, and may in fact appreciate in value. Second, if District facilities were to be relocated to another location in the future, there would be significant resale value attributable to the existing buildings and facilities, the value of which is not known at this time. Third, purchase or construction of any future replacement buildings would likely be financed by bond proceeds, with debt service payments made in the years following the purchase or construction of the new facilities, rather than reserved in advance. Fourth, the analysis in this Report is based on a 20-year period, and the District's relatively new buildings and facilities will not likely be replaced within that time frame.

Exhibit B lists the five existing capital assets that have been excluded from the Capital Asset Replacement Schedule for the reasons identified above.

III. CAPITAL ASSET FUNDING STRATEGIES

The Capital Asset Replacement Schedule forms the basis of this Report's analysis for the Capital Asset Funding Strategies. There are two primary Capital Asset Funding Strategies presented below.

A. Pay-As-You-Go Analysis/Annual Budget Strategy

The Pay-As-You-Go Analysis estimates the cost of replacing each existing capital asset in the year in which it is expected to be replaced (when the useful life expires). The cost in the replacement year is "inflation-adjusted" by one of the two following factors:

1. For major building systems, the replacement cost in the year in which the asset is expected to be replaced is based on the current replacement cost adjusted by an average annual 2.92% ENR-BCI factor from 2019 to the expected replacement year. For example, a capital asset with a current (2019) replacement cost of $100,000 that is scheduled to be replaced in 2020 would have a 2020 replacement cost of $103,000 (all replacement costs are rounded).

2. For equipment, vehicles and other purchased assets, the replacement cost in the year in which the asset is expected to be replaced is based on the current (2019) replacement cost, adjusted by an average annual 2.79% CPI factor from 2019 to the replacement year.

Exhibit C provides the Pay-As-You-Go Analysis. It provides the inflation-adjusted replacement cost for all District-owned capital assets, with 2019 as the base year replacement cost and continuing from 2020 through 2039, a 20-year period. All existing capital assets will be replaced at least once during the 20-year period, except for the parking lot concrete pavement and two 800 gallon fish tanks, which are scheduled to be replaced after the 20-year period. Assets with relatively short useful lives may be replaced more than once during the 20-year period.

Exhibit C can be used as an Annual Budget Strategy tool, in that it estimates the amount in inflation-adjusted dollars required in any given year to replace capital assets that have reached the end of their useful lives.

The Pay-As-You-Go Analysis/Annual Budget Strategy indicates that the annual replacement cost (in inflation-adjusted dollars) would range from $66,000 in 2028 to $487,000 in 2035. Exhibit C identifies the replacement cost for each capital asset from 2019 through 2039. **Table IV-1**, below, provides a summary of the Annual Budget Strategy requirements in inflation-adjusted dollars.

Table IV-1: Annual Budget Strategy Requirements, Inflation-Adjusted Dollars

Year	Capital Budget Requirement
2019	$74,000
2020	$386,000
2021	$185,000
2022	$313,000
2023	$83,000
2024	$164,000
2025	$440,000
2026	$241,000
2027	$407,000
2028	$66,000
2029	$219,000
2030	$95,000
2031	$205,000
2032	$411,000
2033	$97,000
2034	$378,000
2035	$487,000
2036	$215,000
2037	$404,000
2038	$482,000
2039	$251,000

It is noted that any new capital assets added to the District's inventory in future years would need to be added to the Capital Asset Replacement Schedule, and the Pay-As-You-Go Analysis would need to be rerun at regular intervals.

B. Net Present Value Analysis/Reserve Fund Strategy

The District is in a position where it has the financial capacity to set aside sufficient cash over the next few years to finance the replacement of its major capital assets for the next 20 years.

The Net Present Value Analysis estimates the amount of money that would need to be set aside in a reserve fund in 2019, which if invested at a given interest rate (also known as a discount rate) would provide sufficient funding to pay for the inflation-adjusted cost of replacing all current capital assets over the 20-year period.

The Net Present Value Analysis assumes that money in a reserve fund would accrue interest income at an annual interest rate of 2.26%, which has been the average annual California State Treasurer Local Agency Investment Fund (LAIF) interest rate over the past 20 years. A lower interest rate (discount rate) would result in a higher net present value and a higher amount required to be set aside in 2019 to fully fund the replacement of all existing capital assets. Similarly, a higher interest rate (discount rate) would result in a lower net present value and a lower amount required to be set aside in 2019 to fully fund the replacement of all existing capital assets.

Table IV-2, below, provides the Net Present Value Analysis. Based on the Capital Asset Replacement Schedule and an assumed interest rate/discount rate of 2.26%, the District would need to set aside $4,319,711 in a reserve fund in 2019, which would be invested and would accrue interest at an annual rate of 2.26% over the 20-year period to provide sufficient funding for the replacement of the District's existing capital assets.

Table IV-2: Net Present Value Analysis, Inflation-Adjusted Dollars, 2.26% Discount Rate

Year	Inflation-Adjusted Expense
2019	$74,000
2020	$386,000
2021	$185,000
2022	$313,000
2023	$83,000
2024	$164,000
2025	$440,000
2026	$241,000
2027	$407,000
2028	$66,000
2029	$219,000
2030	$95,000
2031	$205,000
2032	$411,000
2033	$97,000
2034	$378,000
2035	$487,000
2036	$215,000
2037	$404,000
2038	$482,000
2039	$251,000
Net Present Value[1]	$4,319,711

[1]The Net Present Value Discount Rate of 2.26% is based on the average quarterly Local Agency Investment Fund interest rate as reported by the California State Treasurer over the past 20 years.

If the District chose to fund the net present value over three years, it could do so by making annual deposits of $1,472,000 into the Capital Replacement Fund in the years 2019, 2020 and 2021.

Alternatively, if the District chose to fund the net present value over four years, it could do so by making annual deposits of $1,116,000 into the Capital Replacement Fund in the years 2019, 2020, 2021 and 2022.

It is noted that any new capital assets that are added to the District's inventory in the future would need to be added to the Capital Asset Replacement Schedule, and the Net Present Value Analysis/Reserve Fund Strategy would need to be rerun at regular intervals.

C. Cash Flow Analysis

The Cash Flow Analysis is based on the Net Present Value Analysis. It provides the annual flow of funds in the Capital Replacement Fund, under three different scenarios. Under the three scenarios, initial capital replacement reserve deposits over one, three, or four years are assumed, plus 2.26% annual interest on the fund balance over 20 years, less capital asset expenditures over 20 years, resulting in a $0 Capital Replacement Fund balance at the end of 20 years. The Cash Flow Analysis is provided to confirm that annual funding is adequate for the replacement of the existing capital assets under the Net Present Value/Reserve Fund Strategy, based on the assumptions described in this Report. However, it is noted that the analysis is interest rate sensitive. While the interest rates have averaged 2.26% over the past 20 years, the rates fluctuate over time. If interest rates trend low for an extended period of time or do not achieve the long-term 2.26% average, the initial Capital Reserve Fund deposits will not be sufficient to fully fund the replacement of all capital assets.

Under the first scenario, as presented in **Table IV-3**, below, the District would make a one-time deposit of $4,319,711, to the Capital Replacement Fund in 2019, using approximately $500,000 in funds from the Repair and Replacement Fund and from other available funds.

Table IV-3: Scenario 1: Cash Flow Analysis/Capital Reserve Fund
Using a One-Time Cash Deposit of $4,319,711

Year	Beginning Fund Balance	Plus: Interest Income (2.26%)	Less: Capital Expense	Ending Fund Balance
2019	$4,319,711	$97,625	($74,000)	$4,343,336
2020	$4,343,336	$98,159	($386,000)	$4,055,495
2021	$4,055,495	$91,654	($185,000)	$3,962,150
2022	$3,962,150	$89,545	($313,000)	$3,738,694
2023	$3,738,694	$84,494	($83,000)	$3,740,189
2024	$3,740,189	$84,528	($164,000)	$3,660,717
2025	$3,660,717	$82,732	($440,000)	$3,303,449
2026	$3,303,449	$74,658	($241,000)	$3,137,107
2027	$3,137,107	$70,899	($407,000)	$2,801,006
2028	$2,801,006	$63,303	($66,000)	$2,798,308
2029	$2,798,308	$63,242	($219,000)	$2,642,550
2030	$2,642,550	$59,722	($95,000)	$2,607,272

Year	Beginning Fund Balance	Plus: Interest Income (2.26%)	Less: Capital Expense	Ending Fund Balance
2031	$2,607,272	$58,924	($205,000)	$2,461,196
2032	$2,461,196	$55,623	($411,000)	$2,105,819
2033	$2,105,819	$47,592	($97,000)	$2,056,411
2034	$2,056.411	$46,475	($378,000)	$1,724,886
2035	$1,724,886	$38,982	($487,000)	$1,276,868
2036	$1,276,868	$28,857	($215,000)	$1,090,725
2037	$1,090,725	$24,650	($404,000)	$711,376
2038	$711,376	$16,077	($482,000)	$245,453
2039	$245,453	$5,547	($251,000)	$ - 0 -

Under the second scenario, as presented in **Table IV-4,** below, the District would make annual deposits of $1,472,000 in 2019, 2020 and 2021 into the Capital Replacement Fund, using approximately $500,000 in funds available from the Repair and Replacement Fund and other available funds.

Table IV-4: Scenario 2: Cash Flow Analysis/Capital Reserve Fund Using Three Annual Deposits

Year	Beginning Fund Balance	Deposits	Plus: Interest Income (2.26%)	Less: Capital Expense	Ending Fund Balance
2019	$ - 0 -	$1,472,000	$33,267	($74,000)	$1,431,267
2020	$1,431,267	$1,472,000	$65,614	($386,000)	$2,582,881
2021	$2,582,881	$1,472,615	$91,654	($185,000)	$3,962,150
2022	$3,962,150		$89,545	($313,000)	$3,738,695
2023	$3,738,695		$84,495	($83,000)	$3,740,189
2024	$3,740,189		$84,528	($164,000)	$3,660,718
2025	$3,660,718		$82,732	($440,000)	$3,303,450
2026	$3,303,450		$74,658	($241,000)	$3,137,108
2027	$3,137,108		$70,899	($407,000)	$2,801,006
2028	$2,801,006		$63,303	($66,000)	$2,798,309
2029	$2,798,309		$63,242	($219,000)	$2,642,551
2030	$2,642,551		$59,722	($95,000)	$2,607,273
2031	$2,607,273		$58,924	($205,000)	$2,461,197
2032	$2,461,197		$55,623	($411,000)	$2,105,820
2033	$2,105,820		$47,592	($97,000)	$2,056,412
2034	$2,056,412		$46,475	($378,000)	$1,724,886
2035	$1,724,886		$38,982	($487,000)	$1,276,869
2036	$1,276,869		$28,857	($215,000)	$1,090,726
2037	$1,090,726		$24,650	($404,000)	$711,377
2038	$711,377		$16,077	($482,000)	$245,454
2039	$245,454		$5,547	($251,000)	$ 1

Under the third scenario, as presented in **Table IV-5,** below, the District would make annual deposits of approximately $1,116,000 in 2019, 2020, 2021 and 2022 into the Capital Replacement Fund, using approximately $500,000 in funds available from the Repair and Replacement Fund and other available funds.

Table IV-5: Scenario 3: Cash Flow Analysis/Capital Reserve Fund Using Four Annual Deposits

Year	Beginning Fund Balance	Deposits	Plus: Interest Income (2.26%)	Less: Capital Expense	Ending Fund Balance
2019	$ - 0 -	$1,116,000	$25,222	($74,000)	$1,067,222
2020	$1,067,222	$1,116,000	$49,341	($386,000)	$1,846,562
2021	$1,846,562	$1,116,807	$66.972	($185,000)	$2,845,342
2022	$2,845,342	$1,116,808	$89,545	($313,000)	$3,738,694
2023	$3,738,694		$84,494	($83,000)	$3,740,189
2024	$3,740,189		$84,528	($164,000)	$3,660,717
2025	$3,660,717		$82,732	($440,000)	$3,303,449
2026	$3,303,449		$74,658	($241,000)	$3,137,107
2027	$3,137,107		$70,899	($407,000)	$2,801,006
2028	$2,801,006		$63,303	($66,000)	$2,798,308
2029	$2,798,308		$63,242	($219,000)	$2,642,550
2030	$2,642,550		$59,722	($95,000)	$2,607,272
2031	$2,607,272		$58,924	($205,000)	$2,461,196
2032	$2,461,196		$55,623	($411,000)	$2,105,819
2033	$2,105,819		$47,592	($97,000)	$2,056,411
2034	$2,056,411		$46,475	($378,000)	$1,724,886
2035	$1,724,886		$38,982	($487,000)	$1,276,868
2036	$1,276,868		$28,857	($215,000)	$1,090,725
2037	$1,090,725		$24,650	($404,000)	$711,376
2038	$711,376		$16,077	($482,000)	$245,453
2039	$245,453		$5,547	($251,000)	$ - 0 -

IV. SUMMARY, RECOMMENDATIONS AND CONCLUSION

A. Summary

This Capital Asset Replacement Program Analysis and Report provides a current Capital Asset Replacement Schedule and strategies to fund the replacement of the District's existing capital assets over the next 20 years.

The Pay-As-You-Go/Annual Budget Strategy provides the estimated annual inflation-adjusted amount the District would need to budget each year to replace existing capital assets. The range of inflation-adjusted budget requirements over a 20-year period ranges from $66,000 in 2028 to $487,000 in 2035.

The Net Present Value/Reserve Fund Strategy calculates the amount that would need to be set aside today, to be invested and accruing interest at an average of 2.26%, to fund the eventual replacement of all of the District's existing capital assets over the next 20 years should the District decide to fund the entire amount at one time. The Net Present Value/Reserve Fund Strategy amount that should be set aside in the Capital Replacement fund is $4,319,711.

The Cash Flow Analysis, based on the Net Present Value/Reserve Fund Strategy, demonstrates that adequate funding would be available, assuming that a deposit of

$4,319,711 is made into the Capital Replacement Fund, with interest accruing on that deposit at 2.26% annually, and that capital assets are replaced at the replacement costs and in the replacement years identified in this Report. The Cash Flow Analysis also shows that adequate funding would be available if, instead, annual deposits of $1,472,000 were made in the years 2019, 2020 and 2021, or if annual payments of $1,116,000 were made in the years 2019, 2020, 2021 and 2022.

There are several variables and scenarios under which these analyses and strategies would need to be updated and revised. These would include, at a minimum:

- Capital assets are not replaced based on the Capital Asset Replacement Schedule;
- Capital assets are replaced at inflation-adjusted costs that differ from this Report's estimated capital asset replacement costs;
- Additional capital assets not currently on the Capital Asset Replacement Schedule are acquired and replaced; or
- Interest rates remain low for an extended period of time and do not increase reasonably early in the 20-year period to achieve the long-term 2.26% average.

Therefore, as the District replaces existing capital assets or acquires new capital assets, it should update the Capital Asset Replacement Schedule. In addition, the District should periodically review and update the Pay-As-You-Go and Net Present Value Analyses to ensure that adequate funds are being set aside for capital asset replacement.

B. Recommendations

<u>Recommendation 1</u>: MRG recommends the Net Present Value/Reserve Fund Strategy with payments over either three or four years. This would require either annual deposits of $1,472,000 in years 2019, 2020 and 2021; or annual deposits of $1,116,000 in years 2019, 2020, 2021 and 2022.

The District has previously and prudently established a Capital Repair and Replacement Fund. In addition, the District has other reserves, and currently has a significant positive operating margin that could be used to fund the Capital Replacement Fund. MRG does not recommend the Pay-As-You-Go/Annual Budget Strategy, since it would require an uneven annual budgetary commitment, ranging from $66,000 in 2028 to $487,000 in 2035 in inflation-adjusted dollars. MRG also does not recommend the Net Present Value/Reserve Fund Strategy with an up-front one-time deposit of $4,319,711 in 2019, because it appears that insufficient funds are available at this time.

<u>Recommendation 2</u>: MRG recommends that the District update the Capital Asset Replacement Schedule as it acquires new assets or replaces existing assets.

Maintaining an accurate and up-to-date Capital Asset Replacement Schedule will make future analyses much simpler to perform. MRG will provide instructions, separate from this

Report, to assist the District in establishing a system for updating the Capital Asset Replacement Schedule.

Recommendation 3: MRG recommends that the District update the Pay-As-You-Go and Net Present Value Analyses at approximately five-year intervals to ensure that adequate funds are being set aside for capital asset replacement.

Regular updates to the Pay-As-You-Go and Net Present Value Analyses will ensure that the District can adjust its funding needs as new assets are acquired, existing assets are replaced, economic conditions evolve, and asset replacements outside the initial 20-year period come due. MRG will provide instructions, separate from this Report, to assist the District in establishing a system for updating the analyses.

C. Conclusion

Implementation of the recommended approach to funding the Net Present Value/Reserve Fund Strategy on a three- or four-year basis, with periodic reviews, will ensure adequate funds are available to replace the items currently listed on the Capital Asset Replacement Schedule. It is important to note that as both new and replacement items are added to the list there will be a need for the District to begin to add funds to the Reserve Fund to make certain there is adequate funding for their replacement.

A five-year review and replacement fund analysis will ensure the District identifies the future replacement costs for the new and replacement items. MRG is available to assist the District in creating a review schedule and protocol to make certain the Capital Asset Replacement Schedule is maintained adequately to meet the District's future needs.

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT

Capital Asset Replacement Program
Analysis and Report

Exhibits

YEAR PURCHASED / IN SERVICE	ASSET DESCRIPTION	SERVICE LIFE	ORIGINAL ACQUISITION COST	CURRENT REPLACEMENT COST	REPLACEMENT COST SOURCE
	BUILDING MAJOR SYSTEMS	Future Cost Based on Current Cost Plus 2.92% Annual ENR-BCI			
2005	HVAC (small)	20	n/a	$8,000	ALCO HVAC
2005	HVAC (small)	20	n/a	$8,000	ALCO HVAC
2005	HVAC (medium)	20	n/a	$9,000	ALCO HVAC
2005	HVAC (medium)	20	n/a	$9,000	ALCO HVAC
2005	HVAC (medium)	20	n/a	$9,000	ALCO HVAC
2005	HVAC (large)	20	n/a	$10,000	ALCO HVAC
2009	Electric Gate	20	$10,275	$14,000	Cost + ENR-BCI
2011	Roof Gutter System	15	$17,075	$21,000	Cost + ENR-BCI
2015	Parking Lot Asphalt Pavement	20	$77,668	$87,000	Cost + ENR-BCI
2005	Parking Lot Concrete Pavement (5,200 s. f.)	40	n/a	$104,000	MRG
2015	Roof - Shop	20	$50,608	$57,000	Cost + ENR-BCI
2018	Roof - Office	20	$107,000	$133,000	District
1990	Public Ed Shed	35	n/a	$8,000	MRG
1985	Wash Rack - Pad and Separator	40	$8,000	$50,000	Hydro Tech/MRG
1985	Parking Structure Roof (6,400 s.f.)	35	n/a	$96,000	MRG

YEAR PURCHASED / IN SERVICE	ASSET DESCRIPTION	SERVICE LIFE	ORIGINAL ACQUISITION COST	CURRENT REPLACEMENT COST	REPLACEMENT COST SOURCE
	VEHICLES	Future Cost Based on Current Cost Plus 2.79% Annual CPI			
2003	2003 Ford E-150 Cargo Van 4X2	20	$27,070	$42,000	Cost + CPI
2005	2005 Jeep Wrangler 4X4 RHD (White)	20	$30,140	$44,000	Cost + CPI
2005	2005 Jeep Wrangler 4X4 RHD (Red)	20	$30,140	$44,000	Cost + CPI
2019	2008 Ford Ranger 4DR 4X4	10	$22,530	$37,000	District
2009	2009 Ford F-150 4X4	12	$29,495	$39,000	Cost + CPI
2019	2009 Ford Ranger 4DR 4X2	10	$29,225	$37,000	District
2011	2011 Ford Ranger 4DR 4X4	10	$22,899	$37,000	District
2011	2011 Ford F-150 4X4	12	$29,582	$37,000	Cost + CPI
2011	2011 Ford Ranger 4DR 4X2	10	$22,899	$37,000	District
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000	Cost + CPI
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000	Cost + CPI
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000	Cost + CPI
2014	2013 Jeep Wrangler 4X4 RHD	20	$34,909	$40,000	Cost + CPI
2014	2014 Ford F-150 4X4 XTRA Cab	12	$30,783	$35,000	Cost + CPI
2014	2014 Ford F-150 4X4 XTRA Cab	12	$26,783	$31,000	Cost + CPI
2014	2014 Ford Fusion Hybrid	12	$28,146	$32,000	Cost + CPI
2015	2014 Ford F-150 4X2 Long Bed	12	$26,984	$30,000	Cost + CPI
2015	2015 Nissan Frontier 4X4 XTRA Cab	12	$26,690	$30,000	Cost + CPI
2017	2017 GMC Canyon 4X4	12	$37,000	$39,000	Cost + CPI
2017	2017 GMC Canyon 4X4	12	$37,000	$39,000	Cost + CPI
2018	2018 GMC Canyon 4X4	12	$37,910	$39,000	Cost + CPI
2011	Argo All-Terrain	10	$28,519	$30,000	Argo Advent.
2012	Argo All-Terrain	10	$23,949	$30,000	Argo Advent.
2014	Argo All-Terrain	10	$27,428	$30,000	Argo Advent.
2015	Argo All-Terrain	10	$27,687	$30,000	Argo Advent.

YEAR PURCHASED / IN SERVICE	ASSET DESCRIPTION	SERVICE LIFE	ORIGINAL ACQUISITION COST	CURRENT REPLACEMENT COST	REPLACEMENT COST SOURCE
	SHOP EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI			
2016	Mar-Len, Pressure Water System	5	$6,875	$8,000	Mar-Len Supply
2000	Vehicle Lift	25	$10,000	$15,000	Ferris Hoist
2000	Tire Balancer	25	n/a	$5,000	District
2000	Tire Changer	25	n/a	$5,000	District
2000	Two Ton Crane Hoist	25	$5,000	$8,000	Ferris Hoist
1991	Oil Tank (BVA) and Slab	35	n/a	$50,000	District/MRG
2005	Mozzie Electric ULV	15	$8,000	$15,000	Leading Edge
1985	Leco Gas ULV/Larvicidal Rig	35	$7,000	$15,000	Leading Edge
2018	London Fogger	10	$17,000	$17,000	District

YEAR PURCHASED / IN SERVICE	ASSET DESCRIPTION	SERVICE LIFE	ORIGINAL ACQUISITION COST	CURRENT REPLACEMENT COST	REPLACEMENT COST SOURCE
	FISH EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI			
1990	Fish Tank (2,400 gal)***	35	n/a	$24,000	Sac. Koi
2002	Filtration (large)	20	n/a	$12,000	Sac. Koi
2015	Fish Tank, Sac. Koi (800 gal)	25	$10,827	$12,000	Sac. Koi
2015	Filtration (small)	10	$7,000	$8,000	Sac. Koi
2016	Fish Tank, Sac. Koi (800 gal)	25	$10,469	$12,000	Sac. Koi
	LAB EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI			
2015	Microscope	10	$6,267	$23,000	Fisher Scienbtific
2015	Microscope	10	$6,267	$23,000	Fisher Scienbtific
2015	Lifetech PCR Machine	5	$33,978	$31,000	Fisher Scienbtific
2015	Incubator	8	n/a	$11,000	Fisher Scienbtific
2016	Lifetech Nucleic Acid Isolator	5	$24,511	$25,000	Fisher Scienbtific
2016	Bio Tek Spec Plate Reader	8	$8,828	$11,000	Fisher Scienbtific
2018	Autoclave	10	$7,493	$7,000	District
2018	Minus 80 Freezer	8	$17,720	$17,000	District
2018	Drone	5	$26,820	$27,000	District
	NON-CAPITAL ASSETS	Future Cost Based on Current Cost Plus 2.79% Annual CPI			
2017	Mosquito District Database	5	$233,000	$246,000	Cost + CPI
2005	Painting - Exterior Main Building	15	n/a	$25,000	Shine Painting/MRG
2005	Painting - Interior Main Building	15	n/a	$15,000	Shine Painting/MRG
2005	Painting - Parking Structure	15	n/a	$15,000	Shine Painting/MRG
2005	Flooring - Main Building (7,200 s. f.)	15	n/a	$108,000	MRG
2000	Landscaping	20	n/a	$15,000	MRG

*** Fish Tank (2,400 gal) will be replaced by two Fish Tanks (800 gal) according to District

Alameda County Mosquito Abatement District
Assets Not Included in Asset Replacement Schedule

Exhibit B

Municipal Resource Group LLC
Februry 2019

YEAR PURCHASED / IN SERVICE	ASSET DESCRIPTION	REASON
	<u>BUILDINGS</u>	
1985/2005	Main Building	buildings excluded by policy
2018	Pesticide Shed	buildings excluded by policy
Unknown	Parking Structures	buildings excluded by policy
	<u>BUILDING MAJOR SYSTEMS</u>	
2014	CCTV	will not be replaced
	<u>VEHICLES</u>	
2005	2005 Ford F-150 4X4	will not be replaced (spare vehicle)

Alameda County Mosquito Abatement District
Projected Capital Asset Replacement Costs

Exhibit C

Municipal Resource Group LLC
February 2019

YEAR PURCHASED / IN SERVICE	ASSET DESCRIPTION	SERVICE LIFE	ORIGINAL ACQUISITION COST	CURRENT REPLACEMENT COST	REPLACEMENT COST SOURCE	REPLACEMENT YEAR 2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
	BUILDING MAJOR SYSTEMS	Future Cost Based on Current Cost Plus 2.92% Annual ENR-BCI																						
2005	HVAC (small)	20	n/a	$8,000	ALCO HVAC							$10,000												
2005	HVAC (small)	20	n/a	$8,000	ALCO HVAC							$10,000												
2005	HVAC (medium)	20	n/a	$9,000	ALCO HVAC							$11,000												
2005	HVAC (medium)	20	n/a	$9,000	ALCO HVAC							$11,000												
2005	HVAC (medium)	20	n/a	$9,000	ALCO HVAC							$11,000												
2005	HVAC (large)	20	n/a	$10,000	ALCO HVAC							$12,000												
2009	Electric Gate	20	$10,275	$14,000	Cost + ENR-BCI											$19,000								
2011	Roof Gutter System	15	$17,075	$21,000	Cost + ENR-BCI									$26,000										
2015	Parking Lot Asphalt Pavement	20	$77,668	$87,000	Cost + ENR-BCI																	$138,000		
2005	Parking Lot Concrete Pavement (5,200 s. f.)	40	n/a	$104,000	MRG																			
2015	Roof Installation - Shop	20	$50,608	$57,000	Cost + ENR-BCI																	$90,000		
2018	Roof Installation - Office	20	$107,000	$133,000	District																			
1990	Public Ed Shed	35	n/a	$8,000	MRG							$10,000												
1985	Wash Rack - Pad and Separator	40	$8,000	$50,000	Hydro Tech/MRG							$59,000												
1985	Parking Structure Roof (6,400 s.f.)	35	n/a	$96,000	MRG		$99,000																	
	VEHICLES	Future Cost Based on Current Cost Plus 2.79% Annual CPI																						
2003	2003 Ford E-150 Cargo Van 4X2	20	$27,070	$42,000	Cost + CPI		$43,000																	
2005	2005 Jeep Wrangler 4X4 RHD (White)	20	$30,140	$44,000	Cost + CPI							$52,000												
2005	2005 Jeep Wrangler 4X4 RHD (Red)	20	$30,140	$44,000	Cost + CPI							$52,000												
2019	2008 Ford Ranger 4DR 4X4	10	$22,530	$37,000	District	$37,000										$49,000								
2009	2009 Ford F-150 4X4	12	$29,495	$39,000	Cost + CPI			$41,000												$57,000				
2019	2009 Ford Ranger 4DR 4X2	10	$29,225	$37,000	District	$37,000										$49,000								
2011	2011 Ford Ranger 4DR 4X4	10	$22,899	$37,000	District			$39,000										$51,000						
2011	2011 Ford F-150 4X4	12	$29,582	$37,000	Cost + CPI					$41,000												$57,000		
2011	2011 Ford Ranger 4DR 4X2	10	$22,899	$37,000	District			$39,000										$51,000						
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000	Cost + CPI						$39,000												$54,000	
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000	Cost + CPI						$39,000												$54,000	
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000	Cost + CPI						$39,000												$54,000	
2014	2013 Jeep Wrangler 4X4 RHD	20	$34,909	$40,000	Cost + CPI																$60,000			
2014	2014 Ford F-150 4X4 XTRA Cab	12	$30,783	$35,000	Cost + CPI								$42,000											
2014	2014 Ford F-150 4X4X TRA Cab	12	$26,783	$31,000	Cost + CPI								$38,000											
2014	2014 Ford Fusion Hybrid	12	$28,146	$32,000	Cost + CPI								$39,000											
2015	2014 Ford F-150 4X2 Long Bed	12	$26,984	$30,000	Cost + CPI									$37,000										
2015	2015 Nissan Frontier 4X4 XTRA Cab	12	$26,690	$30,000	Cost + CPI									$37,000										
2017	2017 GMC Canyon 4X4	12	$37,000	$39,000	Cost + CPI											$51,000								
2017	2017 GMC Canyon 4X4	12	$37,000	$39,000	Cost + CPI											$51,000								
2018	2018 GMC Canyon 4X4	12	$37,910	$39,000	Cost + CPI												$53,000							
2011	Argo All Terrain Vehicle	10	$28,519	$30,000	Argo Advent.			$32,000										$42,000						
2012	Argo All Terrain Vehicle	10	$23,949	$30,000	Argo Advent.				$33,000										$43,000					
2014	Argo All Terrain Vehicle	10	$27,428	$30,000	Argo Advent.						$34,000										$45,000			
2015	Argo All Terrain Vehicle	10	$27,687	$30,000	Argo Advent.							$35,000										$47,000		
	SHOP EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI																						
2016	Mar-Len, Pressure Water System	5	$6,875	$8,000	Mar-Len Supply			$8,000					$10,000					$11,000					$13,000	
2000	Vehicle Lift	25	$10,000	$15,000	Ferris Hoist							$18,000												
2000	Tire Balancer	25	n/a	$5,000	District							$6,000												
2000	Tire Changer	25	n/a	$5,000	District							$6,000												
2000	Two Ton Crane Hoist	25	$5,000	$8,000	Ferris Hoist							$9,000												
1991	Oil Tank (BVA) and Slab	35	n/a	$50,000	District/MRG								$61,000											
2005	Mozzie Electric ULV	15	$8,000	$15,000	Leading Edge		$15,000															$23,000		
1985	Leco Gas ULV/Larvicidal Rig	35	$7,000	$15,000	Leading Edge		$15,000																	
2018	London Fogger	10	$17,000	$17,000	District										$22,000									
	FISH EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI																						
1990	Fish Tank (2,400 gal)	35	n/a	$24,000	Sac. Koi							$28,000												
2002	Filtration (large)	20	n/a	$12,000	Sac. Koi				$13,000															
2015	Fish Tank, Sac. Koi (800 gal)	25	$10,827	$12,000	Sac. Koi																			
2015	Filtration (small)	10	$7,000	$8,000	Sac. Koi							$9,000										$12,000		
2016	Fish Tank, Sac. Koi (800 gal)	25	$10,469	$12,000	Sac. Koi																			
	LAB EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI																						
2015	Microscope	10	$6,267	$23,000	Fisher Scienbtific							$27,000										$36,000		
2015	Microscope	10	$6,267	$23,000	Fisher Scienbtific							$27,000										$36,000		
2015	Lifetech PCR Machine	5	$33,978	$31,000	Fisher Scienbtific		$32,000					$37,000					$42,000					$48,000		
2015	Incubator	8	n/a	$11,000	Fisher Scienbtific					$12,000								$15,000						
2016	Lifetech Nucleic Acid Isolator	5	$24,511	$25,000	Fisher Scienbtific			$26,000					$30,000					$35,000					$40,000	
2016	Bio Tek Spec Plate Reader	8	$8,828	$11,000	Fisher Scienbtific						$13,000								$16,000					
2018	Autoclave	10	$7,493	$7,000	District										$9,000									
2018	Minus 80 Freezer	8	$17,720	$17,000	District								$21,000								$26,000			
2018	Drone	5	$26,620	$27,000	District					$30,000					$35,000					$40,000				
	NON-CAPITAL ASSETS	Future Cost Based on Current Cost Plus 2.79% Annual CPI																						
2017	Mosquito District Database	5	$233,000	$246,000	Cost + CPI				$267,000					$307,000					$352,000					$404,000
2005	Painting - Exterior Main Building	15	n/a	$25,000	Shine Painting/MRG		$26,000														$38,000			
2005	Painting - Interior Main Building	15	n/a	$15,000	Shine Painting/MRG		$15,000														$23,000			
2005	Painting - Parking Structure	15	n/a	$15,000	Shine Painting/MRG		$15,000														$23,000			
2005	Flooring - Main Building (7,200 s. f.)	15	n/a	$108,000	MRG		$111,000														$163,000			
2000	Landscaping	20	n/a	$15,000	MRG		$15,000																	
	TOTAL, ALL ASSETS (Inflation-Adjusted Dollars)					$74,000	$386,000	$185,000	$313,000	$83,000	$164,000	$440,000	$241,000	$407,000	$66,000	$219,000	$95,000	$205,000	$411,000	$97,000	$378,000	$487,000	$215,000	$404,000

YEAR PURCHASED / IN SERVICE	ASSET DESCRIPTION	SERVICE LIFE	ORIGINAL ACQUISITION COST	CURRENT REPLACEMENT COST	2038	2039
	BUILDING MAJOR SYSTEMS	Future Cost Based on Current Cost Plus 2.92% Annual ENR-BCI				
2005	HVAC (small)	20	n/a	$8,000		
2005	HVAC (small)	20	n/a	$8,000		
2005	HVAC (medium)	20	n/a	$9,000		
2005	HVAC (medium)	20	n/a	$9,000		
2005	HVAC (medium)	20	n/a	$9,000		
2005	HVAC (large)	20	n/a	$10,000		
2009	Electric Gate	20	$10,275	$14,000		
2011	Roof Gutter System	15	$17,075	$21,000		
2015	Parking Lot Asphalt Pavement	20	$77,668	$87,000		
2005	Parking Lot Concrete Pavement (5,200 s. f.)	40	n/a	$104,000		
2015	Roof Installation - Shop	20	$50,608	$57,000		
2018	Roof Installation - Office	20	$107,000	$133,000	$230,000	
1990	Public Ed Shed	35	n/a	$8,000		
1985	Wash Rack - Pad and Separator	40	$8,000	$50,000		
1985	Parking Structure Roof (6,400 s.f.)	35	n/a	$96,000		
	VEHICLES	Future Cost Based on Current Cost Plus 2.79% Annual CPI				
2003	2003 Ford E-150 Cargo Van 4X2	20	$27,070	$42,000		
2005	2005 Jeep Wrangler 4X4 RHD (White)	20	$30,140	$44,000		
2005	2005 Jeep Wrangler 4X4 RHD (Red)	20	$30,140	$44,000		
2019	2008 Ford Ranger 4DR 4X4	10	$22,530	$37,000		$64,000
2009	2009 Ford F-150 4X4	12	$29,495	$39,000		
2019	2009 Ford Ranger 4DR 4X2	10	$29,225	$37,000		$64,000
2011	2011 Ford Ranger 4DR 4X4	10	$22,899	$37,000		
2011	2011 Ford F-150 4X4	12	$29,582	$37,000		
2011	2011 Ford Ranger 4DR 4X2	10	$22,899	$37,000		
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000		
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000		
2012	2012 Ford F-150 4X4 Long Bed	12	$27,764	$34,000		
2014	2013 Jeep Wrangler 4X4 RHD	20	$34,909	$40,000		
2014	2014 Ford F-150 4X4 XTRA Cab	12	$30,783	$35,000	$59,000	
2014	2014 Ford F-150 4X4X TRA Cab	12	$26,783	$31,000	$52,000	
2014	2014 Ford Fusion Hybrid	12	$28,146	$32,000	$54,000	
2015	2014 Ford F-150 4X2 Long Bed	12	$26,984	$30,000		$52,000
2015	2015 Nissan Frontier 4X4 XTRA Cab	12	$26,690	$30,000		$52,000
2017	2017 GMC Canyon 4X4	12	$37,000	$39,000		
2017	2017 GMC Canyon 4X4	12	$37,000	$39,000		
2018	2018 GMC Canyon 4X4	12	$37,910	$39,000		
2011	Argo All Terrain Vehicle	10	$28,519	$30,000		
2012	Argo All Terrain Vehicle	10	$23,949	$30,000		
2014	Argo All Terrain Vehicle	10	$27,428	$30,000		
2015	Argo All Terrain Vehicle	10	$27,687	$30,000		
	SHOP EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI				
2016	Mar-Len, Pressure Water System	5	$6,875	$8,000		
2000	Vehicle Lift	25	$10,000	$15,000		
2000	Tire Balancer	25	n/a	$5,000		
2000	Tire Changer	25	n/a	$5,000		
2000	Two Ton Crane Hoist	25	$5,000	$8,000		
1991	Oil Tank (BVA) and Slab	35	n/a	$50,000		
2005	Mozzie Electric ULV	15	$8,000	$15,000		
1985	Leco Gas ULV/Larvicidal Rig	35	$7,000	$15,000		
2018	London Fogger	10	$17,000	$17,000	$29,000	
	FISH EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI				
1990	Fish Tank (2,400 gal)	35	n/a	$24,000		
2002	Filtration (large)	20	n/a	$12,000		
2015	Fish Tank, Sac. Koi (800 gal)	25	$10,827	$12,000		
2015	Filtration (small)	10	$7,000	$8,000		
2016	Fish Tank, Sac. Koi (800 gal)	25	$10,469	$12,000		
	LAB EQUIPMENT	Future Cost Based on Current Cost Plus 2.79% Annual CPI				
2015	Microscope	10	$6,267	$23,000		
2015	Microscope	10	$6,267	$23,000		
2015	Lifetech PCR Machine	5	$33,978	$31,000		
2015	Incubator	8	n/a	$11,000		$19,000
2016	Lifetech Nucleic Acid Isolator	5	$24,511	$25,000		
2016	Bio Tek Spec Plate Reader	8	$8,828	$11,000		
2018	Autoclave	10	$7,493	$7,000	$12,000	
2018	Minus 80 Freezer	8	$17,720	$17,000		
2018	Drone	5	$26,820	$27,000	$46,000	
	NON-CAPITAL ASSETS	Future Cost Based on Current Cost Plus 2.79% Annual CPI				
2017	Mosquito District Database	5	$233,000	$246,000		
2005	Painting - Exterior Main Building	15	n/a	$25,000		
2005	Painting - Interior Main Building	15	n/a	$15,000		
2005	Painting - Parking Structure	15	n/a	$15,000		
2005	Flooring - Main Building (7,200 s. f.)	15	n/a	$108,000		
2000	Landscaping	20	n/a	$15,000		
	TOTAL, ALL ASSETS (Inflation-Adjusted Dollars)				$482,000	$251,000

CHAPTER 200. FINANCIAL

Section 201. Expenditures

By resolution of the Board of Trustees, the Board established the following policy to more efficiently review and approve District expenditures.

201.1 The District budget will be reviewed, approved, and modified as necessary by the Board, consistent with existing District policies, procedures, and state law.

201.2 The Board authorizes the General Manager to issue warrants that are consistent with the objectives of the budget.

201.3 The General Manager shall act as Purchasing Agent unless the Board of Trustees designates another employee. The General Manager may delegate purchasing authority to other personnel in accordance with work functions and operational feasibility.

201.4 Any designated Purchasing Agent, within the intent and limits of the District budget, can purchase all materials, supplies, equipment, furnishings, and other property for the District. No purchase of property by any person other than the General Manager or their designated Purchasing Agent shall be binding upon the District or constitute a lawful charge against any District funds.

Section 202. Bidding Policies

202.1 Less than $5,000. Bidding is not required when the item or service to be purchased is less than $4,999 in value.

202.2 $5,000 to $15,000. Informal bidding shall be required when the item or service to be purchased costs between $5,000 and $15,000. Such bidding may be accomplished by written request for bids sent to selected bidders; by telephone survey of prices; by electronic requests for bids or surveys of prices; or by such other efforts directed towards obtaining a minimum of three bids. The Purchasing Agent shall award the bid to the lowest responsible bidder, unless the Purchasing Agent determines that the public interest requires a different action. The Board will receive a report of all purchases in this cost range. The Board of Trustees authorizes the Purchasing Agent to purchase items described by this policy, provided they do not exceed $15,000 and do not exceed the District's approved budget amount for the item or service in consideration.

202.3 Above $15,000. When the cost of the item or service to be purchased exceeds $15,000, formal bidding shall be required. Such bidding process shall require that a notice be posted at the District office at least ten (10) days prior to the bid opening and that formal requests for bids be solicited either by newspaper publication, trade journal publication, use of a bid service, or other reasonable solicitation. Solicited sealed bids shall be reviewed by the Board and awarded to the lowest responsible bidder based on the Purchasing Agent's analysis and recommendation, unless the Board makes a determination that it would be in the public's best interest to do otherwise. All bids will be retained as part of the District's official record per District record retention policy. See Appendix 800-1.

202.4 Bidding is Not Required for the following:

(a) When an emergency situation exists – Designation of an emergency shall be determined General Manager with the consent of the Board President or available Board officer;

(b) When requiring the services of specialized professionals, such as scientists, engineers, attorneys, or accountants;

(c) When the item or service can only be obtained from one vendor; or

(d) When the public interest may otherwise require that bidding be dispensed with, provided that the facts constituting the basis for the exception are documented by the Board or General Manager as appropriate. Documentation for exceptions shall be retained as part of the District's official records for at least two years.

Any warrant issued under this Section 202.4 shall indicate on the warrant list the specific exemption relied upon.

202.5 The General Manager shall first review all bids received to determine if they are responsive to the bid request. The General Manager is authorized to waive minor deviations and irregularities in the bids.

202.6 The General Manager shall also have the authority to inspect and test products for quality and fitness described or identified in any bid to determine its appropriateness, and further, may investigate the character and reputation of any bidder to determine responsibility and capability. The General Manager's analysis of these factors shall be used in the determination and recommendation of the lowest responsible bidder.

202.7 The District contract shall be awarded to the lowest responsible bidder, except as otherwise provided above. When feasible, preference may be given to Alameda County vendors. If two or more bids are substantially identical, the District may accept any such bid. In its sole discretion, the District may reject any and all bids received, and it may re-advertise for additional bids, have District staff perform such work, or negotiate with the lowest bidder.

Section 203. Contracts

203.1 The General Manager is hereby authorized to sign and enter into contracts on the District's behalf when the dollar value of the contract is $25,000 or less.

203.2 The Board authorizes the General Manager to enter into contracts that are consistent with the objectives of the budget upon receiving approval from the Board.

Section 204. Warrants

204.1 The Board shall review warrants at least monthly to ensure expenditures are within the limitations of the budget, and to raise questions, when appropriate, about any of the listed expenditures.

204.2 The Board hereby authorizes the withdrawal of funds from the general fund upon a warrant signed by one member of the Board and the General Manager, or his/ her designee.

204.3. In an emergency situation where there is not sufficient time to secure prior authorization from the Board, the Board hereby authorizes the General Manager emergency powers to withdraw funds up to $5000, bypassing the dual signature requirement, as noted in Section 204.2 from the District's transfer bank only. If emergency funds are withdrawn, the Board shall be notified immediately, or as reasonably possible, and the issue shall be placed on the next Board agenda for discussion.

Section 205. Meeting Stipends

205.1 Consistent with Health and Safety Code section 2030, the members of the Board of Trustees may receive their actual and necessary traveling and incidental expenses incurred while on official business. In lieu of paying for actual expenses, the Board of Trustees may by resolution provide for the allowance and payment to each Trustee a sum not to exceed one hundred dollars ($100) per month for expenses incurred while on official business. A Trustee may waive the payments permitted by this subdivision. Such compensation is in addition to any reimbursement for meals, lodging, travel and expenses consistent with this policy. (Health & Safety Code § 2051.)

205.2 Meetings and Service Subject Monthly In Lieu of Allowance. To be entitled to the monthly In Lieu Allowance under this policy, the official business in question must constitute one of the following:

(a) A meeting of the District Board of Trustees within the meaning of Government Code section 54952.2(a);

(b) A meeting of a District committee within the meaning of Government Code section 54952(b);

(c) An advisory body meeting within the meaning of Government Code section 54952(b);

(d) A conference within the meaning of Government Code section 54952.2(c)(2);

(e) A meeting of any multi-jurisdictional governmental body on which the General Manager serves as the District's designated representative; or

(f) Any meeting attended or service provided on a given day at the formal request of the District Board of Trustees and for which the District Board of Trustees approves payment of In Lieu of Allowance stipend.

Section 206. Travel and Payment of Expenses While on Official Business

206.1 Travel and Payment of Expenses While on Official Business will be approved if:

(a) There is a substantial benefit to the residents of Alameda County

(b) It includes discussion of the community's concerns with local, regional, state, and federal officials;

(c) There is participation in local, regional, state, and national organizations whose activities affect the District;

(d) Educational seminars are attended designed to improve officials' skill and information levels; and

(e) Public service, team building, or leadership is promoted with service to ACMAD.

Section 207. ACMAD Expense Policy

The following policy governs expenditures of District funds and reimbursement of expenses:

207.1 Authorized Expenses. District funds, equipment, supplies (including letterhead), titles, and staff time must only be used for authorized District business. The following types of expenses generally constitute authorized expenses, as long as the other requirements of this policy are met:

(a) Expenses associated with communicating with representatives of regional, state, and national government on District adopted policy positions;

(b) Expenses associated with attending educational seminars designed to improve officials' skill and information levels;

(c) Expenses associated with participating in regional, state and national organizations whose activities affect the District's interests;

(d) Expenses associated with attending District events;

(e) Expenses associated with meetings, such as those listed above for which a meeting stipend is expressly authorized under this policy, or

(f) Expenses associated with legislative and other District-related local, regional, state, and federal agency business, conducted over meals, where each meal expenditure must also comply with the limits and reporting requirements of local, regional, state, and federal law.

207.2 Any expenditures not included in the budget require approval by the District Board of Trustees.

207.3 Examples of personal expenses that the District will not reimburse include, but are not limited to:

(a) The personal portion of any trip;

(b) Political or charitable contributions or events;

(c) Family expenses, including partner's expenses when accompanying official on District-related business, as well as children- or pet-related expenses;

(d) Entertainment expenses, including theater, movies (either in-room or at the theater), sporting events (including gym, massage, and/or golf related expenses), or other cultural events;

(e) Non-mileage personal automobile expenses, including repairs, traffic citations, insurance or gasoline; and

(f) Personal losses incurred while on District business.

Any questions regarding the propriety of a particular type of expense should be resolved by the purchasing agent before the expense is incurred.

207.4 Expense Report Content and Submission Deadline. Expense reports must document that each expense claimed has met the requirements of the policy. For example, if the meeting is with a legislator, the local agency official should explain whose meals were purchased, what issues were discussed and how those relate to the District's adopted legislative positions and priorities. Trustees and employees must submit their expense reports within 30 days of an expense being incurred, accompanied by receipts documenting each expense. Restaurant receipts, in addition to any credit card receipts, are also part of the required documentation. Inability to provide such documentation in a timely fashion may result in the expense being borne by the individual.

207.5 Reports to Governing Board. At the following District Board meeting, each official shall provide a brief oral or written report on meetings or functions attended at District expense. If multiple District representatives attended, a joint report may be provided.

207.6 Compliance with Laws. District officials should keep in mind that some expenditures may be subject to reporting under the Political Reform Act and other laws. All agency expenditures are public records subject to disclosure under the Public Records Act.

207.7 Violation of this Policy. Use of public resources or falsifying expense reports in violation of this policy may result in any or all of the following: (1) loss of reimbursement privileges, (2) demand for restitution to the District, (3) the District's reporting the expenses as Trustee or employee income to state and federal tax authorities, and (4) prosecution for misuse of public resources.

Section 208. Cost Control

To conserve District resources and keep expenses within community standards for public officials, expenditures should adhere to the following guidelines.

208.1 Transportation. District personnel are expected to use the most economical mode and class of transportation reasonably consistent with scheduling needs and cargo space requirements, using the most direct and time-efficient route. In the event that a more expensive transportation mode or route is used, the cost borne by the District will be limited to the cost of the most economical, direct, efficient, and reasonable mode of transportation. District personnel are encouraged to use public transit when available and feasible and to carpool/ride share when several people are traveling to the same event by automobile. Automobile mileage is reimbursable at Internal Revenue Service prevailing rates in effect. These rates are designed to compensate the driver for gasoline, insurance, maintenance, and other expenses associated with operating the vehicle. Parking, tolls, and other similar expenses relating to travel by auto are reimbursable if necessarily incurred in connection with a meeting or function authorized under this policy.

208.2 Lodging. Lodging costs will be reimbursed or paid for by the District when travel on official District business reasonably requires an overnight stay. If such lodging is in connection with a conference, lodging costs should not exceed any group rate published by the conference sponsor for the meeting in question. In any event, lodging expenses should be moderate, taking into account community standards and prevailing lodging costs for the area.

208.3 Meals. Meal expenses and associated gratuities should be moderate, taking into account community standards and the prevailing restaurant costs of the area. A helpful source of guidance is Internal Revenue Service per diem rates for meals and incidental expenses, which include adjustments for higher cost locations. Alcohol/personal bar bills are not an appropriate use of District resources and will not be reimbursed.

208.4 Telephone/Fax/Mobile. Individuals will be reimbursed for actual telephone and fax expenses incurred on District business. Telephone bills should identify which calls were made on District business.

208.5 Airport Parking. Long-term parking should be used for travel exceeding 24 hours.

208.6 Cash Advance Policy. From time to time, it may be necessary for a District representative to request a cash advance to cover anticipated expenses while traveling or doing business on the District's behalf. Such request for an advance should be submitted to the General Manager at least 14 days prior to the need for the advance with the following information:

(a) The purpose of the expenditure(s);

(b) The benefits of such expenditure to the residents of District;

(c) The anticipated amount of the expenditure(s) (for example, actual or expected hotel rates, meal costs, and transportation expenses); and

(d) The dates of the expenditure(s).

Any unused advance must be returned to the District treasury within two business days of the official's return, along with an expense report and receipts documenting how the advance was used in compliance with this expense policy.

208.7 Credit Card Use Policy. The District does not issue credit cards to individual Trustees, but does have credit cards for selected District expenses. Trustees may use the District's credit card for such purposes as airline tickets and hotel reservations by following the same procedures as for cash advances. Receipts documenting expenses incurred on the District credit card and compliance with this policy must be submitted within five business days of use. District credit cards may not be used for personal expenses, even if the Trustee or employee subsequently reimburses the District. Purchasing agents have a credit card. Employees can purchase items approved in the budget. Receipts are given to the Office Assistant or Administrator. The receipts are reconciled to the statements and then recorded to the general ledger. Disbursement goes through the warrant process noted above.

208.8 In the event circumstances should arise appearing to warrant deviation from these policies, the General Manager shall secure the approval of the Board before making any changes.

Section 209. Conference Policy

209.1 Out of State National Mosquito Control Conference. The General Manager or their delegate, trustees, and limited staff may be permitted to attend.

209.2 Mosquito and Vector Control Association of California (MVCAC) Conference - Outside of the Bay Area. The General Manager may require certain staff to attend.. Any additional staff may request approval, and this approval will be based on workload and conference involvement.

209.3 MVCAC - Within the Bay Area. The General Manager may select any number of District personnel to attend such sessions as he or she may designate from which, in their opinion, the employees and the District would derive the most benefit.

209.4 MVCAC Seminars and Workshops. Trustees are encouraged to represent the District at MVCAC seminars, workshops, committee meetings and regional meetings. Approved cost for registration, travel, lodging, and meal will be reimbursed.

Section 210. Loss or Damage to Personal Property

The District will not be responsible for loss or damage to personal items when the loss or damage incurred was not work-related. Each occurrence of loss or damage to the employee's personal property will be reviewed by the Board on a case-by-case basis.

Section 211. Policy for Disposition of Fixed Assets

211.1 Fixed assets of $5,000 or greater current value are considered Capital Assets, have an expected useful life of three years or greater, and must have Board approval before disposal. Disposal of other fixed assets must be approved by the General Manager.

211.2 Disposition of fixed assets may be initiated by a Purchasing Agent. A disposal form must be completed by the initiator and approved by the General Manager and Board, consistent with District policy, before the item is disposed of, salvaged or sold. Money received through the disposition of fixed assets shall be deposited in the Repair and Replace Fund.

Section 212. Policy on Petty Cash

The District shall maintain a petty cash fund of $500 to be used for incidental District expenditures. All reimbursements to employees must be approved by the General Manager, and the transaction documented by pre-numbered voucher with attached receipt of purchase and signed employee request for reimbursement form. The fund disbursements shall be reviewed by the Board.

Section 213. Fraud Policy

213.1 Designated positions as defined in appendix 100-1 are responsible for the detection and prevention of fraud, misappropriations, and other irregularities. “Fraud” is defined as the intentional, false representation, or concealment of a material fact for the purpose of inducing another to act upon it to their injury. Those defined as a designated position will be familiar with the types of improprieties that might occur within their area of responsibility and be alert for any indication of irregularity. Any fraud that is detected or suspected must be reported to the General Manager or alternatively, to the Finance Committee, who coordinates all investigations.

213.2 Actions Constituting Fraud. The terms “fraud,” “embezzlement,” “misappropriation,” and other fiscal irregularities refer to, but are not limited to:

(a) Any dishonest or fraudulent act;

(b) Forgery or alteration of any document or account belonging to the District;

(c) Forgery or alteration of a check, bank draft, or any other financial document;

(d) Misappropriation of funds, securities, supplies, equipment, or other assets;

(e) Impropriety in the handling or reporting of money or financial transactions;

(f) Disclosing confidential and proprietary information to outside parties;

(g) Accepting or seeking anything of material value from contractors, vendors, or persons providing goods or services to the District;

(h) Destruction, removal or inappropriate use of records, furniture, fixtures, and equipment; or

(i) Any similar or related irregularity.

213.3 Investigation Responsibilities. The District Finance Committee has the primary responsibility for the investigation of all suspected fraudulent acts as defined in the policy. The Finance Committee may utilize whatever internal and/or external resources it considers necessary in conducting an investigation. If an investigation substantiates that fraudulent activities have occurred, the Finance Committee will issue reports to the appropriate personnel, and if appropriate, the District Board of Trustees. Decisions to prosecute or refer the investigation results to the appropriate law enforcement and/or regulatory agencies for independent investigation will be made in conjunction with legal counsel and senior management, as will final dispositions of the case.

213.4 Confidentiality. The Finance Committee will treat all information received confidentially. Any employee who suspects dishonest or fraudulent activity will notify the General Manager or the Finance Committee immediately, and should not attempt to personally conduct investigations or interviews related to the suspected fraudulent act. (See Reporting Procedures in Section 213.6, below.) Investigation results will not be disclosed or discussed with anyone other than those who have a legitimate need to know. This is important in order to avoid damaging the reputations of persons suspected, but subsequently found innocent of wrongful conduct and to protect the District from potential civil liability.

213.5 Investigation Authority. Members of the District Finance Committee will have free and unrestricted access to all District records and premises and authority to examine, copy, and/or remove all or any portion of the contents of files, desks, cabinets, and other storage facilities on the premises, without the prior knowledge or consent of any individual who may use or have custody or any such items or facilities, when it is within the scope of the Committee's investigations.

213.6 Reporting Procedures. Care must be taken in the investigation of suspected improprieties or irregularities so as to avoid mistaken accusations or alerting suspected individuals that an investigation is underway.

An employee who discovers or suspects fraudulent activity will contact the General Manager or the Finance Committee immediately. Alternatively, the employee may use the Employee Risk Management Authority (ERMA), a part of the VCJPA self-insurance group coverage. Call Employee Reporting Line at 1-877-651-3924 to make an anonymous report. This line is monitored 24 hours a day.

The employee or other complainant may remain anonymous to the extent that the law will allow. All inquiries concerning the activity under investigation from the suspected individual(s), their legal counsel, or any other inquirer should be directed to the Finance Committee or District legal counsel. No information concerning the status of an investigation will be given out. The proper response to any inquiry is, "I am not at liberty to discuss this matter."

The individual making the report should be counseled to not contact the suspected individual in an effort to determine facts or demand restitution and to not discuss the case, facts, suspicions, or allegations with anyone unless specifically asked to do so by the District legal counsel or the Finance Committee.

Section 214. Security

214.1 Accounting Security. Petty cash is stored in a locked file cabinet. The General Manager or designee will be the only employee(s) with keys to the petty cash cabinet.

214.2 Access to Electronically Stored Accounting Data. It is the policy of the District to utilize passwords to restrict access to accounting software and data. Only duly authorized accounting personnel with data input responsibilities will be assigned passwords that allow access to the system.

214.3 Storage of Backup Files. It is the policy of the District to maintain back-up copies of electronic data files. Access to back-up files shall be limited to individuals authorized by management.

214.4 General Office Security. During normal business hours, all visitors are required to check in at the front counter. After hours, a key and security passcode are required for access to the District's office. Keys are issued only to employees (and janitorial services).

Section 215. Financial Transactions

215.1 Warrant Authorization Signers. Warrant Requests require two signatures from the following group: Board Members and the General Manager or their designee.

215.2 Electronic Funds Transfers. The General Manager is authorized to transfer funds between reserve accounts, the general fund, and any vendors where electronic payments are a more efficient process. The General Manager will get pre-approval via the warrant authorization process in the previous section.

215.3 Cash Receipts. When miscellaneous checks come in the mail, staff will prepare a deposit form and mail to the general fund with the check. The District keeps a copy of the check for records. All revenue shall be entered in the ledger.

215.4 Bank and Cash Account Reconciliations. Reserve accounts and VCJPA statements shall be reconciled once a year at the end of the year. The general fund cash general ledger detail is reconciled as soon as it is received. The Payroll imprest account is reconciled monthly.

Section 216. Liabilities and Assets

216.1 Pension Liability. The District's retirement fund shall be at least 80% funded.

216.2 Capital Assets. The Accounting Associate maintains a capital depreciation schedule. Items valued over $5000 are placed on the depreciation schedule. Disposal or sale of capital assets on this schedule must have Board approval.

Section 217. Payroll and Benefits

217.1 The District uses a third party administrator (TPA) for payroll. Payroll is paid bi-monthly. The TPA prepares 941 and DE6 forms. The TPA delivers payroll checks to the District. Employees have the option to have direct deposit handled by the TPA.

217.2 Payroll will be recorded to the general ledger twice a month. Payroll is paid out of a separate imprest bank account. Employees enter time into the District database. The reports are reviewed monthly by the management staff.

217.3 Administrative/Finance Manager prepares a payroll spreadsheet that is approved and signed by the General Manager. This report is support for the transfer of funds from the County cash account to the payroll account.

Section 218. District Fund Policy

218.1 Policy Statement

218.1.1 The District recognizes the importance of adopting policies for financial reserves and reserve funds that adhere to Government Accounting Standards Board (GASB) guidelines and professional standards/best practices such as those identified by, but not limited to Government Finance Officers Association (GFOA). Written, adopted financial policies regarding designated reserves are a critical element of sound short- and long-term fiscal management. The designation of funds for long-term financial goals is an important element of prudent fiscal management.

218.2 Fund Policy

218.2.1 This policy follows the guidelines set in the Governmental Accounting Standards Board ("GASB") Statement No. 54, regarding Fund Balance Reporting and Governmental Fund Type Definitions.

218.2.2 In order to achieve the objectives of this policy, the Board of Trustees shall adhere to the guidelines as set forth herein.

218.2.3 Funds may be established from time to time by the Board of Trustees as an important component of sound financial management to meet both short- and long-term financial objectives, and to ensure prudent financial management practices.

218.2.4 Classification of Funds. Funds may be designated by the Board of Trustees as "restricted" or "non-restricted." These classifications are defined under GASB 54 as follows:

(a) Restricted Funds shall be segregated and limited in use to specific and designated purposes as defined and established by the Board of Trustees. According to GASB 54, Restricted Funds are those that are constrained to specific purposes by the constitution, external resource providers (such as grantors, bondholders, and higher levels of government), or through enabling legislation. Examples of Restricted Funds, but not limited to, are pension stabilization and Other Post-Employment Benefits (OPEB).

(b) Non-restricted Funds may be classified as “Committed” or “Assigned.” These funds do not require the physical segregation of funds, but may be segregated if desirable.

(c) Committed Funds are defined by GASB 54 as those that are constrained to specific purposes by a formal action of the agency’s highest-level decision-making authority (the District’s Board of Trustees). Committed Funds cannot be used for any other purpose, unless the District takes the same highest-level action to remove or change the constraint. The District’s Committed funds include the Public Health Emergency, Repair and Replace, Operating Reserve, and Capital Reserve funds.

(d) Assigned Funds are defined as those that are intended for a specific purpose, but do not meet the criteria to be classified as Restricted or Committed. Intent can be expressed by the Board of Trustees or by an official or body to which the Board of Trustees delegates the authority. The District currently has no Assigned Funds.

218.2.5 Investment earnings from Restricted and Non-Restricted Funds shall be credited to the District General Fund, unless otherwise stated herein.

218.2.6 Approval by the District’s Board of Trustees shall be required prior to the expenditure of Restricted or Committed Funds. Approval shall be determined by action at a public meeting of the Board.

218.2.7 The Board of Trustees shall maintain a written Fund Policy.

218.2.8 The Board of Trustees shall annually review the District Policy at a public meeting in order to determine appropriate changes, additions, and/or deletions.

218.3. Funds

218.3.1 The Board of Trustees hereby establishes and **commits** the following funds:

(a) Public Health Emergency Fund. Appendix 200-1.

(b) Repair and Replace Fund. Appendix 200-2.

(c) Operating Reserve Fund. Appendix 200-3.

(d) Capital Reserve Fund. Appendix 200-4.

218.3.2 The Board of Trustees hereby establishes and **restricts** the following funds:

(a) Pension Stabilization Fund. Appendix 200-5.

(b) Other Post-Employment Benefits (OPEB) Fund Appendix 200-6

218.4. Target Fund Levels

218.4.1 The Board of Trustees shall establish a stated target fund level for each designated fund.

218.5 Annual Evaluation

218.5.1 The General Manager shall perform a review and analysis of each designated fund for presentation to the Board of Trustees at a public meeting upon the occurrence of the following:

(a) Upon consideration by the Board of Trustees of the annual budget;

(b) Upon any significant change to and/or expenditure(s) from a designated fund; or

(c) Upon determination that a fund balance is less than the established target fund level for a designated fund.

APPENDIX 200-1

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
PUBLIC HEALTH EMERGENCY FUND

Purpose of Fund:

The purpose of the Public Health Emergency Fund is to mitigate the financial impact of unusually high levels of vector-borne disease activity or prevent a future threat to public health from a newly detected invasive mosquito species.

Policy:

In order to achieve the objectives of this policy the Board of Trustees shall adhere to the following guidelines:

1. This fund shall be known as the "Public Health Emergency Fund."
2. The Public Health Emergency Fund shall be designated as a Committed Fund.
3. These funds will be used to replenish operating cash flow in the General Fund should circumstances cause the District to incur greater than normal expenses to prevent or manage an imminent threat to public health from vectors and vector-borne disease.
4. Expenditure of Public Health Emergency Funds must be authorized by the Board of Trustees at a publicly noticed meeting.
5. Expenditures from this designated fund that are subsequently recovered, either partially or fully, from State sources, shall be utilized solely for the purpose of refunding the Public Health Emergency Fund.
6. Investment earnings from the Public Health Emergency Fund may be credited to the District's General Fund.
7. The Public Health Emergency Fund may be invested in financial institutions and instruments that maintain the highest level of liquidity, such as checking, savings, and interest earning savings accounts.
8. Annual replenishment will vary, depending upon other designation requirements and current year expense requirements.
9. This policy shall be reviewed on an annual basis for long-term adequacy and use restriction.

Target Fund Level:

The target balance of this fund is based on an estimate of likely operational needs should the most likely public health threat scenario become reality. This target balance will be reviewed annually and adjusted as needed to remain current. However, it is recognized that having a minimum fund balance of $500,000 would be prudent.

APPENDIX 200-2

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
REPAIR AND REPLACE FUND

Purpose of Fund:

The purpose of the Repair and Replace Fund is to set aside sufficient financial resources to ensure timely replacement and upgrade of the District's vehicles, mobile equipment, laboratory equipment, operational equipment, administrative equipment, and facilities.

Policy:

In order to achieve the objectives of this policy the Board of Trustees shall adhere to the following guidelines:

1. This fund shall be known as the "Repair and Replace Fund."
2. The Repair and Replace Fund shall be designated as a Committed Fund.
3. These funds will be used to pay for capital assets according to the District budget and purchasing policies.
4. Each year, funds can be transferred from the Repair and Replace Fund to the General Fund to cover the cost of capital purchases designated and approved during the annual budgeting process.
5. Funds transferred from the Repair and Replace Fund shall be expended solely for the purpose of replacement, repair, and upgrade of existing District vehicles and equipment, or for renovations or replacement of District facilities.
6. The Repair and Replace Fund may be invested in financial institutions and instruments that maintain the highest level of liquidity, such as checking, savings, and reserve accounts.
7. Investment earnings from the Capital Improvement Fund may be credited to the District's General Fund.
8. Annual replenishment will vary, depending upon other designation requirements and current year expense requirements.
9. This policy shall be reviewed on an annual basis for long-term adequacy and use restriction.

Target Fund Level:

The target balance for this fund is determined by the District's capital asset replacement program and the total cumulative depreciation for the District's capital assets as stated in the District's Basic Financial Statements prepared by the auditor each year. This target will be reviewed annually and adjusted as needed with the additions, deletions, or replacements of capital assets. A more thorough review shall be completed every 5 years to update the escalation rates, the discount rate, net present value, and overall cash flow required to extend the replacement plan another 5 years. This fund shall be funded in order of preference in 3 or 4-year installments, a lump sum payment, or pay as you go.

APPENDIX 200-3

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
OPERATING RESERVE FUND

Purpose of Fund:

This fund would act as a rate stabilizer, covering unforeseen losses in revenue caused by drastic reductions in property taxes. This fund will preserve the District's credit worthiness, ensure adequate financial resources are available for timely payment of District obligations, and provide liquidity throughout the fiscal year.

Policy:

In order to achieve the objectives of this policy the Board of Trustees shall adhere to the following guidelines:

1. The fund shall be known as the "Operating Reserve Fund."
2. The Operating Reserve shall be designated as a Committed reserve fund.
3. Each year, funds can be transferred from the General Fund to the Operating Reserve Fund to ensure the target fund balance is met.
4. Funds transferred from the Operating Reserve Fund shall be expended solely for the purpose covering unforeseen losses in revenue caused by drastic reductions in property taxes.
5. Investment earnings from the Operating Reserve Fund may be credited to the District's General Fund.
6. Annual replenishment will vary, depending upon other designation requirements and current year expense requirements.
7. This policy shall be reviewed on an annual basis for long-term adequacy and use restrictions.

Target Fund Level:

The target fund level for the Operating Reserve Fund is to maintain a minimum equal to 60% of discretionary General Fund revenues, as of July 1st of each fiscal year. If under-funded, 25% of excess revenues will be deposited into the Operation Reserve Fund. This target fund level was established based upon the following general guidelines:

1. The District shall maintain a balance in the Operating Reserve Fund equal to approximately 60% of budgeted expenditures for the fiscal year.
2. For the purpose of this policy, budgeted expenditures shall include all expenditures associated with the following:

(a) Salaries and Employee Benefits; and
(b) Services and Supplies.

APPENDIX 200-4

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
CAPITAL RESERVE FUND

Purpose of Fund:

The purpose of the Capital Reserve Fund is to set aside money for large projects rather than withdrawing those funds from the general fund account. Projects may include future capital assets that are ineligible for repair and replace funding such as flooring and painting, or adding new capital assets that are not listed in the capital asset replacement program.

Policy:

In order to achieve the objectives of this policy the Board of Trustees shall adhere to the following guidelines:

1. This fund shall be known as the “Capital Reserve Fund.”
2. The Capital Reserve Fund shall be designated as a Committed Fund.
3. These funds will be used to finance large projects that may be identified in the strategic plan.
4. Each year, funds can be transferred from the General Fund to Capital Reserve Fund to ensure the target fund balance is met.
5. Funds transferred from the Operating Capital Reserve shall be expended solely on capital projects that have been identified in the strategic plan
6. This policy shall be reviewed on an annual basis for long-term adequacy and use restriction.

Target Fund Level:

The target balance of this fund is based on large future capital project needs. This target balance will be reviewed annually and adjusted as needed to remain current. If under-funded, 25% of excess revenues will be deposited into the Capital Reserve Fund.

APPENDIX 200-5

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
PENSION STABILIZATION FUND

Purpose of Fund:

The purpose of the Pension Stabilization Fund is to ensure that increasing pension costs are offset by investments in interest-earning accounts.

Policy:

In order to achieve the objectives of this policy the Board of Trustees shall adhere to the following guidelines:

1. This fund shall be known as the “Pension Stabilization Fund.”
2. The Pension Stabilization Fund shall be designated as a Restricted Fund.
3. These funds will be used to offset increases in pension costs from unfunded liabilities.
4. The Pension Stabilization Fund will be invested in financial institutions that restrict the funds for only pension-related expenses.
5. This policy shall be reviewed on an annual basis for long-term adequacy and use restriction.

Target Fund Level:
The target balance of this fund is based on the annual CalPERS actuarial report of unfunded liability. This target balance will consider funds in CalPERS combined with the amount in PARS to not exceed 100% of liabilities. If under-funded, 25% of excess revenues will be deposited into the PARS 115 Trust.

Withdrawal:

Withdrawals may be considered in the event of:

- Pension costs affecting operational costs;
- If the growth of pension contribution rates (in dollars) is greater than the growth in property tax revenue;
- Paying off specific pension liabilities that will result in interest savings greater than interest earnings on the Trust Fund;
- Economic conditions or fiscal demands arise, e.g. non-discretionary expenditures exceeding revenues.

APPENDIX 200-6

ALAMEDA COUNTY MOSQUITO ABATEMENT DISTRICT
OTHER POST-EMPLOYEE BENEFITS (OPEB) FUND

Purpose of Fund:

The purpose of the Other Post-Employee Benefits (OPEB) Fund is to ensure that agreed-upon health, dental, and vision benefits to retired employees will be fulfilled.

Policy:

In order to achieve the objectives of this policy the Board of Trustees shall adhere to the following guidelines:

1. This fund shall be known as the “Other Post-Employee Benefits (OPEB) Fund.”
2. The Other Post-Employee Benefits (OPEB) Fund shall be designated as a Restricted Fund.
3. These funds will be used to annually replenish expenses occurred in the General Fund used to provide health, dental, and vision benefits to qualified retired employees along with fund management.
4. The Other Post-Employee Benefits (OPEB) Fund will be invested in financial institutions that restrict the funds for only OPEB-related expenses.
5. This policy shall be reviewed on an annual basis for long-term adequacy and use restriction.

Target Fund Level:

It is the intent of the District to fully fund the OPEB. The funded status of the OPEB will be assessed based upon the most recent actuarial valuation. Should the plan drop below 90% funded, the District shall consider making an annual contribution equal to at least 50% of the annual determined contribution (ADC) as defined by the most recent actuarial valuation (or whatever percentage the District deems appropriate) from excess revenues. Additionally, the District will review this policy at a minimum biennially, coincident with preparation of the actuarial valuation, to determine if changes to this policy are necessary to ensure adequate resources are being accumulated to fund OPEB benefits.

Withdrawal:

Annual withdrawals are calculated after the close of the fiscal year by adding the prior year’s retiree health care, dental, and vision costs along with retiree reimbursements and US Bank and PFM administrative fees.