EBDA

EAST BAY DISCHARGERS AUTHORITY
2651 Grant Avenue
San Lorenzo, CA 94580-1841
(510) 278-5910
FAX (510) 278-6547

A Joint Powers Public Agency

NOTICE: Pursuant to the Governor's Executive Orders N-25-20 and N-29-20, the Financial Management Committee meeting scheduled below will be accessible via Zoom video conferencing. Members of the public may participate in the meeting through the Zoom link or phone number below.

- Zoom link: https://us02web.zoom.us/j/82261534447
- Telephone dial-in: 1(669) 900-6833, meeting ID #822 6153 4447

ITEM NO. 12

FINANCIAL MANAGEMENT COMMITTEE AGENDA

Monday, September 20, 2021

10:00 A.M.

East Bay Dischargers Authority
2651 Grant Avenue, San Lorenzo, CA 94580

Committee Members: Duncan (Chair); Andrews

FM1. Call to Order

FM2. Roll Call

FM3. Public Forum

FM4. List of Disbursements for July and August 2021
(The Committee will review the List of Disbursements for the months of July and August.)

FM5. Preliminary Treasurer's Reports for July and August 2021
(The Committee will review the Treasurer's Report for July and August 2021.)

FM6. Preliminary Fourth Quarter Expense Summary, Fiscal Year 2020/2021
(The Committee will review the fourth quarter expenses.)

FM7. CalPERS Annual Valuation Reports as of June 30, 2020
(The Committee will review the Authority's pension valuation reports.)

FM8. Motion to Rescind Additional Discretionary Payment of $65,861 to Reduce the Unfunded Accrued Liability of the Authority's Pension Plan
(The Committee will consider the motion.)

FM9. Draft Budget Policy
(The Committee will review and provide feedback on the draft policy.)

FM10. Adjournment

Agenda Explanation
East Bay Dischargers Authority
Financial Management Committee
September 20, 2021

Any member of the public may address the Committee at the commencement of the meeting on any matter within the jurisdiction of the Committee. This should not relate to any item on the agenda. Each person addressing the Committee should limit their presentation to three minutes. Non-English speakers using a translator will have a time limit of six minutes. Any member of the public desiring to provide comments to the Committee on any agenda item should do so at the time the item is considered. Oral comments should be limited to three minutes per individual or ten minutes for an organization. Speaker's cards will be available and are to be completed prior to speaking.

In compliance with the Americans with Disabilities Act of 1990, if you need special assistance to participate in an Authority meeting, or you need a copy of the agenda, or the agenda packet, in an appropriate alternative format, please contact the Juanita Villasenor at juanita@ebda.org or (510) 278-5910. Notification of at least 48 hours prior to the meeting or time when services are needed will assist the Authority staff in assuring that reasonable arrangements can be made to provide accessibility to the meeting or service.

In compliance with SB 343, related writings of open session items are available for public inspection at East Bay Dischargers Authority, 2651 Grant Avenue, San Lorenzo, CA 94580. For your convenience, agenda items are also posted on the East Bay Dischargers Authority website located at http://www.ebda.org.

The next Financial Management Committee meeting is scheduled on Monday, October 18, 2021 at 10:00 a.m.

Agenda Explanation
East Bay Dischargers Authority
Financial Management Committee
September 20, 2021

ITEM NO. FM4 LIST OF DISBURSEMENTS FOR JULY AND AUGUST 2021

The itemized List of Disbursements for the months of July and August 2021 totaled $1,195,290.42.

Reviewed and Approved by:

Rita Duncan, Chair Date
Financial Management Committee

Jacqueline T. Zipkin Date
Treasurer

East Bay Dischargers Authority
Cash Disbursement
July - August 2021

Check #	Payment Date	Invoice #	Vendor Name	Description	Invoice Amount	Disbursement Amount
25304	08/16/2021	EBM-BDO-01484	EBMUD	BACWA MEMBERSHIP	478,728.00	478,728.00
25265	07/15/2021	3021071	REGIONAL MONITORING PROGRAM C/O SFEI	QUARTERLY PARTICIPANT FEE FOR THE RMP 2021 BUDGET	62,009.50	62,009.50
25295	07/30/2021	11414761	BROWN & CALDWELL	ENGINEERING SERVICES - BRINE ASSESSMENT	38,069.74	38,069.74
25301	08/16/2021	383611	CITY OF SAN LEANDRO	O&M - JUN	36,898.02	36,898.02
25303	08/16/2021	002744	UNION SANITARY DISTRICT	O&M - JUN	34,877.08	34,877.08
35338	08/31/2021	002745	UNION SANITARY DISTRICT	O&M - JUL	31,641.50	31,641.50
25275	07/15/2021	0046041-2021-1	THE WATER RESEARCH FOUNDATION	UTILITY MEMBERSHIP	25,580.00	25,580.00
25281	07/30/2021	347889	CITY OF HAYWARD	QUARTERLY O&M APR-JUN	24,071.77	24,071.77
25263	07/15/2021	6832	CSRMA	ALLIANT PROPERTY INSURANCE PROGRAM RENEWAL	22,103.36	22,103.36
25323	08/31/2021	11416971	BROWN & CALDWELL	ENGINEERING SERVICES - BRINE ASSESSMENT	21,615.90	21,615.90
25309	08/16/2021	FB13453	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 3	16,408.00	17,714.50
25309	08/16/2021	FB13292	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 1	1,306.50	
25296	07/30/2021	165733	ENVIRONMENTAL SCIENCE ASSOCIATES	FIRST MILE PROJECT WORK ORDER NO. 1	13,860.68	16,839.97
25296	07/30/2021	165734	ENVIRONMENTAL SCIENCE ASSOCIATES	HAYWARD FEASIBILITY STUDY WORK ORDER NO. 2	2,979.29	
25316	08/16/2021	11415465	BROWN & CALDWELL	ENGINEERING SERVICES - BRINE ASSESSMENT	16,108.84	16,108.84
25329	08/31/2021	166751	ENVIRONMENTAL SCIENCE ASSOCIATES	FIRST MILE PROJECT WORK ORDER NO. 1	11,954.67	15,389.72
25329	08/31/2021	166757	ENVIRONMENTAL SCIENCE ASSOCIATES	HAYWARD FEASIBILITY STUDY WORK ORDER NO. 2	3,435.05	
25320	08/31/2021	20210105.01-1	ASCENT ENVIRONMENTAL, INC	CONSULTING SERVICES - CARGILL CEQA	13,113.75	13,113.75
35339	08/31/2021	49380996	UNIVAR	SODIUM BISULFITE - DELIVERED 08/18/2021	6,497.79	12,992.88
35339	08/31/2021	49343274	UNIVAR	SODIUM BISULFITE - DELIVERED 08/02/2021	6,495.09	
35334	08/31/2021	6489	ORO LOMA SANITARY DISTRICT	ADMIN BUILDING LAND RENT, JANITORIAL SUPPLIES, & RECYCLING SERVICES	8,880.00	8,880.00
25270	07/15/2021	49287699	UNIVAR	SODIUM BISULFITE - DELIVERED 07/09/2021	4,068.89	7,772.71
25270	07/15/2021	49266284	UNIVAR	SODIUM BISULFITE - DELIVERED 06/29/2021	3,703.82	
35331	08/31/2021	12575569	HACH COMPANY	WIMS SOFTWARE SUBSCRIPTION RENEWAL	6,538.00	6,538.00
25293	07/30/2021	49309113	UNIVAR	SODIUM BISULFITE - DELIVERED 07/19/2021	6,070.91	6,070.91
25271	07/15/2021	0621-20	BEECHER ENGINEERING, INC	PROFESSIONAL ELECTRICAL ENGINEERING SERVICES	5,000.00	5,000.00
25322	08/31/2021	8/15/2021	AZYURA	WATERBITS LICENSING AND SMR/EDMR REPORT SERVICES	4,750.00	4,750.00
35335	08/31/2021	17636	PACIFIC ECORISK	CHRONIC AND ACUTE TOXICITY TESTING	4,726.00	4,726.00
25272	07/15/2021	378288	E&M ELECTRIC & MACHINERY, INC	CITECT SCADA RENEWAL	3,808.35	4,408.35
25272	07/15/2021	378286	E&M ELECTRIC & MACHINERY, INC	TOPVIEW SUPPORT RENEWAL	600.00	
25264	07/15/2021	FB12026	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 3	4,329.00	4,329.00
25307	08/16/2021	Jun-21	DEBORAH QUINN	ACCOUNTING SERVICES - JUN	4,186.88	4,186.88
35342	08/31/2021	0911086	VINCENT ELECTRIC MOTOR CO	OLEPS PUMP NO 4 MOTOR REBUILD	3,839.35	3,839.35
25253	07/15/2021	APR-JUN2021	KARL D. ROYER	QUARTERLY HEALTH PREMIUM REIMBURSEMENT	3,462.84	3,462.84
25290	07/30/2021	FB12549	CAROLLO ENGINEERS	ENGINEERING SERVICES - WORK ORDER NO. 1	3,216.00	3,216.00
25260	07/15/2021	Apr-21	DEBORAH QUINN	ACCOUNTING SERVICES - APR	2,990.63	2,990.63
25315	08/16/2021	378265	E&M ELECTRIC & MACHINERY, INC	HISTORIAN & AVEVA REPORTS RENEWAL	2,929.50	2,929.50
25286	07/30/2021	May-21	DEBORAH QUINN	ACCOUNTING SERVICES - MAY	2,681.25	2,681.25
25268	07/15/2021	EA06-0521	EOA, INC	NPDES PERMIT REISSUANCE ASSISTANCE	2,593.59	2,593.59
25274	07/15/2021	901039	LOCAL GOVERNMENT COMMISSION	BAYCAN ANNUAL MEMBERSHIP	2,500.00	2,500.00
25267	07/15/2021	4246044555687620	US BANK	PURCHASING CARD EXPENSES	2,414.63	2,414.63
35333	08/31/2021	22403614	JOHNSON CONTROLS	FIRE ALARM SERVICE, TESTING, & MONITORING	2,278.00	2,278.00
25285	07/30/2021	49271	CALCON	HEPS PMS	1,046.10	2,228.36
25285	07/30/2021	49265	CALCON	MDF SERVICE CALL	912.26	
25285	07/30/2021	49270	CALCON	SKYWEST PMS	270.00	
25255	07/15/2021	570197	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 07/15/2021	2,030.67	2,030.67

East Bay Dischargers Authority
Cash Disbursement
July - August 2021

Check #	Payment Date	Invoice #	Vendor Name	Description	Invoice Amount	Disbursement Amount
25300	08/16/2021	586295	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 08/15/2021	1,830.67	1,830.67
35340	08/31/2021	594895	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 08/31/2021	1,830.67	1,830.67
25280	07/30/2021	578069	VANTAGEPOINT	ICMA DEFERRED COMPENSATION FOR PAY PERIOD ENDED 07/31/2021	1,830.67	1,830.67
25314	08/16/2021	EA06-0621	EOA, INC	NPDES PERMIT REISSUANCE ASSISTANCE	1,760.81	1,760.81
25312	08/16/2021	523915	R-COMPUTER	IT PRODUCTS	1,717.70	1,717.70
25302	08/16/2021	52205702	CITY OF HAYWARD	BENEFIT PREMIUMS - AUG	1,345.92	1,345.92
25256	07/15/2021	52205701	CITY OF HAYWARD	BENEFIT PREMIUMS - JULY	1,345.92	1,345.92
25327	08/31/2021	652974	CORRPRO COMPANIES, INC	FORCE MAIN BI-ANNUAL CATHODIC PROTECTION SYSTEM SURVEY	1,320.00	1,320.00
35332	08/31/2021	1299490	HANSON BRIDGETT	LEGAL SERVICES	1,280.00	1,280.00
25258	07/15/2021	1746192-21	SCIF	WORKERS COMPENSATION PREMIUM - JUL	679.25	1,001.94
25258	07/15/2021	1746192-21	SCIF	WORKERS COMPENSATION PREMIUM SURCHARGES	322.69	
25325	08/31/2021	624144	CALTEST	LAB TESTING SERVICES - JUL	864.90	864.90
25298	07/30/2021	623197	CALTEST	LAB TESTING SERVICES - JUNE	864.90	864.90
25276	07/15/2021	P225072	CORE & MAIN LP	SKYWEST PUMP STATION VALVE	832.84	832.84
25324	08/31/2021	49456	CALCON	OPS CENTER SCADA DATA BACKUP	453.60	733.60
25324	08/31/2021	49455	CALCON	OPS CENTER LAVWMA FLOW DATA	280.00	
25306	08/16/2021	1746192-21	SCIF	WORKERS COMPENSATION PREMIUM - AUG	679.25	679.25
25313	08/16/2021	4246044555687620	US BANK	PURCHASING CARD EXPENSES	660.51	660.51
25297	07/30/2021	SI168640	WATSON MARLOW, INC	MDF SBS PUMP PARTS	602.59	602.59
25254	07/15/2021	APR-JUN2021	CHARLES V. WEIR	QUARTERLY HEALTH PREMIUM REIMBURSEMENT	527.88	527.88
25279	07/15/2021	14308	CITY OF FOSTER CITY	CALOPPS JOB POSTING SERVICE	510.00	510.00
25269	07/15/2021	39551	BA MORRISON	HVAC SERVICE - ADMIN	480.00	480.00
25310	08/16/2021	8299	CAYUGA INFORMATION SYSTEMS	IT SERVICES	446.25	446.25
25259	07/15/2021	4KK07	BAAQMD	PERMIT TO OPERATE HEPS	441.00	441.00
25317	08/16/2021	Jul-21	EVERARDO OROZCO LANDSCAPE MANAGEMENT	LANDSCAPING SERVICES - JUL	375.00	375.00
25273	07/15/2021	Jun-21	EVERARDO OROZCO LANDSCAPE MANAGEMENT	LANDSCAPING SERVICES - JUN	375.00	375.00
25319	08/31/2021	1082424	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	340.00
25319	08/31/2021	1083190	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25319	08/31/2021	1084315	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25319	08/31/2021	1085037	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25294	07/30/2021	1075075	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	340.00
25294	07/30/2021	1073952	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25294	07/30/2021	1072967	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25294	07/30/2021	1072588	ALPHA ANALYTICAL LABORATORIES	LAB SAMPLES FOR SKYWEST	85.00	
25257	07/15/2021	510 278-5910	AT&T	TELEPHONE SERVICE - ADMIN BUILDING	338.82	338.82
25305	08/16/2021	510 278-5910	AT&T	TELEPHONE SERVICE - ADMIN BUILDING	337.78	337.78
25328	08/31/2021	10110000001	EBMUD	WATER & SEWER, MDF JUN-AUG	329.24	329.24
25289	07/30/2021	00013.11-8	LARRY WALKER ASSOCIATES	PROFESSIONAL SERVICES - WORK ORDER NO. 2	274.00	274.00
25277	07/15/2021	48272	COMPUTER COURAGE	WEBSITE HOSTING - JULY	150.00	232.50
25277	07/15/2021	48412	COMPUTER COURAGE	GENERAL WEBSITE UPDATES	82.50	
25283	07/30/2021	510-483-0439	AT&T	TELEPHONE SERVICE - MDF	208.37	208.37
25311	08/16/2021	217598795	ORKIN	PEST CONTROL SERVICES - MDF	200.00	200.00
25321	08/31/2021	510-483-0439	AT&T	TELEPHONE SERVICE - MDF	197.27	197.27
35336	08/31/2021	16349	TOWN & COUNTRY	JANITORIAL SERVICES - AUG	165.00	165.00
25292	07/30/2021	15882	TOWN & COUNTRY	JANITORIAL SERVICES - JULY	165.00	165.00
25284	07/30/2021	Nov-98	GFOA	ANNUAL MEMBERSHIP DUES	160.00	160.00

EAST BAY DISCHARGERS AUTHORITY
Cash Disbursement
July - August 2021

Check #	Payment Date	Invoice #	Vendor Name	Description	Invoice Amount	Disbursement Amount
35330	08/31/2021	9020492717	GRAINGER	FORCE MAIN SUPPLIES	83.39	155.26
35330	08/31/2021	9020981628	GRAINGER	FORCE MAIN SUPPLIES	71.87	
25262	07/15/2021	9943067588	GRAINGER	REPAIRS & MAINTENANCE SUPPLIES	153.94	153.94
25318	08/16/2021	48478	COMPUTER COURAGE	WEBSITE HOSTING - AUG	150.00	150.00
35337	08/31/2021	1417262021	UNDERGROUND SERVICE ALERT 811	ANNUAL MEMBERSHIP RENEWAL	150.00	150.00
25299	07/30/2021	3294562	CALTRONICS	COPIER USAGE AND MAINTENANCE	107.45	107.45
25291	07/30/2021	8293	CAYUGA INFORMATION SYSTEMS	IT SERVICES	105.00	105.00
25282	07/30/2021	44777800001	EBMUD	WATER & SEWER, ADMIN MAY-JUL	97.48	97.48
25266	07/15/2021	1683255	ALLIANT INSURANCE	ALLIANT MOBILE VEHICLE PROGRAM RENEWAL	93.00	93.00
25308	08/16/2021	9885271100	VERIZON WIRELESS	WIRELESS PHONE SERVICES	60.07	60.07
25261	07/15/2021	9883102301	VERIZON WIRELESS	WIRELESS PHONE SERVICES	60.07	60.07
25278	07/15/2021	04352	CALGOVHR	ANNUAL MEMBERSHIP DUES	60.00	60.00
25326	08/31/2021	3315209	CALTRONICS	COPIER USAGE AND MAINTENANCE	49.99	49.99
25288	07/30/2021	9962767258	GRAINGER	FORCE MAIN SUPPLIES	30.63	30.63
25287	07/30/2021	9883891249	VERIZON WIRELESS	MODEM FOR SCADA	16.15	16.15
35341	08/31/2021	9886061196	VERIZON WIRELESS	MODEM FOR SCADA	5.19	5.19
25178			CITY OF HAYWARD	VOID	(1,330.77)	(1,330.77)
				TOTAL CHECK PAYMENTS	**984,490.66**	**984,490.66**
				ELECTRONIC PAYMENTS		
	08/25/2021	5105948980-0	PG&E	GAS & ELECTRIC SERVICE	39,855.66	39,855.66
	07/13/2021	5105948980-0	PG&E	GAS & ELECTRIC SERVICE	33,172.94	33,172.94
	07/16/2021	100000016476991	CALPERS	ANNUAL UAL	20,864.00	20,864.00
	08/09/2021	100000016496640	CALPERS	HEALTH PREMIUMS - AUG	6,907.99	6,907.99
	07/07/2021	100000016462789	CALPERS	HEALTH PREMIUMS - JULY	6,907.08	6,907.08
	08/03/2021	100000016460552	CALPERS	PENSION CONTRIBUTION, CLASSIC 07/16 - 31/2021	4,575.23	4,575.23
	08/19/2021	100000016483782	CALPERS	PENSION CONTRIBUTION, CLASSIC 08/01 - 15/2021	4,575.23	4,575.23
	07/19/2021	100000016460547	CALPERS	PENSION CONTRIBUTION, CLASSIC 07/01 - 15/2021	4,575.23	4,575.23
	07/02/2021	100000016430358	CALPERS	PENSION CONTRIBUTION, CLASSIC 06/16 - 30/2021	4,521.26	4,521.26
	08/26/2021	100000016511536	CALPERS	GASB 68 REPORT AND SCHEDULES FEES	700.00	700.00
	08/11/2021		WELLS FARGO	CLIENT ANALYSIS SERVICE CHARGE	43.32	43.32
	07/12/2021		WELLS FARGO	CLIENT ANALYSIS SERVICE CHARGE	14.77	14.77
				TOTAL ELECTRONIC PAYMENTS	**126,712.71**	**126,712.71**
				PAYROLL		
	07/29/2021		ADP, LLC	PAYROLL PERIOD: 07/16-31/2021	22,947.83	22,947.83
	08/12/2021		ADP, LLC	PAYROLL PERIOD: 08/01-15/2021	20,356.42	20,356.42
	08/30/2021		ADP, LLC	PAYROLL PERIOD: 08/16-31/2021	20,307.83	20,307.83
	07/14/2021		ADP, LLC	PAYROLL PERIOD: 07/01-15/2021	20,156.42	20,156.42
	07/02/2021	4527175	ADP, LLC	PAYROLL FEES, PERIOD: 06/16-30/2021	88.25	88.25
	08/06/2021	585467213	ADP, LLC	PAYROLL FEES, PERIOD: 07/16-31/2021	85.60	85.60
	08/20/2021	586370801	ADP, LLC	PAYROLL FEES, PERIOD: 08/01-15/2021	72.35	72.35
	07/23/2021	5489683	ADP, LLC	PAYROLL FEES, PERIOD: 07/01-15/2021	72.35	72.35
				TOTAL PAYROLL	**84,087.05**	**84,087.05**
				TOTAL DISBURSEMENTS	**1,195,290.42**	**1,195,290.42**

ITEM NO. FM5 PRELIMINARY TREASURER'S REPORT FOR JULY AND AUGUST 2021

The beginning cash balance on July 1, 2021 was $3,393,358.21. The ending cash balance on August 31, 2021 was $5,112,513.00. Total receipts for the period were $2,914,445.21 and disbursements totaled $1,195,290.42. EBDA's LAIF balance is $2,258,744.16 and the interest rate for August was 0.22%.

EBDA currently has a two-pronged investment approach that includes Local Agency Investment Fund (LAIF) and traditional bank accounts. Staff will work with the Committee on investment strategy going forward.

Approval is recommended.

EAST BAY DISCHARGERS AUTHORITY

PRELIMINARY

TREASURER'S REPORT

JULY 31, 2021

FUND	DESCRIPTION	BEGINNING CASH BALANCE	DEBITS (INCREASE)	CREDITS (DECREASE)	ENDING CASH BALANCE
12	OPERATIONS & MAINTENANCE	1,071,445.77	677,340.23	204,263.15	1,544,522.85
13	PLANNING & SPECIAL STUDIES	279,416.30	225,235.83	152,911.80	351,740.33
14	RECLAMATION O & M (SKYWEST)	37,200.06	27,000.00	1,442.84	62,757.22
15	BRINE ACCEPTANCE	0.00			0.00
31	RENEWAL & REPLACEMENT	2,005,296.08	157,842.70	5,000.00	2,158,138.78
	TOTALS	3,393,358.21	1,087,418.76	363,617.79	4,117,159.18

Jul-21

9/15/2021

SUPPLEMENTAL TREASURERS REPORT

DATE	TRANSACTION	RECEIPT	DISBURSEMENT CHECKING	DISBURSEMENT PAYROLL	PAYROLL TRANSFER	LAIF TRANSFER	CD TRANSFER	CD INTEREST & EXPENSES	WELLS FARGO CHECKING BALANCE	WELLS FARGO PAYROLL BALANCE	LAIF BALANCE	WELLS FARGO CERTIFICATES OF DEPOSIT	TOTAL CASH
06/30/21	BALANCE								1,115,049.50	19,808.82	2,256,901.46	1,598.43	3,393,358.21
07/02/21	ELECTRONIC BILL PAY		4,521.26						1,110,528.24	19,808.82	2,256,901.46	1,598.43	3,388,836.95
07/02/21	PAYROLL FEES			88.25					1,110,528.24	19,720.57	2,256,901.46	1,598.43	3,388,748.70
07/07/21	ELECTRONIC BILL PAY		6,907.08						1,103,621.16	19,720.57	2,256,901.46	1,598.43	3,381,841.62
07/12/21	ANALYSIS FEE		14.77						1,103,606.39	19,720.57	2,256,901.46	1,598.43	3,381,826.85
07/12/21	PAYROLL TRANSFER				20,000.00				1,083,606.39	39,720.57	2,256,901.46	1,598.43	3,381,826.85
07/13/21	ELECTRONIC BILL PAY		33,172.94						1,050,433.45	39,720.57	2,256,901.46	1,598.43	3,348,653.91
07/14/21	PAYROLL			20,156.42					1,050,433.45	19,564.15	2,256,901.46	1,598.43	3,328,497.49
07/15/21	DISBURSEMENT		153,648.19						896,785.26	19,564.15	2,256,901.46	1,598.43	3,174,849.30
07/15/21	INTEREST	1,842.70				1,842.70			896,785.26	19,564.15	2,258,744.16	1,598.43	3,176,692.00
07/16/21	ELECTRONIC BILL PAY		20,864.00						875,921.26	19,564.15	2,258,744.16	1,598.43	3,155,828.00
07/19/21	DEPOSIT - HAYWARD	27,000.00							902,921.26	19,564.15	2,258,744.16	1,598.43	3,182,828.00
07/19/21	ELECTRONIC BILL PAY		4,575.23						898,346.03	19,564.15	2,258,744.16	1,598.43	3,178,252.77
07/22/21	VOID CHECK		(1,330.77)						899,676.80	19,564.15	2,258,744.16	1,598.43	3,179,583.54
07/23/21	PAYROLL FEES			72.35					899,676.80	19,491.80	2,258,744.16	1,598.43	3,179,511.19
07/26/21	PAYROLL TRANSFER				25,000.00				874,676.80	44,491.80	2,258,744.16	1,598.43	3,179,511.19
07/26/21	DEPOSIT - USD	1,053,076.06							1,927,752.86	44,491.80	2,258,744.16	1,598.43	4,232,587.25
07/29/21	PAYROLL			22,947.83					1,927,752.86	21,543.97	2,258,744.16	1,598.43	4,209,639.42
07/30/21	DEPOSIT	5,500.00							1,933,252.86	21,543.97	2,258,744.16	1,598.43	4,215,139.42
07/30/21	DISBURSEMENT		97,980.24						1,835,272.62	21,543.97	2,258,744.16	1,598.43	4,117,159.18
	TOTAL	1,087,418.76	320,352.94	43,264.85	45,000.00	1,842.70	-	-					
	CURRENT BALANCE								1,835,272.62 ①	21,543.97 ②	2,258,744.16 ③	1,598.43 ④	4,117,159.18

Reconciliation

①	Per Bank Statement @ 07/31/21	$ 1,934,658.78
	Less: Outstanding Checks	99,386.16
		$ 1,835,272.62
②	Per Bank Statement @ 07/31/21	$ 21,543.97
③	Per LAIF Statement @ 07/31/21	$ 2,258,744.16
④	Per Treasurer's Report @ 07/31/21	$ 1,598.43
	Fair Market Value Increase/Decrease	(1,598.42)
	Per Investment Statement @7/31/21	$ 0.01

The Supplemental Treasurer's Report is prepared monthly by the General Manager. It also serves as EBDA's cash and investments reconciliation.

EAST BAY DISCHARGERS AUTHORITY
PRELIMINARY
TREASURER'S REPORT
AUGUST 31, 2021

FUND	DESCRIPTION	BEGINNING CASH BALANCE	DEBITS (INCREASE)	CREDITS (DECREASE)	ENDING CASH BALANCE
12	OPERATIONS & MAINTENANCE	1,544,522.85	888,888.64	449,163.76	1,984,247.73
13	PLANNING & SPECIAL STUDIES	351,740.33	474,137.81	339,298.28	486,579.86
14	RECLAMATION O & M (SKYWEST)	62,757.22		340.00	62,417.22
15	BRINE ACCEPTANCE	0.00	80,000.00	39,031.24	40,968.76
31	RENEWAL & REPLACEMENT	2,158,138.78	384,000.00	3,839.35	2,538,299.43
	TOTALS	4,117,159.18	1,827,026.45	831,672.63	5,112,513.00

Aug-21
9/15/2021

SUPPLEMENTAL TREASURERS REPORT

DATE	TRANSACTION	RECEIPT	DISBURSEMENT CHECKING	DISBURSEMENT PAYROLL	PAYROLL TRANSFER	LAIF TRANSFER	CD TRANSFER	CD INTEREST & EXPENSES	WELLS FARGO CHECKING BALANCE	WELLS FARGO PAYROLL BALANCE	LAIF BALANCE	WELLS FARGO CERTIFICATES OF DEPOSIT	TOTAL CASH
07/31/21	BALANCE								1,835,272.62	21,543.97	2,258,744.16	1,598.43	4,117,159.18
08/03/21	ELECTRONIC BILL PAY		4,575.23						1,830,697.39	21,543.97	2,258,744.16	1,598.43	4,112,583.95
08/06/21	DEPOSIT - DSRSD	80,000.00							1,910,697.39	21,543.97	2,258,744.16	1,598.43	4,192,583.95
08/06/21	DEPOSIT - CVSD	250,249.51							2,160,946.90	21,543.97	2,258,744.16	1,598.43	4,442,833.46
08/06/21	PAYROLL FEES			85.60					2,160,946.90	21,458.37	2,258,744.16	1,598.43	4,442,747.86
08/09/21	DEPOSIT - CARGILL	78,129.48							2,239,076.38	21,458.37	2,258,744.16	1,598.43	4,520,877.34
08/09/21	DEPOSIT - CSL	162,516.87							2,401,593.25	21,458.37	2,258,744.16	1,598.43	4,683,394.21
08/09/21	ELECTRONIC BILL PAY		6,907.99						2,394,685.26	21,458.37	2,258,744.16	1,598.43	4,676,486.22
08/10/21	PAYROLL TRANSFER				23,000.00				2,371,685.26	44,458.37	2,258,744.16	1,598.43	4,676,486.22
08/11/21	ANALYSIS FEE		43.32						2,371,641.94	44,458.37	2,258,744.16	1,598.43	4,676,442.90
08/12/21	PAYROLL			20,356.42					2,371,641.94	24,101.95	2,258,744.16	1,598.43	4,656,086.48
08/13/21	DEPOSIT - LAVWMA	465,342.96							2,836,984.90	24,101.95	2,258,744.16	1,598.43	5,121,429.44
08/16/21	DEPOSIT - OLSD	506,347.76							3,343,332.66	24,101.95	2,258,744.16	1,598.43	5,627,777.20
08/16/21	DISBURSEMENT		601,006.78						2,742,325.88	24,101.95	2,258,744.16	1,598.43	5,026,770.42
08/19/21	DEPOSIT - CERBT	65,861.00							2,808,186.88	24,101.95	2,258,744.16	1,598.43	5,092,631.42
08/19/21	ELECTRONIC BILL PAY		4,575.23						2,803,611.65	24,101.95	2,258,744.16	1,598.43	5,088,056.19
08/20/21	PAYROLL FEES			72.35					2,803,611.65	24,029.60	2,258,744.16	1,598.43	5,087,983.84
08/24/21	DEPOSIT - ABAG	90,328.87							2,893,940.52	24,029.60	2,258,744.16	1,598.43	5,178,312.71
08/25/21	ELECTRONIC BILL PAY		39,855.66						2,854,084.86	24,029.60	2,258,744.16	1,598.43	5,138,457.05
08/26/21	PAYROLL TRANSFER				50,000.00				2,804,084.86	74,029.60	2,258,744.16	1,598.43	5,138,457.05
08/26/21	ELECTRONIC BILL PAY		700.00						2,803,384.86	74,029.60	2,258,744.16	1,598.43	5,137,757.05
08/30/21	DEPOSIT - COH	128,250.00							2,931,634.86	74,029.60	2,258,744.16	1,598.43	5,266,007.05
08/30/21	PAYROLL			20,307.83					2,931,634.86	53,721.77	2,258,744.16	1,598.43	5,245,699.22
08/31/21	DISBURSEMENT		133,186.22						2,798,448.64	53,721.77	2,258,744.16	1,598.43	5,112,513.00
	TOTAL	1,827,026.45	790,850.43	40,822.20	73,000.00	-	-	-					
	CURRENT BALANCE								2,798,448.64	53,721.77	2,258,744.16	1,598.43	5,112,513.00
									①	②	③	④	

Reconciliation

①	Per Bank Statement @ 08/31/21	$ 2,963,150.24
	Less: Outstanding Checks	164,701.60
		$ 2,798,448.64
②	Per Bank Statement @ 08/31/21	$ 53,721.77
③	Per LAIF Statement @ 08/31/21	$ 2,258,744.16
④	Per Treasurer's Report @ 08/31/21	$ 1,598.43
	Fair Market Value Increase/Decrease	(1,598.42)
	Per Investment Statement @8/31/21	$ 0.01

The Supplemental Treasurer's Report is prepared monthly by the General Manager. It also serves as EBDA's cash and investments reconciliation.

Agenda Explanation
East Bay Dischargers Authority
Financial Management Committee
September 20, 2021

ITEM NO. FM6 PRELIMINARY FOURTH QUARTER EXPENSE SUMMARY, FISCAL YEAR 2020/2021

Recommendation
Review year end expenses and provide direction to staff on use of unspent budget.

Background
This staff summary presents agency preliminary final expense summary for FY 2020/2021.

Discussion
Overall, EBDA's annual expenses were 21% under budget. The O&M Fund was 19% under budget, thanks largely to optimization of operations and maintenance and a dry winter resulting in decreased chemical and energy costs. In addition, reimbursement for labor hours spent on the Cargill project further offset salary and benefit costs. The Skywest Fund was close to budget, as reduced and optimized operation was offset by the $100,000 insurance deductible paid for the May 2020 pipeline leak.

The Special Projects Fund ended the year 25% under budget. All consultant expenses incurred for both the Cargill project and the EPA-funded Nature-based Solutions Project are reimbursable. Work on several projects is continuing in FY 2021/2022, including NPDES Permit Reissuance, AQPI, and Disinfection Master Plan. Per the adopted FY 2021/2022 Budget, funds will be carried over for ongoing projects.

The Year End Expense Summary for FY 2020/2021 is attached for the Committee's review. Expenses are presented by Program and by Account Number. These categories have been grouped to provide a summary overview of Authority expenses. The tables include discussion of particular items that varied significantly (>10%) from the budget. These tables have also been modified to show revenues from Cargill and the EPA grant, which total over $600,000 this year, offsetting costs. Staff notes that this is a preliminary summary, and additional expenses may come in before the fiscal year is officially closed.

Accounting for the carryover of $195,000 in project funds as approved in the FY 2021/2022 Budget, the FY 2020/2021 credit available to the agencies is approximately $869,000. Staff is seeking direction on distribution of these funds. Historically, funds were returned to the agencies as a credit against the subsequent fiscal year's bills, and this would be the default approach for this year. In recent years, funds were used to prefund OPEB and pension liabilities, however as discussed in Items No. FM7 and FM8, funding levels for the Authority's OPEB trust and CalPERS pension fund now exceed the target level. The Commission could also consider moving unspent funds into the Renewal and Replacement Fund or other reserve fund to offset future costs.

East Bay Dischargers Authority

EXPENSE SUMMARY BY PROGRAM

FY 2020/21 THROUGH JUNE 30, 2021 (100% of YEAR)

	YTD Expenses	Budget	Revenues - Cargill and Grant	Variance	% of Budget	Explanations for Variance Over 10%
O&M EFFLUENT DISPOSAL						
General Administration	$935,954	$1,254,764	($44,321)	($363,131)	71%	Benefits lower than budgeted, CERBT disbursement ($65,861) was credited to this program to offset costs, and some salary costs were defrayed by the Cargill brine project.
Outfall & Forcemains	$155,688	$181,336		($25,648)	86%	Low due to labor efficiencies.
San Leandro Pump Station	$11,392	$0		$11,392	100%	SLEPS is now San Leandro's responsibility, but some costs were incurred to close out projects that were initiated last fiscal year.
Marina Dechlor Facility	$365,597	$506,003		($140,406)	72%	Low due to minimal wet weather and labor efficiencies.
Oro Loma Pump Station	$430,263	$463,920		($33,657)	93%	
Hayward Pump Station	$136,247	$163,336		($27,089)	83%	Low due to minimal wet weather.
Union Pump Station	$320,904	$365,336		($44,432)	88%	Low due to minimal wet weather.
Bay & Effluent Monitoring	$484,733	$534,550		($49,817)	91%	
TOTAL O&M EFFLUENT DISPOSAL	**$2,840,778**	**$3,469,245**	**($44,321)**	**($672,788)**	**81%**	
SPECIAL PROJECTS						
NPDES Permit Fees	$538,685	$555,483		($16,798)	97%	
NPDES Permit Issues	$22,669	$200,000		($177,331)	11%	Reserve funds in case of enforcement. Funds expended have been used for NPDES reissuance activities.
Regional Monitoring Program	$246,184	$280,000		($33,816)	88%	Fees were lower than anticipated.
Nutrient Surcharge	$269,479	$269,479		$0	100%	
Water Environment Research Foundation	$23,407	$25,000		($1,593)	94%	
Transport System Evaluation	$7,210	$20,000		($12,790)	36%	Work has been carried over to next FY.
JPA Legal Support	$35,037	$42,000		($6,963)	83%	These funds carried over from JPA negotiation legal support were used to develop Procurement Policy.
AQPI	$0	$29,000		($29,000)	0%	EBDA will be invoiced by Sonoma Water next FY due to project delays.
Operator Training Modules	$0	$16,000		($16,000)	0%	Work has been carried over to next FY.
Brine Project Development	$467,843	$30,000	($472,844)	($35,002)	0%	All work performed is reimbursed by Cargill.
Strategic Planning	$0	$10,000		($10,000)	0%	Work deferred to next FY.
Disinfection Master Plan	$27,560	$40,000		($12,440)	69%	Work initiated in Q3 and carries over to next FY.
Contingency - Admin Support	$0	$22,246		($22,246)	0%	Funds to be left in contingency per new Classification Plan.
PFAS Sampling	$0	$15,000		($15,000)	0%	Costs were covered through BACWA for a regional study, and individual sampling was not required for all dischargers.
Nature-Based Solutions Study	$90,329	$0	($90,329)	$0	0%	Costs were reimbursed through EPA grant.
NPDES Testing - CSL	$1,500	$1,500		$0	100%	
NPDES Testing - OLSD	$1,500	$1,500		$0	100%	
NPDES Testing - HAY	$1,500	$1,500		$0	100%	
NPDES Testing - USD	$1,500	$1,500		$0	100%	
TOTAL SPECIAL PROJECTS	**$1,734,403**	**$1,560,208**	**($563,173)**	**($388,978)**	**75%**	
WATER RECYCLING						
Skywest Golf Course	$118,013	$120,000		($1,987)	98%	Includes insurance claim deductible for incident that occurred in May 2020.
TOTAL WATER RECYCLING	**$118,013**	**$120,000**	**$0**	**($1,987)**	**98%**	
TOTAL PROGRAMS	**$4,693,194**	**$5,149,453**	**($607,494)**	**($1,063,753)**	**79%**	

East Bay Dischargers Authority

EXPENSE SUMMARY BY ACCOUNT

FY 2020/21 THROUGH JUNE 30, 2021 (100% OF YEAR)

	YTD Expenses	Budget	Revenues - Cargill and Grant	Variance	% of Budget	Explanations for Variance Over 10%
4010 - Salary	$540,706	$543,442	($27,881)	($30,617)	94%	
4020 - Benefits	$159,202	$282,582	($16,440)	($139,820)	51%	Reduction in number of retirees supported; budgeted CalPERS UAL was higher than actual due to recent discretionary payment; CERBT disbursement ($65,861) was credited to this account to offset costs.
4030 - Commissioner Compensation	$33,840	$45,000		($11,160)	75%	Budget assumes maximum number of meetings and several Committees are currently on reduced schedules.
4070 - Insurance	$143,526	$60,000		$83,526	239%	Includes $100,000 deductible for Skywest claim.
4080 - Memberships & Subscriptions	$143,364	$155,677		($12,313)	92%	
4100 - Supplies, Variable	$224,676	$287,000		($62,324)	78%	Low due to minimal wet weather.
4100 - Supplies, Fixed	$4,261	$24,000		($19,739)	18%	Significant spending on supplies for office and facilities was not required.
4110 - Contract Services	$53,910	$132,320		($78,410)	41%	Minimal contract services for the force main and pump stations were required.
4120 - Professional Services	$905,285	$712,190	($538,509)	($345,414)	51%	Several Special Studies were deferred (see Expenses by Program), and expenses for Cargill and the Nature-based Solutions Project were reimbursed.
4140 - Rents & Fees	$1,071,719	$1,107,242		($35,523)	97%	
4141 - NPDES Fines	$0	$209,000		($209,000)	0%	Reserve funds in case of enforcement.
4150 - Maintenance & Repair	$618,270	$711,500		($93,230)	87%	Low due to minimal wet weather.
4160 - Monitoring	$165,564	$185,000		($19,436)	89%	Lower spending than anticipated on monitoring for Skywest due to decreased operation.
4170 - Travel	$2,949	$18,000		($15,051)	16%	Reduced travel due to COVID pandemic.
4190 - Utility, Fixed	$16,877	$21,500		($4,623)	78%	Lower than expected utility costs.
4191 - Utility, Variable (PG&E)	$605,429	$615,000		($9,571)	98%	
4200 - Acquisitions & Other	$3,618	$40,000	($24,664)	($61,046)	0%	Deferred capital spending on the Skywest recycled water system; revenue from Cargill contract markups.
TOTAL ALL ACCOUNTS	**$4,693,194**	**$5,149,453**	**($607,494)**	**($1,063,753)**	**79%**	

ITEM NO. FM7 CALPERS ANNUAL VALUATION REPORTS AS OF JUNE 30, 2020

Recommendation
For the Committee's information only, and no action is required.

Background
The Authority participates in the California Public Employees' Retirement System (CalPERS) for its pension benefits. In addition, on April 21, 2011, the EBDA Commission approved an agreement with CalPERS to participate in its California Employers Retiree Benefit Trust (CERBT) Fund to pre-fund other post-employment benefits (OPEB) including retiree health. The fund operates much like the CalPERS pension fund in that it is designed to increase the value of employer contributions through investment earnings.

In 2019, the Authority adopted OPEB and Pension Funding Policies, including target funding levels of 80% and 95%, respectively. The Authority made lump sum pre-payments to both funds in 2020, prior to the effective date of the Amended and Restated Joint Powers Agreement (JPA), with the intention of reaching these targets.

Discussion
Each year, staff presents the latest actuarial valuations of both the CERBT and pension funds for the Committee's information. These valuations always lag one year, and therefore are presented as of June 30, 2020.

OPEB
The financial status of the Authority's CERBT fund as of June 30, 2020, is summarized below.

CERBT Account Summary as of June 30, 2020	
Present value of all future benefits	$875,076
Accumulated assets in the CERBT fund	$743,350
Portion not yet funded	$131,726
Funded Ratio	84.9%
Current Asset Allocation Strategy Selection	CERBT Strategy 1

As shown above, based on the Authority's most recent actuarial valuation, the Authority's OPEB liability is 84.9% funded, exceeding the target. The estimate on which the lump sum was based underestimated investment earnings, and assumed a higher accrued liability based on a previous actuarial valuation.

Per Commission direction, the Authority took its first disbursement in FY 2020/2021 of $65,861. The Authority's qualifying OPEB expenditures included expenses paid on behalf of retirees to Kaiser Permanente, CalPERS' medical provider; expenses paid directly to retirees whose contracts included medical benefit stipends, and the implicit rate subsidy. The implicit rate subsidy reflects the benefit to retirees of accessing the Authority's group health insurance plan.

Pension

The table below summarizes the status of the Authority's pension funds as of June 30, 2020. The majority of the Authority's assets and liabilities are in the CalPERS "Classic" Plan, which is for employees employed by a CalPERS or reciprocal agency prior to January 1, 2013. The Authority has one former employee enrolled in the Public Employees' Pension Reform Act (PEPRA) Plan. Complete actuarial reports for each fund are attached.

CalPERS Account Summaries as of June 30, 2020		
	Classic	**PEPRA**
1. Present Value of Projected Benefits	$ 5,625,333	$ 135,748
2. Entry Age Accrued Liability (AL)	$ 4,858,986	$ 9,514
3. Plan's Market Value of Assets (MVA)	$ 4,444,457	$ 9,265
4. Unfunded Accrued Liability (UAL) [2-3]	$ 414,529	$ 249
5. Funded Ratio [3/2]	91.5%	97.4%

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 East Bay Dischargers Authority
(CalPERS ID: 5860828298)
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	12.21%	$30,528
Projected Results		
2023-24	*12.2%*	*$37,000*

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
East Bay Dischargers Authority
(CalPERS ID: 5860828298)

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
East Bay Dischargers Authority

(CalPERS ID: 5860828298)
(Rate Plan ID: 1172)

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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**
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- **Required Employer Contributions**
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Introduction

This report presents the results of the June 30, 2020 actuarial valuation of the Miscellaneous Plan of the East Bay Dischargers Authority 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 East Bay Dischargers Authority 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	**12.21%**
Plus	
Required Payment on Amortization Bases[1]	**$30,528**
Paid either as	
1) Monthly Payment	**$2,544.00**
Or	
2) Annual Prepayment Option*	**$29,513**

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	19.55%	19.55%
Surcharge for Class 1 Benefits[2]		
a) FAC 1	0.61%	0.62%
Phase out of Normal Cost Difference[3]	0.00%	0.00%
Plan's Total Normal Cost	20.16%	20.17%
Formula's Expected Employee Contribution Rate	7.96%	7.96%
Employer Normal Cost Rate	12.20%	12.21%

[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 $30,528. 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
$58,091	$30,528	$0	$30,528	$88,619

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	$58,091	$30,528	$9,189	$39,717	$97,808
15 years	$58,091	$30,528	$15,670	$46,198	$104,289
10 years	$58,091	$30,528	$29,380	$59,908	$117,999
5 years	$58,091	$30,528	$72,093	$102,621	$160,712

[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)	$5,590,592	$5,625,333
2. Entry Age Accrued Liability (AL)	4,751,432	4,858,986
3. Plan's Market Value of Assets (MVA)	3,827,649	4,444,457
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	923,783	414,529
5. Funded Ratio [(3) / (2)]	80.6%	91.5%

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 1172 Results					
Normal Cost %	12.21%	12.2%	12.2%	12.2%	12.2%	12.2%
UAL Payment	$30,528	$37,000	$44,000	$48,000	$51,000	$52,000

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 1172. 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	$493,683	$569,930
Estimated Employer Normal Cost	$60,229	$65,125
Required Payment on Amortization Bases	$21,582	$30,595
Estimated Total Employer Contributions	$81,811	$95,720
Estimated Total Employer Contribution Rate (illustrative only)	16.57%	16.80%

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	$447,495
Transferred Members	0
Terminated Members	0
Members and Beneficiaries Receiving Payments	4,411,491
Total	$4,858,986

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	$4,858,986
2.	Projected UAL balance at 6/30/2020	294,407
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)	104,920
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	15,202
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	120,123

[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)	$414,529
11.	Plan's Share of Pool's MVA: (1) - (10)	$4,444,457

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%	11	434,398	43,578	419,728	44,776	402,792	46,008
Non-Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	(4,342)	(295)	(4,341)	(303)	(4,331)	(311)
Investment (Gain)/Loss	6/30/13	100%	Up/Down	2.75%	23	296,993	20,147	296,942	20,701	296,315	21,270
Investment (Gain)/Loss	6/30/14	100%	Up/Down	2.75%	24	(387,997)	(25,657)	(388,617)	(26,363)	(388,550)	(27,088)
Side Fund	2013 or Prior	No Ramp		2.75%	9	(414,022)	(47,290)	(394,086)	(48,591)	(371,409)	(49,927)
Assumption Change	6/30/14	100%	Up/Down	2.75%	14	216,372	20,575	210,235	21,140	203,084	21,722
Non-Investment (Gain)/Loss	6/30/15	100%	Up/Down	2.75%	25	(18,016)	(942)	(18,303)	(1,210)	(18,333)	(1,244)
Non-Investment (Gain)/Loss	6/30/16	100%	Up/Down	2.75%	26	(32,014)	(1,258)	(32,954)	(1,724)	(33,477)	(2,214)
Assumption Change	6/30/16	100%	Up/Down	2.75%	16	78,400	4,268	79,473	5,848	78,987	7,511
Non-Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(6,592)	(175)	(6,872)	(270)	(7,074)	(370)
Investment (Gain)/Loss	6/30/17	80%	Up/Down	2.75%	27	(136,439)	(3,627)	(142,238)	(5,590)	(146,412)	(7,658)
Assumption Change	6/30/17	80%	Up/Down	2.75%	17	88,890	3,241	91,760	4,996	93,015	6,844
Investment (Gain)/Loss	6/30/18	60%	Up/Down	2.75%	28	(44,582)	(609)	(47,073)	(1,251)	(49,074)	(1,929)
Assumption Change	6/30/18	60%	Up/Down	2.75%	18	143,959	2,684	151,260	5,516	156,142	8,501
Method Change	6/30/18	60%	Up/Down	2.75%	18	39,664	740	41,675	1,520	43,020	2,342
Non-Investment (Gain)/Loss	6/30/19	No Ramp		0.00%	19	19,620	0	20,993	1,916	20,481	1,916
Investment (Gain)/Loss	6/30/19	40%	Up Only	0.00%	19	20,115	0	21,523	471	22,542	941
Non-Investment (Gain)/Loss	6/30/20	No Ramp		0.00%	20	15,202	0	16,266	0	17,405	1,588
Investment (Gain)/Loss	6/30/20	20%	Up Only	0.00%	20	104,920	0	112,264	0	120,122	2,626
Total						414,529	15,380	427,635	21,582	435,245	30,528

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: 10 Year Amortization		Alternate Schedules: 5 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2022	435,245	30,528	435,245	59,908	435,245	102,621
6/30/2023	434,135	37,023	403,743	59,908	359,560	102,621
6/30/2024	426,228	43,994	370,036	59,908	278,577	102,621
6/30/2025	410,556	47,938	333,969	59,908	191,925	102,621
6/30/2026	389,706	51,431	295,378	59,908	99,208	102,622
6/30/2027	363,785	52,323	254,085	59,908		
6/30/2028	335,127	53,241	209,902	59,908		
6/30/2029	303,513	54,184	162,626	59,908		
6/30/2030	268,712	55,149	112,041	59,908		
6/30/2031	230,473	119,879	57,915	59,908		
6/30/2032	122,602	116,952				
6/30/2033	10,209	10,560				
6/30/2034						
6/30/2035						
6/30/2036						
6/30/2037						
6/30/2038						
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6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		**673,202**		**599,080**		**513,106**
Interest Paid		**237,957**		**163,835**		**77,861**
Estimated Savings				**74,122**		**160,096**

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	10.069%	$13,053	N/A
2017 - 18	10.110%	21,947	N/A
2018 - 19	10.609%	30,942	N/A
2019 - 20	11.432%	44,901	645,000
2020 - 21	12.361%	50,334	
2021 - 22	12.20%	21,582	
2022 - 23	12.21%	30,528	

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	$3,176,316	$2,789,638	$386,678	87.8%	$365,500
06/30/2012	3,329,338	2,730,187	599,151	82.0%	373,134
06/30/2013	3,494,779	3,009,248	485,531	86.1%	376,164
06/30/2014	3,806,425	3,407,986	398,439	89.5%	376,707
06/30/2015	3,898,690	3,303,082	595,608	84.7%	393,594
06/30/2016	3,918,330	3,134,508	783,822	80.0%	377,034
06/30/2017	4,064,725	3,286,636	778,089	80.9%	509,484
06/30/2018	4,634,973	3,784,258	850,715	81.6%	373,529
06/30/2019	4,751,432	3,827,649	923,783	80.6%	455,096
06/30/2020	4,858,986	4,444,457	414,529	91.5%	438,576

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	12.2%	12.2%	12.2%	12.2%
UAL Contribution	$44,000	$64,000	$88,000	$119,000
4.0%				
Normal Cost	12.2%	12.2%	12.2%	12.2%
UAL Contribution	$40,000	$54,000	$68,000	$86,000
7.0%				
Normal Cost	12.2%	12.2%	12.2%	12.2%
UAL Contribution	$37,000	$44,000	$48,000	$51,000
9.0%				
Normal Cost	12.5%	12.7%	13.0%	13.2%
UAL Contribution	$36,000	$40,000	$39,000	$36,000
12.0%				
Normal Cost	12.5%	12.7%	13.0%	13.2%
UAL Contribution	$32,000	$0	$0	$0

Discount Rate Sensitivity

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

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	**3.5%**	**4.5%**	**5.5%**
a) Total Normal Cost	25.25%	20.17%	16.29%
b) Accrued Liability	$5,382,662	$4,858,986	$4,416,717
c) Market Value of Assets	$4,444,457	$4,444,457	$4,444,457
d) Unfunded Liability/(Surplus) [(b) - (c)]	$938,205	$414,529	($27,740)
e) Funded Status	82.6%	91.5%	100.6%

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	21.54%	20.17%	18.57%
b) Accrued Liability	$5,093,645	$4,858,986	$4,547,224
c) Market Value of Assets	$4,444,457	$4,444,457	$4,444,457
d) Unfunded Liability/(Surplus) [(b) - (c)]	$649,188	$414,529	$102,767
e) Funded Status	87.3%	91.5%	97.7%

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	20.51%	20.17%	19.85%
b) Accrued Liability	$4,968,287	$4,858,986	$4,759,209
c) Market Value of Assets	$4,444,457	$4,444,457	$4,444,457
d) Unfunded Liability/(Surplus) [(b) - (c)]	$523,830	$414,529	$314,752
e) Funded Status	89.5%	91.5%	93.4%

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	4,433,469	4,411,491
2. Total Accrued Liability	4,751,432	4,858,986
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.93	0.91

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	3	3
2. Number of Retirees	14	14
3. Support Ratio [(1) / (2)]	0.21	0.21

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	$3,827,649	$4,444,457
2. Payroll	455,096	438,576
3. Asset Volatility Ratio (AVR) [(1) / (2)]	8.4	10.1
4. Accrued Liability	$4,751,432	$4,858,986
5. Liability Volatility Ratio (LVR) [(4) / (2)]	10.4	11.1

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	0.83	0.33	6.5	8.0
06/30/2018	0.94	0.21	10.1	12.4
06/30/2019	0.93	0.21	8.4	10.4
06/30/2020	0.91	0.21	10.1	11.1

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%
$4,444,457	$10,144,662	43.8%	$5,700,205	$8,139,501	54.6%	$3,695,044

[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	3	3
Average Attained Age	N/A	49.1
Average Entry Age to Rate Plan	N/A	45.1
Average Years of Credited Service	N/A	3.9
Average Annual Covered Pay	$151,699	$146,192
Annual Covered Payroll	$455,096	$438,576
Projected Annual Payroll for Contribution Year	$493,683	$475,763
Present Value of Future Payroll	$3,528,011	$3,332,310
Transferred Members	0	0
Separated Members	0	0
Retired Members and Beneficiaries		
Counts*	14	14
Average Annual Benefits*	N/A	$27,119

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)

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	No	Yes	No	
Transfers/Separated	No	No	No	
Receiving	Yes	Yes	Yes	
Benefit Provision				
Benefit Formula		2.5% @ 55		
Social Security Coverage		No		
Full/Modified		Full		
Employee Contribution Rate		8.00%		
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		No		
Special		No		
Alternate (firefighters)		No		
Post-Retirement Death Benefits				
Lump Sum	$500	$500	$500	
Survivor Allowance (PRSA)	No	No	No	
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 East Bay Dischargers Authority
(CalPERS ID: 5860828298)
Annual Valuation Report as of June 30, 2020

Dear Employer,

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

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

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

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

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

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

Required Contribution

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

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability	PEPRA Employee Rate
2022-23	7.47%	$67	6.75%
Projected Results			
2023-24	*7.5%*	*$67*	*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
East Bay Dischargers Authority

(CalPERS ID: 5860828298)

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

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Section 1

Plan Specific Information for the PEPRA Miscellaneous Plan of the East Bay Dischargers Authority

(CalPERS ID: 5860828298)
(Rate Plan ID: 26753)

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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 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 East Bay Dischargers Authority 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 East Bay Dischargers Authority 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	**7.47%**
Plus	
Required Payment on Amortization Bases[1]	**$67**
Paid either as	
1) Monthly Payment	**$5.58**
Or	
2) Annual Prepayment Option*	**$65**

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	N/A	14.22%
Surcharge for Class 1 Benefits[2]		
None	0.00%	0.00%
Phase out of Normal Cost Difference[3]	N/A	0.00%
Plan's Total Normal Cost	N/A	14.22%
Plan's Employee Contribution Rate[4]	N/A	6.75%
Employer Normal Cost Rate	N/A	7.47%

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

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

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

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

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for the 2022-23 fiscal year is $67. 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
$7,034	$67	$0	$67	$7,101

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

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

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

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

Plan's Funded Status

	June 30, 2019	June 30, 2020
1. Present Value of Projected Benefits (PVB)	N/A	$135,748
2. Entry Age Accrued Liability (AL)	N/A	9,514
3. Plan's Market Value of Assets (MVA)	N/A	9,265
4. Unfunded Accrued Liability (UAL) [(2) - (3)]	N/A	249
5. Funded Ratio [(3) / (2)]	N/A	97.4%

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 26753 Results					
Normal Cost %	7.47%	7.5%	7.5%	7.5%	7.5%	7.5%
UAL Payment	$67	$67	$67	$68	$68	$0

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

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

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

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown below, correspond to rate plan 26753. 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	$0	$569,930
Estimated Employer Normal Cost	$0	$65,125
Required Payment on Amortization Bases	$0	$30,595
Estimated Total Employer Contributions	$0	$95,720
Estimated Total Employer Contribution Rate (illustrative only)	0.00%	16.80%

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	$9,514
Transferred Members	0
Terminated Members	0
Members and Beneficiaries Receiving Payments	0
Total	$9,514

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	$9,514
2.	Projected UAL balance at 6/30/2020	0
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)	219
8.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (3) × (6)	30
9.	Plan's New (Gain)/Loss as of 6/30/2020: (7) + (8)	248

[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)	$249
11.	Plan's Share of Pool's MVA: (1) - (10)	$9,265

Schedule of Plan's Amortization Bases

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

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

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

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

Reason for Base	Date Est.	Ramp Level 2022-23	Ramp Shape	Escala-tion Rate	Amort. Period	Balance 6/30/20	Expected Payment 2020-21	Balance 6/30/21	Expected Payment 2021-22	Balance 6/30/22	Minimum Required Payment 2022-23
Fresh Start	6/30/20	No Ramp		0.00%	5	249	0	266	0	285	67
Total						**249**	**0**	**266**	**0**	**285**	**67**

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

Amortization Schedule and Alternatives

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

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

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

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

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

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

Amortization Schedule and Alternatives (continued)

			Alternate Schedules			
	Current Amortization Schedule		0 Year Amortization		0 Year Amortization	
Date	**Balance**	**Payment**	**Balance**	**Payment**	**Balance**	**Payment**
6/30/2022	285	67	N/A	N/A	N/A	N/A
6/30/2023	236	67				
6/30/2024	183	67				
6/30/2025	127	68				
6/30/2026	66	68				
6/30/2027						
6/30/2028						
6/30/2029						
6/30/2030						
6/30/2031						
6/30/2032						
6/30/2033						
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6/30/2041						
6/30/2042						
6/30/2043						
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
6/30/2050						
6/30/2051						
Total		**337**		**N/A**		**N/A**
Interest Paid		**52**		**N/A**		**N/A**
Estimated Savings				**N/A**		**N/A**

Employer Contribution History

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

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment ($)	Additional Discretionary Payments
2022 - 23	7.47%	$67	

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
06/30/2020	$9,514	$9,265	$249	97.4%	$86,807

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	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$81	$110	$150	$210
4.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$74	$88	$110	$140
7.0%				
Normal Cost	7.5%	7.5%	7.5%	7.5%
UAL Contribution	$67	$67	$68	$68
9.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	$120	$0	$0	$0
12.0%				
Normal Cost	7.6%	7.8%	8.0%	7.4%
UAL Contribution	$0	$0	$0	$0

Discount Rate Sensitivity

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

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2020	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	2.5%	2.5%	2.5%
Real Rate of Return	**3.5%**	**4.5%**	**5.5%**
a) Total Normal Cost	17.65%	14.22%	11.59%
b) Accrued Liability	$12,424	$9,514	$7,267
c) Market Value of Assets	$9,265	$9,265	$9,265
d) Unfunded Liability/(Surplus) [(b) - (c)]	$3,159	$249	($1,998)
e) Funded Status	74.6%	97.4%	127.5%

Sensitivity to the Price Inflation Assumption

As of June 30, 2020	1% Lower Inflation Rate	Current Assumptions	1% Higher Inflation Rate
Discount Rate	**6.0%**	**7.0%**	**8.0%**
Inflation	**1.5%**	**2.5%**	**3.5%**
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	15.20%	14.22%	13.05%
b) Accrued Liability	$10,251	$9,514	$8,629
c) Market Value of Assets	$9,265	$9,265	$9,265
d) Unfunded Liability/(Surplus) [(b) - (c)]	$986	$249	($636)
e) Funded Status	90.4%	97.4%	107.4%

Mortality Rate Sensitivity

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

As of June 30, 2020	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	14.49%	14.22%	13.97%
b) Accrued Liability	$9,697	$9,514	$9,341
c) Market Value of Assets	$9,265	$9,265	$9,265
d) Unfunded Liability/(Surplus) [(b) - (c)]	$432	$249	$76
e) Funded Status	95.5%	97.4%	99.2%

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	N/A	0
2. Total Accrued Liability	N/A	9,514
3. Ratio of Retiree AL to Total AL [(1) / (2)]	N/A	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	N/A	1
2. Number of Retirees	N/A	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	N/A	$9,265
2. Payroll	N/A	86,807
3. Asset Volatility Ratio (AVR) [(1) / (2)]	N/A	0.1
4. Accrued Liability	N/A	$9,514
5. Liability Volatility Ratio (LVR) [(4) / (2)]	N/A	0.1

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	N/A	N/A	N/A	N/A
06/30/2018	N/A	N/A	N/A	N/A
06/30/2019	N/A	N/A	N/A	N/A
06/30/2020	0.00	N/A	0.1	0.1

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%
$9,265	$28,010	33.1%	$18,745	$14,386	64.4%	$5,121

[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	N/A	1
Average Attained Age	N/A	33.9
Average Entry Age to Rate Plan	N/A	33.3
Average Years of Credited Service	N/A	0.7
Average Annual Covered Pay	N/A	$86,807
Annual Covered Payroll	N/A	$86,807
Projected Annual Payroll for Contribution Year	N/A	$94,167
Present Value of Future Payroll	N/A	$974,506
Transferred Members	N/A	0
Separated Members	N/A	0
Retired Members and Beneficiaries		
Counts*	N/A	0
Average Annual Benefits*	N/A	$0

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

* Values include community property settlements.

List of Class 1 Benefit Provisions

This plan has the additional Class 1 Benefit Provisions:

- None

Plan's Major Benefit Options

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

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

PEPRA Member Contribution Rates

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

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

		Basis for Current Rate		Rates Effective July 1, 2022			
Rate Plan Identifier	**Benefit Group Name**	**Total Normal Cost**	**Member Rate**	**Total Normal Cost**	**Change**	**Change Needed**	**Member Rate**
26753	Miscellaneous PEPRA Level	13.735%	6.75%	14.22%	0.485%	No	6.75%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

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

Agenda Explanation
East Bay Dischargers Authority
Financial Management Committee
September 20, 2021

ITEM NO. FM8 MOTION TO RESCIND ADDITIONAL DISCRETIONARY PAYMENT OF $65,861 TO REDUCE THE UNFUNDED ACCRUED LIABILITY OF THE AUTHORITY'S PENSION PLAN

Recommendation

Approve a motion to rescind approval for an Additional Discretionary Payment to the Authority's Pension Plan of $65,861.

Background

As discussed in Item No. FM7, the Authority participates in the California Public Employees' Retirement System (CalPERS) for its pension benefits. In 2019, the Authority adopted Other Post-Employment Benefit (OPEB) and Pension Funding Policies, including target funding levels of 80% and 95%, respectively. The Authority made lump sum pre-payments to both funds in 2020, prior to the effective date of the Amended and Restated Joint Powers Agreement (JPA), with the intention of reaching these targets. The Additional Discretionary Payment (ADP) made to the Authority's pension fund in 2020 was $645,000.

Discussion

At its April 2021 meeting, the Committee recommended allocating the CERBT disbursement discussed in Item No. FM7 to the pension fund as an ADP. A motion to approve this ADP of $65,861 was adopted at the Commission's July 2021 meeting. This decision was based on the latest actuarial information, which at the time projected a June 2021 funded ratio of 92.3%, shy of the Authority's 95% target.

In August, staff requested and received updated information from the Authority's CalPERS actuary. Thanks to an approximate FY 2020/2021 return of 21.3%, the Authority's projected funded ratio at June 30, 2021 is 101.5%. Based on this new information, staff is no longer recommending that the Authority make an ADP at this time. Staff therefore recommends that the Commission rescind the July 2021 motion to approve the ADP. The $65,861 that was received as a disbursement from CERBT would be credited to the Member Agencies as part of the fiscal year end close. Staff will continue to work with the Authority's actuary to assess whether an ADP is warranted in the future, as discount rates and returns fluctuate.

Agenda Explanation
East Bay Dischargers Authority
Financial Management Committee
September 20, 2021

ITEM NO. FM9 DRAFT BUDGET POLICY

Recommendation
Review Draft Budget Policy and provide direction to staff.

Background
Over the past several years, the Authority has been going through a process of updating its financial policies. The Authority historically had a comprehensive Financial Management System Policy and Procedures Manual. Each chapter is now being split into policies for consideration and adoption by the Commission, and procedures to be implemented by staff.

Discussion
Attached is a draft Budget Policy for the Committee's review and feedback. This Policy would replace the Financial Planning and Budgeting section of the existing manual, which was last updated in 2013, and was highly procedural.

POLICY NUMBER: 1.8

NAME OF POLICY: Finance – Budget

LAST REVISED: TBD

PREVIOUSLY REVISED: 05/16/13

PURPOSE: The budgeting function establishes control and accountability for Authority resources.

POLICY: It is the policy of the Authority to prepare and adopt a budget for the fiscal year to ensure that revenues are sufficient to meet operating and capital expenditures.

The draft budget shall be reviewed by the Managers Advisory Committee (MAC) and Financial Management Committee and approved by the Commission. Adoption of the annual Budget constitutes authority to bill Member Agencies for contributions. It also constitutes approval for expenditures for programs and authorizes the General Manager to make payment for them.

Major budgetary items include:

- Operations – salaries, benefits, chemicals, supplies, maintenance, professional services
- Renewal and Replacement Fund (Capital) Projects – those included on the Commission-approved Project List
- Special Projects – Studies and projects outside of normal operations
- Revenues from recycled water, brine, and grants
- Assessment for the Renewal and Replacement Fund

The Annual Budget must be completed and adopted by June 1, in accordance with the Joint Powers Agreement. The annual budget may be amended only upon approval of the Commission. The General Manager, however, has discretion of budget changes by account number. The General Manager shall report budget-to-actual results to the Commission on at least a quarterly basis.