

Board Agenda

Regular Meeting

Thursday, December 14, 2023 Camrosa Board Room 5:00 P.M.

TO BE HELD IN PERSON

The Board of Directors meeting will be held in person. The public and guests are welcome to attend at the District office: 7385 Santa Rosa Road Camarillo, CA 93012

Call to Order

Public Comments

At this time, the public may address the Board on any item <u>not</u> appearing on the agenda which is subject to the jurisdiction of the Board. Persons wishing to address the Board should fill out a white comment card and submit it to the Board Chairman prior to the meeting. All comments are subject to a <u>5-minute</u> time limit.

Matters appearing on the Consent Agenda are expected to be non-controversial and will be acted upon by the Board at one time, without discussion, unless a member of Board or the Staff requests an opportunity to address any given item. Items removed from the Consent Agenda will be discussed at the beginning of the Primary Items. Approval by the Board of Consent Items means that the recommendation of the Staff is approved along with the terms and conditions described in the Board Memorandum.

Consent Agenda

- 1. Approve Minutes of the Regular Meeting of November 9, 2023
- 2. Approve Minutes of the Special Meeting of December 5, 2023
- 3. <u>**Approve Vendor Payments</u>

Objective: Approve the payments as presented by Staff.

Action Required: Approve accounts payable in the amount of \$2,990,279.10.

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terny L. Foreman Division 5

General Manager Tony L. Stafford

Primary Agenda

4. <u>**CalPERS Unfunded Accrued Liability</u>

Objective: Receive a briefing from Urban Futures regarding the CalPERS Annual Valuation Report as of June 30, 2022.

Action Required: No action necessary; for information only.

5. <u>**Water Quality Sampling Stations</u>

Objective: Upgrade 42 routine water quality sampling stations.

Action Required: It is recommended that the Board of Directors authorize the General Manager to:

- 1) Appropriate \$40,000.00 from the potable capital improvement fund to establish a Water Quality Sampling Stations CIP; and
- Authorize the General Manager to enter into an agreement and issue a purchase order to MNS for \$30,200.00 to provide professional engineering services for the design of 42 water quality sampling stations.

6. Emergency Leak Repair

Objective: Ratify action regarding emergency leak repair on Santa Rosa Road.

Action Required: Ratify the payment to Sam Hill & Sons, Inc. in the amount of \$98,610.71, for an emergency leak repair.

7. <u>**Woodcreek Well Rehabilitation Project</u>

Objective: Award a contract for the rehabilitation of Woodcreek Well.

Action Required: It is recommended that the Board of Directors:

- 1) Appropriate additional funding in the amount of \$575,000.00 for the Woodcreek Well Rehabilitation from the potable capital replacement fund; and
- 2) Authorize the General Manager to award a contract to General Pump Company, Inc., in the amount of \$541,351.22, for the rehabilitation of Woodcreek Well.

CLOSED SESSION: The Board may enter closed sessions to confidentially discuss litigation and personnel matters as authorized by Government codes 54956.9(d) and 54957(b)respectively.

8. <u>Closed Session Conference with Legal Counsel – Litigation Matters</u>

Objective: To confer with and receive advice from counsel regarding litigation matters.

Action Required: No action necessary; for information only.

9. <u>Closed Session – Personnel Matters</u>

Objective: Discuss personnel matters.

Action Required: No action necessary; for information only.

Closed Sessions: The Board of Directors may hold a closed session to discuss personnel matters or litigation, pursuant to the attorney/client privilege, as authorized by Government Codes. Any of the items that involve pending litigation or personnel matters may require discussion in closed session on the recommendation of the Board's Legal Counsel.

** indicates agenda items for which a staff report has been prepared or backup information has been provided to the Board. The full agenda packet is available for review on our website at: www.camrosa.com/board-agendas/



December 14, 2023

Board of Directors Agenda Packet



Board Minutes

Regular Meeting

Camrosa Board Room Thursday, November 9, 2023 5:00 P.M.

Call to Order The meeting was convened at 5:00 P.M.

- Present: Eugene F. West, President Andrew F. Nelson, Vice-President (via teleconference) Jeffrey C. Brown, Director Timothy H. Hoag, Director Terry L. Foreman, Director
 - Staff: Tony Stafford, General Manager Norman Huff, Assistant General Manager Tamara Sexton, Deputy General Manager/Finance Jozi Zabarsky, Customer Service Manager Kevin Wahl, Superintendent of Operations Art Aseo, Engineering & Capital Projects Manager Greg Jones, Legal Counsel

Public Comments

None

Consent Agenda

1. Approve Minutes of the Regular Meeting of October 26, 2023

The Board approved the Minutes of the Regular Meeting of October 26, 2023.

Motion: Hoag Second: Brown Rollcall: Brown-Yes; Hoag-Yes; Foreman-Yes; West-Yes; Nelson-Yes

2. Approve Vendor Payments

A summary of accounts payable in the amount of \$503,302.63 was provided for Board information and approval. The Board approved the payments to vendors as presented by staff in the amount of \$503,302.63.

Motion: Hoag Second: Brown Rollcall: Brown-Yes; Hoag-Yes; Foreman-Yes; West-Yes; Nelson-Yes Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5

General Manager Tony L. Stafford

Primary Agenda

CLOSED SESSION: The Board entered into closed session at 5:02 PM to confidentially discuss litigation matters as authorized by Government code 54956.9(d).

3. <u>Closed Session Conference with Legal Counsel – Litigation Matters</u>

The Board conferred with and received advice from counsel regarding litigation matters.

No action was taken in the closed session.

The Board returned to open session at 5:34 PM.

Primary Agenda (continued)

4. <u>Recycled & Non-Potable Water Contractual Customers</u>

The Board discussed allowing the contracts to expire on their expiration date in 2027 with these customers then being subject to current rates and policies of the District.

No action necessary; for information only.

5. Local Production Update

The Board received a briefing on local water production through the first quarter of Fiscal Year 2023-24.

No action necessary; for information only.

6. <u>CWRF Confined Space Gas Monitor Capital Improvement Project</u>

The Board authorized the General Manager to:

- 1) Appropriate \$80,000.00 from the Wastewater Capital Replacement Fund and establish a CWRF Confined Space Gas Monitor Capital Improvement Project (CIP); and
- 2) Issue a purchase order to JPR Systems, Inc., in an amount not to exceed \$41,592.39, for the purchase of confined space gas monitoring equipment.

Motion: Brown Second: Nelson Rollcall: Brown-Yes; Hoag-Yes; Foreman-Yes; Nelson-Yes; West-Yes

7. Board of Directors Meeting Calendar for 2024

The Board adopted a calendar of regular Board meetings for calendar year 2024.

Motion: Hoag Second: Foreman Rollcall: Brown-Yes; Hoag-Yes; Foreman-Yes; Nelson-Yes; West-Yes

CLOSED SESSION: The Board cancelled the closed sessions to confidentially discuss personnel matters as authorized by Government codes 54957(b).

8. <u>Closed Session – Personnel Matters</u> (cancelled)

Comments by General Manager

• Emergency repairs were made at Santa Rosa and Hill Canyon Road and staff will bring the item to the Board at the next meeting.

Comments by Directors

- Director Brown requested a special meeting to discuss CalPERS.
- Director Nelson reported attending the recent Calleguas Board meeting.
- President West commended O&M on responding to the power/generator outage.

CLOSED SESSION: The Board re-entered into closed session at 6:22 PM to continue to confidentially discuss litigation matters as authorized by Government code 54956.9(d).

3. <u>Closed Session Conference with Legal Counsel – Litigation Matters</u>

The Board conferred with and received advice from counsel regarding litigation matters.

No action was taken in the closed session.

The Board returned to open session at 6:39 PM.

The Board opted to remain in the PFAS class action settlement of case.

Motion: Nelson Second: Brown Rollcall: Brown-Yes; Hoag-Yes; Foreman-Abstain; Nelson-Yes; West-Yes

Adjournment

There being no further business, the meeting was adjourned at 6:43 P.M.

Tony L. Stafford, Secretary/Manager Board of Directors Camrosa Water District Eugene F. West, President Board of Directors Camrosa Water District _(ATTEST)



Board Minutes

Special Meeting

Camrosa Board Room Tuesday, December 5, 2023 2:00 P.M.

Call to Order The meeting was convened at 2:00 P.M.

- Present: Eugene F. West, President Andrew F. Nelson, Vice-President Jeffrey C. Brown, Director Timothy H. Hoag, Director Terry L. Foreman, Director
 - Staff: Tony Stafford, General Manager
 Norman Huff, Assistant General Manager
 Tamara Sexton, Deputy General Manager/Finance (teleconference)
 Jozi Zabarsky, Customer Service Manager (teleconference)

Public Comments

None

Primary Agenda

CLOSED SESSION: The Board entered closed session at 2:04 PM to confidentially discuss personnel matters as authorized by Government code 54957(b).

1. <u>Closed Session to Discuss Personnel Matters – General Manager Recruitment</u>

The Board discussed the General Manager recruitment and transition.

No action was taken in the closed session.

The Board returned to open session at 3:24 PM.

Primary Agenda (continued)

2. Unfunded Liability Management Strategies

The Board and staff discussed CalPERs Unfunded Liability (UAL) management and strategies and agreed that an ad hoc committee would meet with staff to explore available retirement plan options.

No action necessary; for information only.

CLOSED SESSION: The Board cancelled the closed sessions to confidentially discuss litigation matters as authorized by Government code 54956.9(d).

3. <u>Closed Session Conference with Legal Counsel – Litigation Matters</u> (cancelled)

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5

General Manager Tony L. Stafford

Comments by General Manager

None

Comments by Directors

None

Adjournment

There being no further business, the meeting was adjourned at 4:07 P.M.

(ATTEST)

Tony L. Stafford, Secretary/Manager Board of Directors **Camrosa Water District** Eugene F. West, President Board of Directors **Camrosa Water District**



Board Memorandum

December 14, 2023

To: General Manager

From: Sandra Llamas, Sr. Accountant

Subject: Approve Vendor Payments

Objective: Approve the payments as presented by Staff.

Action Required: Approve accounts payable in the amount of \$2,990,279.10.

Discussion: A summary of accounts payable is provided for Board information and approval.

Payroll PR 11-1, 11-2, 11-3 & ME	\$	225,016.03
Accounts Payable 11/02/2023-12/06/2023	<u>\$</u>	<u>2,765,263.07</u>
Total Disbursements	\$	2,990,279.10

DISBURSEMENT APPI	ROVAL
BOARD MEMBER	DATE
BOARD MEMBER	DATE
BOARD MEMBER	DATE

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5 General Manager

Tony L. Stafford

Tony L. Stafford, General Manager

	CAL-Card Monthly Summary							
Date Purchased	Statement	Vendor	Purchase	Item Description	Staff			
11/02/23	11/22/23	Surfside Prints	\$994.66	Camrosa Hats	KW			
10/27/23	11/22/23	SQ Mobile Glass	\$741.65	Unit #34 Ranger Glass	кw			
10/25/23	11/22/23	Don & Toms	\$857.96	Unit #3 2012 F550 Brakes	КW			
10/23/23	11/22/23	Don & Toms	\$857.96	Unit #6 2015 F550 Brakes	КW			
11/21/23	11/22/23	Amazon	\$96.50	SDI pads for RMWTP	JS			
11/16/23	11/22/23	Amazon	\$392.39	Coffee for Camrosa	JS			
11/01/23	11/22/23	CSDS	\$82.11	Location flags for dig alerts	JS			
10/23/23	11/22/23	VIOC (Valvoline)	\$100.40	Unit 45 Oli Change	JS			
11/20/23	11/22/23	Harbor Freight	\$103.79	Tool box	GM			
10/28/23	11/22/23	Environmental Express	\$331.30	Tss filters	GM			
10/27/23	11/22/23	Amazon	\$79.60	Lab Electrode Holder	GM			
11/07/23	11/22/23	Amazon	\$291.68	Mini Freezer for water lab (fixed asset)	MP			
10/29/23	11/22/23	Amazon	\$40.07	Kitchen Supplies	JZ			
11/19/23	11/22/23	Amazon	\$22.50	Roll of nylon cord for Honda generator pull starts	BB			
11/15/23	11/22/23	Amazon	\$59.50	Coffee creamer	BB			
11/01/23	11/22/23	Harbor Freight	\$72.92	Handtruck for O&M building	BB			
10/31/23	11/22/23	VC Metals	\$188.56	Material for VFD backpanel	BB			
11/07/23	11/22/23	CMTA	\$50.00	Investment Policy Fundamentals Webinar	SLL			
11/07/23	11/22/23	GFOA	\$460.00	FY22/23 ACFR review	SLL			
10/30/23	11/22/23	GFUA Coder Velley, plumbing	\$150.00	Nembership Renewal	SLL			
11/09/23	11/22/23		\$115.00	Safety Reate For Mike Smith	MS			
11/17/23	11/22/23	John Deer Cal Coast	\$230.31	New battery for pond 1 nump				
11/05/23	11/22/23	Amazon	\$71.62					
11/05/23	11/22/23	Amazon	\$49.96	Electrolyte packets for employees	JC			
11/02/23	11/22/23	The Home Depot	\$43.36	Shop chainsaw tool parts	ĴĊ			
10/27/23	11/22/23	Quinn CAT	\$84.67	Coolant fluids for district generator rounds	JC			
10/31/23	11/22/23	Mobile Autoglass	\$323.25	Window Replacement for unit #37	MS			
10/31/23	11/22/23	Autozone	\$228.26	Truck Battery Replacement for unit #22	MS			
11/16/23	11/22/23	The Home Depot	\$496.94	Salt for Penny Well	КН			
11/16/23	11/22/23	The Home Depot	\$192.96	Pitch forks and rakes for diversion	КН			
11/15/23	11/22/23	Valvoline Instant Oil Change	\$154.42	Oil change and filter change for truck 36	KH			
11/03/23	11/22/23	The Home Depot	\$98.51	Cleaning supplies for RMWTP	КН			
11/01/23	11/22/23	Coastal Pipco	\$41.84	Parts for KMW I P Inventory	KH			
10/31/23	11/22/23	Staples	\$23.00	Supplies for Lab (Calpiers, 0-hings, ear muns)	CL			
10/31/23	11/22/23	Home Denot	\$16.03	Bleach for Lab	CI			
11/01/23	11/22/23	UPS	\$130.16	Shipped Samples to Weck Labs	CL			
11/01/23	11/22/23	Vons	\$6.42	Ice for shipping samples	CL			
11/17/23	11/22/23	Staples	\$54.14	Compressed air and scissors for lab	CL			
11/17/23	11/22/23	Las Posas Car Wash	\$23.99	Wash for Truck 33	CL			
10/24/23	11/22/23	Best Buy	\$10.91	JVC White Wired Earbuds for Teams Meetings	AA			
11/20/23	11/22/23	BNI Publications	\$163.59	Public Works Construction Manual: A Legal Guide for California; and Public Works Inspectors' Man	AA			
11/19/23	11/22/23	CA Board of PE, LS and Ge	\$180.00	CA Civil Engineer License Biennial Renewal. Current license expires 12/31/23.	AA			
11/15/23	11/22/23	Oil Stop	\$187.81	venicie Service	15			
11/02/23	11/22/23	Shell	\$41.05	fuel	TS			
10/24/23	11/22/23	Americas Tires	\$84.65	flat repair and tire pressure sensor replaced	TS			
11/21/23	11/22/23	SupplyUSAStore Aadapterd	\$55.40	Qtv 4 Micro-USB power adapters for Samsung Tablets	JW			
11/20/23	11/22/23	Network Solutions	\$18.97	ASRGSA.COM monthly hosting and forwarding - Nov Bill	JW			
11/19/23	11/22/23	Spectrum	\$95.32	Spectrum Cable	JW			
11/17/23	11/22/23	Browning Wireless	\$34.99	Monthly security camera fee - Lynwood Well and Conejo Wellfield	JW			
11/16/23	11/22/23	Mailchimp	\$69.00	Email blasts outreach/Monthly Fee	JW			
11/11/23	11/22/23	Callfire	\$99.00	Ionline IVR - Delinquent Call Out (Monthly Service Fee)	JW			
11/05/23	11/22/23	Newegg	\$272.39	Battery Replacements for Tripplite 1500 UPS (qty 2 batteries)	JW			
11/03/23	11/22/23	Thinking2	\$188.74	Dattery Replacements for Tripplite 1500 UPS (qty 2 batteries)	JVV			
11/02/23	11/22/23	Ininking2	\$160.00	Www.camrosa.com and asrgsa.com domain nosting	JVV			
11/01/23	11/22/23	Progress Software	\$230.32	Whateun Inswitch Network Monitoring software appual support renewal	JVV IW/			
11/01/23	11/22/23	Google com	\$172.80	google corporate email domain - camrosawaterdistrict org monthly charges - currently 12 seats	JW			
10/26/23	11/22/23	Spectrum	\$1,249.00	Spectrum Internet	JW			
10/25/23	11/22/23	AVTech	\$149.95	Annual renewal support for 2 server room temperature monitors	JW			
10/23/23	11/22/23	Network Solutions	\$18.97	ASRGSA.COM monthly hosting and forwarding - Oct Bill	JW			
11/17/23	11/22/23	John Deer	\$330.13	pond pump repair	KK			
11/02/23	11/22/23	Home Depot	\$477.20	shop tool	KK			
10/26/23	11/22/23	Home Depot	\$91.47	tools	KK			
11/22/23	11/22/23	Zoom	\$278.90	teleconterencing for Board & staff meetings	IDS			
11/15/23	11/22/23	AWA	\$66.00	vvatervvise meeting	DA			
11/15/23	11/22/23	AVVA Hilton Hotol	\$33.00	Waterwise meeting				
11/03/23	11/22/23	CASA	₹675 00	2024 CASA Willer Colli. (AN)				
11/01/23	11/22/23	Backgrounds Online	\$33.50	Background Check (RV)	DA			
10/23/23	11/22/23	AWA	\$30.00	AWA/CCWUC Training (TC)	DA			
			,					
			\$16,325.22					

Camrosa Water District

Accounts Payable Period:

11/02/2023-12/06/2023

Expense	Account Description	Amount
10302	Escrow Account-Cushman	6549.19
11100	AR Other	
11700	Meter Inventory	
11900	Prepaid Insurance	
11905	Prepaid Maintenance Ag	
13000	Land	
13400	Construction in Progress	534986.50
20053	Current LTD Bond 2016	
21800	Unclaimed Monies	
20400	Contractor's Retention	-216.36
20250	Non-Potable Water Purchases	
23001	Refunds Payable	1916.02
50110	Payroll FLSA Overtime-Retro	
50010	Water Purchases & SMP	1286607.51
50020	Pumping Power	175688.71
50100	Federal Tax 941 1 st QTR	
50012	CamSan Reclaimed Water	35695.20
50135	PERS Retirement	
50200	Utilities	5980.04
50210	Communications	8987.49
50220	Outside Contracts	162572.98
50230	Professional Services	39113.62
50240	Pipeline Repairs	139350.81
50250	Small Tool & Equipment	2639.18
50260	Materials & Supplies	76306.10
50270	Repair Parts & Equip Maint	164078.71
50280	Legal Services	7654.29
50290	Dues & Subscriptions	6260.00
50300	Conference & Travel	1302.72
50310	Safety & Training	4280.37
50330	Board Expenses	
50340	Bad Debt	
50350	Fees & Charges	96657.61
50360	Insurance Expense	
50500	Misc Expense	
50600	Fixed Assets	8852.38
50700	Interest Expense	
	TOTAL	\$2,765,263.07

Expense Approval Report

Camrosa Water District, CA

By Vendor Name Payable Dates 11/2/2023 - 12/6/2023 Post Dates 11/2/2023 - 12/6/2023

Payment N	Numt Post Date	Vendor Name	Payable Number	Description (Item)	Account Name	Purchase Orc	Amount
21	12/06/2023	BONDY GROUNDWATER CONSULTING. INC.	077-25 GSA	PM: Santa Rosa GSP	Prof services	FY22-0137-R	551.25
21	12/06/2023	BONDY GROUNDWATER CONSULTING, INC	. 097-04 GSA	Consulting Services GSA Track 2	Prof services	FY24-0001	1286.25
	,,			Vendor BON01 - I	BONDY GROUNDWATER CONSU	LTING, INC. Total:	1837.5
114	11/14/2023	CAMROSA WATER DISTRICT	1981	Reimb for EFT Pymt to Bondy Grwtr for inv 097-0	D3 Prof services		367.5
115	11/15/2023	INTERA INCORPORATED	10-23-45	Updating the numerical in the GSP	Prof services	FY23-0322-R1	4820
TOTAL	VENDOR PAY	MENTS-GSA				\$	7,025.00
Vendor: *(CAM* - DEPOSIT ONI	LY-CAMROSA WTR					
3413	11/09/2023	DEPOSIT ONLY-CAMROSA WTR	11-9-23-PR	Transfer to Disbursements Account	Transfer to disburser	ment	564000
3414	11/09/2023	DEPOSIT ONLY-CAMROSA WTR	11-9-23-AP	Transfer to Disbursements Account	Transfer to disburser	nent	2650000
				Vend	lor *CAM* - DEPOSIT ONLY-CAM	IROSA WTR Total:	3214000
Vendor: A	CL01 - ACLARA TECH	NOLOGIES					
60136	12/06/2023	ACLARA TECHNOLOGIES	23104828-RI	Aclara 3450 Water MTU	Repair Parts & Equip	men FY23-0316-R1	63243.18
60136	12/06/2023	ACLARA TECHNOLOGIES	23104828-RI	Aclara 3450 Water MTU	Repair Parts & Equip	men FY23-0316-R1	63243.18
					Vendor ACL01 - ACLARA TECH	HNOLOGIES Total:	126486.36
60073	11/07/2023	ADVANCE UTILITY SYSTEMS	ADVXT0000055	CIS upgrade	Construction in prog	ress FY24-0045	57600
Vendor: A	GR00 - AG RX INC.						
60137	12/06/2023	AG RX INC.	102588	Weed Abatement	Outsd contracts	FY24-0133	4320.16
60137	12/06/2023	AG RX INC.	102611	Weed Abatement	Outsd contracts	FY24-0134	2595.87
					Vendor AGR00 -	AG RX INC. Total:	6916.03
Vendor: A	IR05 - AIRGAS USA, I	LC.					
60074	11/14/2023	AIRGAS USA, LLC.	5503519054	Materials & Supplies - CO2 Well Sounding	Materials & supplies		34.9
60074	11/14/2023	AIRGAS USA, LLC.	9143616462	Materials & Supplies - CO2 Conejo Wells	Materials & supplies		50
60138	12/05/2023	AIRGAS USA, LLC.	5504231871	Material & Supplies-CO2 Well Sounding	Materials & supplies		34.1
60138	12/05/2023	AIRGAS USA, LLC.	9144543215	Material & Supplies-CO2 Tank Rental	Materials & supplies		50
					Vendor AIR05 - AIRGA	S USA, LLC. Total:	169
Vendor: A	LL11 - ALL PEST AND	REPAIR, INC.					
60075	11/14/2023	ALL PEST AND REPAIR, INC.	0027105	Pest Control-VTA1-1900	Outsd contracts		700
60075	11/14/2023	ALL PEST AND REPAIR, INC.	0027131	Pest Control-VTA1-7385	Outsd contracts		550
60139	12/05/2023	ALL PEST AND REPAIR, INC.	0027185	Pest Control-VTA1-1900	Outsd contracts		700
60139	12/05/2023	ALL PEST AND REPAIR, INC.	0027215	Pest Control-VTA1-7385	Outsd contracts		550
					Vendor ALL11 - ALL PEST AND R	EPAIR, INC. Total:	2500

Vendor: ALL	14 - ALLCONNECTE	DINC					
60076	11/15/2023	ALLCONNECTED INC	107661	All Connected Smart Connect and Aux Support	Outsd contracts	FY24-0003	13524.25
60076	11/15/2023	ALLCONNECTED INC	107664	AllConnected Cloud-Env CISv5	Construction in progress	FY24-0050	2066.88
60076	11/15/2023	ALLCONNECTED INC	43620	AllConnected Cloud-Env CISv5	Construction in progress	FY24-0050	15776
60140	11/28/2023	ALLCONNECTED INC	107750	All Connected Smart Connect and Aux Support	Outsd contracts	FY24-0003	13524.25
60140	12/05/2023	ALLCONNECTED INC	107751	Monthly Cloud Hosting Server Environment	Construction in progress	FY24-0131	2066.88
60140	12/06/2023	ALLCONNECTED INC	43653	Lynnwood Well IPSec Tunnel	Construction in progress	FY24-0111	1429.82
60140	11/28/2023	ALLCONNECTED INC	43666	All Connected Smart Connect and Aux Support	Outsd contracts	FY24-0003	4915.5
				V	/endor ALL14 - ALLCONNEC	TED INC Total:	53303.58
60141	12/05/2023	AMANDA LOWERY	00003056	Deposit Refund Act 3056 - 5662 Willow View Dr	Refunds payable		17.2
60077	11/15/2023	ARBITRAGE COMPL SPEC, INC	1034500	Arbitrage 2016A Series	Prof services		630
60142	12/05/2023	BASELINE ENTERPRISES	21152	Fuel Tank Inspection-November	Outsd contracts		981.75
1291	11/14/2023	BCDI AV Acquisition, Inc.	PS-INV103706	GAC Vessels for Conejo Wellfield Treatment Plant	Construction in progress		53565.26
60143	12/04/2023	BERNARD FLEMING	00007327	Deposit Refund Act 7327- 269 Calle Orovista	Refunds payable		189.49
60078	11/14/2023	BLACK & VEATCH CORP	6712107	Five-year water and wastewater rate study	Prof services	FY23-0279-R1	3920
1306	12/06/2023	BONDY GROUNDWATER CONSULTING, INC	. 094-06	Project Management for District PV Modeling	Prof services	FY24-0020	367.5
60079	11/14/2023	BOUTWELL*FAY LLP	37976	Def Comp Legal Services	Legal services		315
60144	12/06/2023	CALIFORNIA SURVEYING & DRAFTING SUPP	PL 91387779	Dig Alert Stake Chasers	Materials & supplies		76.45
Vendor: CAL	.03 - CALLEGUAS M	IUNICIPAL WATER DISTRICT					
1292	11/14/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	104923	Water Purchases-Potable	Water purchases-Potable	е	643724.9
1292	11/14/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	104923	Water Purchases	CMWD Fixed Charges		76995
1292	11/14/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	104923	Water Purchases N-P	Water purchases N-P		62095.43
1292	11/14/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	2024-00000004	Chemicals - Conejo Wells	SMP CWD-RMWTP		330
1292	11/14/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	SMP101123	SMP CMWD - SMP pipeline fee	SMP CWD-RMWTP		8448.46
1292	11/14/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	SMP101123	SMP CMWD - SMP pipeline fee	SMP CMWD		541
1307	12/06/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	116223	Water Purchase Potable	Water purchases Potable	2	366645.88
1307	12/06/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	116223	Water Purchase	CMWD Fixed Charges		76995
1307	12/06/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	116223	Water Purchase N-P	Water purchases N-P		36858.63
1307	12/06/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	SMP-115323	SMP CMWD-SMP Pipeline	SMP CWD-RMWTP		13432.21
1307	12/06/2023	CALLEGUAS MUNICIPAL WATER DISTRICT	SMP-115323	SMP CMWD-SMP Pipeline	SMP CMWD		541
				Vendor CAL03 - CALLEO	GUAS MUNICIPAL WATER D	ISTRICT Total:	1286607.51
Vendor: CAN	103 - Cannon Corpo	pration					
60080	11/07/2023	Cannon Corporation	86240	Contract Inspection Services	Outsd contracts	FY24-0110	816
60080	11/07/2023	Cannon Corporation	86242	Contract Inspection Services	Outsd contracts	FY24-0110	136
60080	11/15/2023	Cannon Corporation	86244	Contract Inspection Services	Outsd contracts	FY24-0110	2233
60080	11/07/2023	Cannon Corporation	86246	Contract Inspection Services	Outsd contracts	FY24-0110	2775.75
60080	11/07/2023	Cannon Corporation	86248	Contract Inspection Services	Outsd contracts	FY24-0110	6566.75
60080	11/14/2023	Cannon Corporation	86406	AG 3 Tank Design Services	Construction in progress	FY23-0201-R1	14436
60080	11/15/2023	Cannon Corporation	86537	Contract Inspection Services	Outsd contracts	FY24-0110	340
60080	11/15/2023	Cannon Corporation	86538	Contract Inspection Services	Outsd contracts	FY24-0110	1224
60080	11/15/2023	Cannon Corporation	86539	Contract Inspection Services	Outsd contracts	FY24-0110	2380
60080	11/15/2023	Cannon Corporation	86540	Contract Inspection Services	Outsd contracts	FY24-0110	4300.5
60080	11/15/2023	Cannon Corporation	86541	Contract Inspection Services	Outsd contracts	FY24-0110	854.5
60080	11/15/2023	Cannon Corporation	86554	Design Camsprings new waterline under Conejo Creek	Construction in progress	FY22-0273-R2	276.75
				Ve	endor CAN03 - Cannon Corp	oration Total:	36339.25
60081	11/14/2023	CASA	7516	CASA Membership	Dues & subscrip		5410

Vendor: CEN	N04 - CENTRAL CON	IMUNICATIONS				
60082	11/07/2023	CENTRAL COMMUNICATIONS	000030-754-191	After Hours Call Center	Communications	473.5
60145	12/06/2023	CENTRAL COMMUNICATIONS	000031-073-951	After Hours Services-December 2023	Communications	503.45
				Vendor (CEN04 - CENTRAL COMMUNICATIONS Total:	976.95
60083	11/15/2023	Central Courier LLC	54144	Courier Service	Outsd contracts	338.64
60146	12/05/2023	CITY OF CAMARILLO	30999	Recycled Wtr CamSan-July-August-Septem-2023	CamSan Water	35695.2
60084	11/15/2023	CITY OF THOUSAND OAKS	901-110123	Sewer Service for the Read Rd Tract 5142	Outsd contracts	1144.08
60147	12/06/2023	CLIFTON LARSON ALLEN LLP	3985854	Professional Auditing services FY2022-23	Prof services FY23-0165-R:	1954.9
60148	11/28/2023	CONCORD UTILITY SERVICES	4564	Meter & MTU Installation in Potable Zones 1 and 2	Construction in progress FY23-0166-R:	5306.25
60149	12/05/2023	CONSOR NORTH AMERICA, INC.	W232492CA.00-1	Design Services for Iron/MN Removal	Construction in progress FY24-0084	12185.77
60085	11/15/2023	CORELOGIC INFORMATION SOLUTIONS, IN	C 30690846	Assessors Parcel Info for Ventura County	Outsd contracts	159.14
60150	12/06/2023	COUNTY FIRE PROTECTION	23-29732	Annual Fire Extinguisher Recertifications	Repair parts & equipmen FY24-0136	2773.67
Vendor: CO	U03 - COUNTY OF V	ENTURA PUBLIC WORKS				
60086	11/14/2023	COUNTY OF VENTURA PUBLIC WORKS	364652	Encroachment Permit-PE23-0842	Outsd contracts	1430
60151	12/06/2023	COUNTY OF VENTURA PUBLIC WORKS	WellPermit 2024	Monitorning Well Heritage Park-Permit Fee		390
				Vendor COU03 - C	COUNTY OF VENTURA PUBLIC WORKS Total:	1820
Vendor: CO	U11 - COUNTY OF V	ENTURA-CLERK RECORDER	442022			50
60134	11/20/2023	COUNTY OF VENTURA-CLERK RECORDER	112023	NOE for Heritage Park Monitoring Well		50
				Vendor COOTI - CO		50
Vendor: CUI	11/14/2022		1969946	Water Coftanar, Danny Wall	Outed contracts	70 5
60152	12/05/2023	CULLIGAN OF VENTURA COUNTY	1870104	Water Softener - Penny Well	Outsd contracts	70.5
00102	12,00,2020		10/0101	Vendor CUL	.02 - CULLIGAN OF VENTURA COUNTY Total:	146
60153	12/06/2023	CUSTOM PRINTING	168490	Business Cards for New Employees	Materials & supplies	182.32
60088	11/09/2023	CYNTHIA COCHRAN	00001660	Deposit Refund Act 1660- 5053 Galano Dr	Refunds payable	43.02
60089	11/15/2023	DAVMAR AIR	11941	Air Compressor Maintenance	Outsd contracts FY24-0116	2556.21
60154	12/04/2023	DINA A CAPELLA	00001729	Deposit Refund-Act 1729 - 451 Estancia Pl	Refunds pavable	27.89
Vendor: FJH	I01 - F.J. HARRISON	& SONS INC				
60090	11/14/2023	E.J. HARRISON & SONS INC	254	Trash Removal-Diversion (Act 5-0076824-5)	Outsd contracts	370.86
60090	11/15/2023	E.J. HARRISON & SONS INC	5260	Trash Removal CWRF	Outsd contracts	512.95
60090	11/14/2023	E.J. HARRISON & SONS INC	611	Trash Removal- Role-Off Bins (Act 5-0080466-9)	Outsd contracts	564.63
				Vend	or EJH01 - E.J. HARRISON & SONS INC Total:	1448.44
Vendor: ENH	H01 - Enhanced Lan	dscape Development, Inc				
60091	11/14/2023	Enhanced Landscape Development, Inc	2736	Landscaping Montly Charges-November 2023	Outsd contracts	1836.19
60091	11/14/2023	Enhanced Landscape Development, Inc	3248	Irrigation Repair	Outsd contracts	246
60155	12/06/2023	Enhanced Landscape Development, Inc	4255	Landscaping-December 2023	Outsd contracts	1836.19
				Vendor ENH01 - Er	hanced Landscape Development, Inc Total:	3918.38
1293	11/15/2023	ENTERPRISE FLEET SERV INC	FBN4891549	Vehicle Leases	Outsd contracts	9752.03
60156	11/28/2023	ENVIRONMENTAL RESOURCE ASSOCIATES	060057	Laboratory Materials for Staff Training	Materials & supplies	1397.2
Vendor: \E1	.07 - ESQUIRE PROP	ERTY MANAGEMENT				
60092	11/09/2023	ESQUIRE PROPERTY MANAGEMENT	0000894	Deposit Refund Act 894 - 822 Paseo Serenata	Refunds payable	8.97
60157	12/04/2023	ESQUIRE PROPERTY MANAGEMENT	00010526	Deposit Refund Acy 10526- 445 Castiano St		16.78
				Vendor (E107	- ESQUIRE PROPERTY IVIANAGEIVIENT TO(al:	25./5

Vendor: FAN	101 - FAMCON PIPE	& SUPPLY, INC				
60093	11/14/2023	FAMCON PIPE & SUPPLY, INC	S100107318-001	Materials & Supplies - Conejo Wells	Materials & supplies	381.81
60093	11/14/2023	FAMCON PIPE & SUPPLY, INC	S100114569-001	Materials & Supplies - Yard Stock	Materials & supplies	579.02
60093	11/15/2023	FAMCON PIPE & SUPPLY, INC	S100115195-001	Armorcast Airvac Cans	Materials & supplies FY24-0095	1694.55
60158	12/05/2023	FAMCON PIPE & SUPPLY, INC	S100116366-001	Repair Couplings for NP Pipe Repair	Repair parts & equipmen	577.01
				Vendor FAN	101 - FAMCON PIPE & SUPPLY, INC Total:	3232.39
1294	11/15/2023	First Republic Bank	Retention Pymt 22	Escrow from Retention Pymt 22	Escrow Account-James Cu	6549.19
60094	11/07/2023	FOX CANYON GROUNDWATER MANAGEME	12023-2 Extraction I	F CMRSA- FCGMA ExtractionnFees(4-01 th 9-30 2023)	Fees & charges	47449.71
60159	12/05/2023	Frontier Communications	December 2023	VOIP - Land Lines	Communications	589.9
Vendor: FRU	01 - FRUIT GROWEF	S LAB. INC.				
60095	11/14/2023	FRUIT GROWERS LAB. INC.	316528A	Outside Lab Analysis	Outsd contracts	158
60095	11/14/2023	FRUIT GROWERS LAB. INC.	317267A	CASA Membership	Outsd contracts	577
60095	11/07/2023	FRUIT GROWERS LAB. INC.	317856A	Outside Lab Analysis	Outsd contracts	39
60095	11/14/2023	FRUIT GROWERS LAB. INC.	318010A	Outside Lab Work for the Round Mountain Deslater	Outside Contracts	39
60095	11/07/2023	FRUIT GROWERS LAB. INC.	318011A	Outside Lab Analysis	Outsd contracts	39
60095	11/15/2023	FRUIT GROWERS LAB. INC.	318012A	Outside Lab Analysis	Materials & supplies	67
60160	11/28/2023	FRUIT GROWERS LAB. INC.	317436A	Outside Lab Work for CWRF	Outsd contracts	58
60160	11/28/2023	FRUIT GROWERS LAB. INC.	318236A	Outside Lab Analysis	Outsd contracts	35
60160	11/28/2023	FRUIT GROWERS LAB. INC.	318301A	Outside Lab Work	Outsd contracts	88
60160	11/28/2023	FRUIT GROWERS LAB. INC.	318392A	Outside Lab Analysis GAC Plant	Outsd contracts	428
60160	11/28/2023	EBUIT GROWERS LAB. INC.	318393A	Round Mountain Outside Lab Work	Outside Contracts	39
60160	11/28/2023	FRUIT GROWERS LAB. INC.	318394A	Round Mountain Outside Lab Work	Outside Contracts	39
60160	11/28/2023	FRUIT GROWERS LAB INC	3183954	Outside Lab Work for CWRE	Outsd contracts	239
60160	11/28/2023	FRUIT GROWERS LAB. INC.	318397A	Outside Lab Work for CWRF	Outsd contracts	312
60160	11/28/2023	FRUIT GROWERS LAB INC	3185954	Outside Lab Work for the GAC Plant	Outsd contracts	35
60160	12/06/2023	FRUIT GROWERS LAB. INC	318596A	Outside Lab Analysis	Outsd contracts	39
60160	12/06/2023		3185974	Outside Lab Analysis	Outsd contracts	944
60160	12/06/2023	FRUIT GROWERS LAB. INC	3192424	Outside Lab Analysis	Outsd contracts	120
60160	12/06/2023		3193534	Outside Lab Analysis	Outsd contracts	39
60160	12/06/2023		2102511	Outside Lab Analysis	Outsd contracts	19/
00100	12/00/2025	There one were table inc.	313334A	Vendor F	RU01 - FRUIT GROWERS LAB. INC. Total:	3518
60161	12/04/2023	GARY S PURNELL	00001048	Deposit Refund Act 1048 - 5953 Paseo Encantada	Refunds payable	22.6
Vendor: GEI)1 - GEIGER ENTERP	RISES, INC.				
60096	11/14/2023	GEIGER ENTERPRISES, INC.	23-1703	Materials & Supplies - Generator Fuel	Materials & supplies	1756.2
60162	12/05/2023	GEIGER ENTERPRISES. INC.	23-1806	Materials & Supplies - FUEL	Materials & supplies	300.89
60162	12/05/2023	GEIGER ENTERPRISES. INC.	23-1844	Generator Fuel	Materials & supplies	726.13
	, ,			Vendor	GEI01 - GEIGER ENTERPRISES, INC. Total:	2783.22
Vendor: GEN	06 - GENERAL PUM	P COMPANY, INC				
60097	11/15/2023	GENERAL PUMP COMPANY, INC	30762	Well rehabilitation services for the Woodcreek Wel	Construction in progress FY24-0101	26970
60163	12/06/2023	GENERAL PUMP COMPANY, INC	81265-Retention R	eRetention Release-Tierra Rejada Rehab Project	Contractor's retention	12974.53
				Vendor GEN06	6 - GENERAL PUMP COMPANY, INC Total:	39944.53
60098	11/15/2023	GIBBS GIDEN LOCHER TURNER SENET & WIT	Т 318595	Legal Services Conejo Wellfield	Construction in progress	1300
60099	11/15/2023	GMS Landscaping Inc	204206	Tree and Site Maintenances	Outsd contracts FY24-0104	1500
Vendor: HAC	01 - HACH COMPAN	IY				
60100	11/15/2023	HACH COMPANY	13806533	Materials & Supplies - RMWTP SDI Pads	Materials & supplies	277.78
60164	12/06/2023	HACH COMPANY	13824556	Reagents RMWTP	Materials & Supplies-RM\FY24-0135	1840.52
					Vendor HAC01 - HACH COMPANY Total:	2118.3
1295	11/14/2023	HealthEquity	qq8eu3	Consumer Driven Health Savings Plan-Admon Fees Nov	Fees & charges	5.9

60165	12/06/2023	HOGENTOGLER & CO INC.	0308351IN	Mettler Toledo Balance for Wastewater Lab	Fixed Assets-Internal	8560.7
60166	12/05/2023	HOSE-MAN, INC.	00049930	Lynnwood Backwash Flow Testing	Materials & supplies	531.48
Vendor: HF	PS01 - HYDROPRO S	OLUTIONS				
60167	12/05/2023	HYDROPRO SOLUTIONS	0002361-IN	Meter Purchase Octaves	Repair Parts & Equipmen FY24-0128	15248.68
60167	12/05/2023	HYDROPRO SOLUTIONS	0002361-IN	Meter Purchase Octaves	Repair Parts & Equipmen FY24-0128	4554.8
				Ve	ndor HPS01 - HYDROPRO SOLUTIONS Total:	19803.48
60101	11/09/2023	IDEXX LABORATORIES, INC	3140187001	Laboratory Testing Materials	Materials & supplies	121.07
60168	12/06/2023	INFOSEND, INC.	250979	Monthly Processing and Mailing Statements-Novembe	r Outsd contracts	5222.08
60102	11/15/2023	INTERA INCORPORATED	10-23-89	Pleasant Valley Basin Modeling	Prof services FY24-0016	2160
60103	11/15/2023	INTERNATIONAL WATER SCREENS	INV0014049	Diversion Screens Repair	Construction in progress FY24-0087	70416.27
60104	11/09/2023	JAMES C CUSHMAN, INC.	00000008	Fire Hydrant Deposit Refund -Act 8-105922	Refunds payable	1000
Vendor: CL	JS05 - JAMES C. CUS	HMAN, INC.				
60105	11/15/2023	JAMES C. CUSHMAN, INC.	CUS05-Pymt 22	GAC Change Order No. 6	Construction in progress FY22-0179-R2	25886
60105	11/15/2023	JAMES C. CUSHMAN, INC.	CUS05-Pymt 22	Cushman - Change Order No. 7	Construction in progress FY22-0179-R2	29097.89
60105	11/15/2023	JAMES C. CUSHMAN, INC.	CUS05-Pymt 22	Additional Grading and Utility Raising	Construction in progress FY22-0179-R2	76000
60105	11/15/2023	JAMES C. CUSHMAN, INC.	Retention on Pym	t Retention on Payment 22	Contractor's retention	-6549.19
				Venc	lor CUS05 - JAMES C. CUSHMAN, INC. Total:	124434.7
Vendor: JA	N01 - Janitek Cleani	ng Solutions-Allstate Cleaning, Inc.				
60106	11/14/2023	Janitek Cleaning Solutions-Allstate Cleaning	g, 51194A	Janitorial Services-November 2023	Outsd contracts	1772
60169	12/05/2023	Janitek Cleaning Solutions-Allstate Cleaning	g, 51452A	Cleaning Service - December 2023	Outsd contracts	1772
				Vendor JAN01 - Janitek Clea	aning Solutions-Allstate Cleaning, Inc. Total:	3544
60170	12/04/2023	JEANNETTE DA SILVA CURIEL	00002788	Overpayment Closed Act-2788- 6059 Fremont Cir	Refunds payable	31.55
60171	12/04/2023	JENNY MORGAN	00002869	Deposit Refund Act 2869 - 5929 Palomar Cir	Refunds payable	143.54
60172	12/05/2023	JORDAN, GILBERT & BAIN LANDSCAPE ARC	H 2023-186	Landscape Design Services at PV Well No. 2	Construction in progress FY23-0163-R:	320
60173	12/05/2023	LINDE GAS & EQUIPMENT INC	39563968	Acetylene Gas Cylinders	Materials & supplies	82.93
60174	12/04/2023	MARGARET GRAY	00012066	Deposit Refund Act 120662450 Rondell Rd	Refunds payable	21.91
60175	12/04/2023	MING -FUN CHEN	00010076	Overpayment Closed Act-10076- 383 Nuez St	Refunds payable	65.15
60176	12/04/2023	NICHOLAS KROL	00006697	Deposit Refund Act 6697- 5358 Corte Pico Verde	Refunds payable	26.23
60107	11/15/2023	NICK'S TRUCK & TRACTOR REPAIR, INC.	120415	Vehicle Repair Unit #6	Repair parts & equipmen	760
Vendor: NO	OR07 - NORTHSTAR	CHEMICAL				
60108	11/14/2023	NORTHSTAR CHEMICAL	267422	Chemicals - Conejo Wells	Materials & supplies	2608.69
60108	11/14/2023	NORTHSTAR CHEMICAL	267423	Chemicals - Tierra Rejada Well	Materials & supplies	1503.5
60177	12/05/2023	NORTHSTAR CHEMICAL	268449	Chemicals - RMWTP	Materials & Supplies-RM	6993.24
60177	12/05/2023	NORTHSTAR CHEMICAL	268464	Chemicals - RMWTP	Materials & Supplies-RM	4909.24
				Ve	ndor NOR07 - NORTHSTAR CHEMICAL Total:	16014.67
60178	12/06/2023	OCCU-MED, LTD.	1123711oa	New Hire Physical (CL)	Outsd contracts	290.5
60109	11/15/2023	OLIN CORP-CHLOR ALKALI	900348130	Materials & Supplies - Chemicals CWRF	Materials & supplies	10477.04
Vendor: PA	AC13 - PACIFIC LOW	VOLTAGE				
60110	11/16/2023	PACIFIC LOW VOLTAGE	5177	Security Cameras (CIP 400-24-01)	Construction in progress FY24-0061	28229
60110	11/16/2023	PACIFIC LOW VOLTAGE	5177	Ubiquiti RF Link	Construction in progress FY24-0061	1255
				Ve	endor PAC13 - PACIFIC LOW VOLTAGE Total:	29484

Vendor: Pl	ER02 - PERLITER & IN	NGALSBE				
60111	11/07/2023	PERLITER & INGALSBE	18822	Additional Eng. Support Services	Construction in progress REQ00057-R6	251
60179	12/05/2023	PERLITER & INGALSBE	18829	Additional Eng. Support Services	Construction in progress REQ00057-R6	1802.5
				Ve	endor PER02 - PERLITER & INGALSBE Total:	2053.5
Vendor: Pl	RO05 - PROVOST & F	PRITCHARD CONSULTING GROUP				
60180	12/05/2023	PROVOST & PRITCHARD CONSULTING	GROU105275	GAC CEQA	Construction in progress FY21-0176-R:	696.26
60180	12/05/2023	PROVOST & PRITCHARD CONSULTING	GROU105275-1	GAC Engineering	Construction in progress FY20-0326-R4	1080
				Vendor PRO05 - PROVOST	& PRITCHARD CONSULTING GROUP Total:	1776.26
Vendor: P	UR01 - PURETEC IND	OUSTRIAL WATER				
60112	11/14/2023	PURETEC INDUSTRIAL WATER	2122197	Deionized Water Service	Materials & supplies	84.5
60112	11/14/2023	PURETEC INDUSTRIAL WATER	2123723	Chemicals RMWTP	Materials & Supplies-RM	18074.9
				Vendor PL	JR01 - PURETEC INDUSTRIAL WATER Total:	18159.4
60113	11/15/2023	QUALITY AG, INC	119921	Diversion clean up	Outsd contracts FY24-0117	3008
60114	11/09/2023	ROGER ANDERSON	00003753	Deposit Refund Act 3753 - 1232 Misiion Verde Dr	Refunds payable	59.06
60181	12/04/2023	ROWENA M PEREZ	00008697	Deposit Refund Act 8697 - 5329 Calarosa Ranch Rd	Refunds payable	15.13
Vendor: R	OY03 - ROYAL INDUS	STRIAL SOLUTIONS				
60115	11/15/2023	ROYAL INDUSTRIAL SOLUTIONS	9009-1037596	Repair Parts - Effluent VDFs	Repair parts & equipment	193.26
60115	11/15/2023	ROYAL INDUSTRIAL SOLUTIONS	9009-1040920	Repair Parts Fuses	Repair parts & equipmen FY24-0094	1148.78
				Vendor ROY	03 - ROYAL INDUSTRIAL SOLUTIONS Total:	1342.04
Vendor: R	TL01 - RT LAWRENCE	E CORPORATION				
60116	11/15/2023	RT LAWRENCE CORPORATION	48580	Lockbox services Processing October 2023 Payments	Outsd contracts	709.74
60182	12/06/2023	RT LAWRENCE CORPORATION	48429	Lockbox Services - August 2023 Processing Payments	Outsd contracts	703.07
				Vendor R	TL01 - RT LAWRENCE CORPORATION Total:	1412.81
Vendor: S	AM01 - SAM HILL & S	SONS, INC.				
60117	11/15/2023	SAM HILL & SONS, INC.	4668	Leak Repair Air Vac Replacement	Pipeline repairs FY24-0118	3894.34
60117	11/15/2023	SAM HILL & SONS, INC.	4670	Leak Repair Main Lineir	Pipeline repairs FY24-0119	21209.65
60117	11/15/2023	SAM HILL & SONS, INC.	4678	Leak Repair Non-Potable Mainline	Pipeline repairs FY24-0121	98610.71
60117	11/15/2023	SAM HILL & SONS, INC.	4682	Leak Repair 1" Service Line	Pipeline repairs FY24-0120	10958.78
60183	12/06/2023	SAM HILL & SONS, INC.	4712	Leak Repair 4" Non-Potable	Pipeline repairs FY24-0137	4677.33
				Ven	dor SAM01 - SAM HILL & SONS, INC. Total:	139350.81
Vendor: So	CF01 - SC Fuels					
60118	11/14/2023	SC Fuels	2509590IN	Materials & Supplies - FUEL	Materials & supplies	1552.66
60118	11/14/2023	SC Fuels	2514837IN	Materials & Supplies - FUEL	Materials & supplies	2233.65
60184	12/05/2023	SC Fuels	2518957IN	Material & Supplies - FUEL	Materials & supplies	1510.85
60184	12/05/2023	SC Fuels	2525664IN	Material & Supplies - FUEL	Materials & supplies	1323.28
60184	12/05/2023	SC Fuels	2529038IN	Material & Supplies - FUEL	Materials & supplies	1609.19
60184	12/05/2023	SC Fuels	2531551IN	Material & Supplies - FUEL - Pond 1	Materials & supplies	2084.43
					Vendor SCF01 - SC Fuels Total:	10314.06
Vendor: SI	G03 - SIGNATURE RI	ESOLUTION, LLC				
1305	12/01/2023	SIGNATURE RESOLUTION, LLC	54873	PS MEDIATION	Construction in progress	5450
				Vendor S	IG03 - SIGNATURE RESOLUTION, LLC Total:	5450
Vendor: SI	VIT01 - SM TIRE, INC	•				
60119	11/14/2023	SM TIRE, INC.	252957	Repair Parts- Shop Tractor Tire Repair	Repair parts & equipmen	382.23
60119	11/14/2023	SM TIRE, INC.	253057	Repair Parts- CWRF Tractor Tire Repair	Repair parts & equipmen	637.61
					Vendor SMT01 - SM TIRE, INC. Total:	1019.84

Vendor: T	OM03 - S-MT SALES,	INC.					
60185	12/06/2023	S-MT SALES, INC.	17076	Tank Ladder Enclouser	Repair Parts & Equi	pmen [:] FY24-0023	1800
60185	12/06/2023	S-MT SALES, INC.	17077	Repair Parts and Equipment-Site Rehab	Repair parts & equi	pmen	405
60185	12/06/2023	S-MT SALES, INC.	17078	Repair Parts and Equipment-Site Rehab	Repair parts & equi	pmen	405
					Vendor TOM03 - S-M1	SALES, INC. Total:	2610
Vendor: So	CE01 - SOUTHERN CA	ALIF. EDISON					
1298	11/14/2023	SOUTHERN CALIF. EDISON	November 2023	November 2023 Stament	Pumping power-Pot	table	50030.55
1298	11/14/2023	SOUTHERN CALIF. EDISON	November 2023	November 2023 Stament	Pumping Power-RN	1WTP	10907.55
1298	11/14/2023	SOUTHERN CALIF. EDISON	November 2023	November 2023 Stament	Pumping power N-F)	114750.61
1298	11/14/2023	SOUTHERN CALIF. EDISON	November 2023	November 2023 Stament	Utilities		5948.1
				v	endor SCE01 - SOUTHERN CA	ALIF. EDISON Total:	181636.81
Vendor: SO	CG01 - SOUTHERN C	ALIFORNIA GAS					
1299	11/15/2023	SOUTHERN CALIFORNIA GAS	Nov2023	October 2023 Usage-Act 123-787-1794-1	Utilities		14.3
1299	11/15/2023	SOUTHERN CALIFORNIA GAS	Nov2023-A	October 2023 Usage-Act 170-013-9900-9	Utilities		17.64
				Ven	dor SCG01 - SOUTHERN CALI	FORNIA GAS Total:	31.94
60186	12/06/2023	SPARKLETTS	4667386-112623	Distilled Bottled Water	Outsd contracts		77.44
Vendor: ST	TA05 - STATE WATE	R RESOURCES CONTROL BOARD					
60071	11/02/2023	STATE WATER RESOURCES CONTROL BO	ARET2 Certification-N	ISI Treatment 2 Certification-Mike Smith	Dues & subscrip		65
60072	11/02/2023	STATE WATER RESOURCES CONTROL BO	ARE D3 Test-CCastañe	da D3 Test- Chris Castañeda	Dues & subscrip		70
60120	11/15/2023	STATE WATER RESOURCES CONTROL BO	ARET2 Exam-Chris C	Grade 2 Treatment Exam Chris Castaneda	Dues & subscrip		45
				Vendor STA05 - STA	TE WATER RESOURCES CONT	ROL BOARD Total:	180
Vendor: S\	WR01 - SWRCB-Drin	king Water Program Fees					
60187	12/05/2023	SWRCB-Drinking Water Program Fees	WD0231086	CWRF Collection System Fees	Fees & charges		3746
60187	12/05/2023	SWRCB-Drinking Water Program Fees	WD0231316	Waste Discharge Permit Fee Annual	Fees & charges		26785
60187	12/05/2023	SWRCB-Drinking Water Program Fees	WD0231727	CWRF Annual Discharge Permit Fee	Fees & charges		17803
60187	12/05/2023	SWRCB-Drinking Water Program Fees	WD0231756	NPDES Annual Fee for CWRF	Fees & charges		868
				Vendor SWR0	1 - SWRCB-Drinking Water P	rogram Fees Total:	49202
Vendor: S	VN02 - SVNAGRO TE	CHNOLOGIES					
60121	11/1//2023		/3178	Sludge Removal	Outsd contracts	EV24-0010	20842.05
60121	12/05/2023	SYNAGRO TECHNOLOGIES	43178	Sludge Removal	Outsd contracts	EV24-0010	7017 27
00100	12/03/2023		45550	V	endor SYN02 - SYNAGRO TEC	HNOLOGIES Total	27859 32
Vandau T	0 TO1 TO T TOUCK 0			•			27033.32
vendor: 18	11/15/2022		0165110-IN	Crano at Diversion	Outed contracts		776
60122	11/15/2023		165007	Diversion Traveling Screens	Construction in prov	gross EV24-0122	2820
00122	11/15/2025		105057	Vend	or T&T01 - T&T TRUCK & CR	ANE SERVICE Total:	3605
60189	12/05/2023	THE CAPRICORN GROUP	19315	Materials & Supplies - Kitchen/Bathroom/Ianitorial	Materials & sunnlie	s	870 31
60123	11/16/2023		205611			5	2598.99
60123	11/10/2023		114115	EV2022-23 Agreed Upon Procedures on Investment	ts Prof services	EV24-0013	5000
Vandam T			114115			1124 0015	5000
vendor: In	11/00/2022		2120021	Leh Guadian		_	F20.27
00125 60125	11/14/2023		3130031	Lab Supplies	Materials & supplie	s c	528.27
60125	11/14/2023		2122245	Lab Supplies	Materials & supplie	3 C	102.19
60100	12/06/2023		3152343 2151022	Lab Supplies	Materials & supplie	э с	49.54
60100	12/00/2023		21772/0		Materials & supplie	с С	04.UD
00130	12/05/2023		51//240	ran anhhitea	Vendor THON9 - THOMA	s S SCIENTIFIC Total	<u>95.17</u> 829 22
60101	12/04/2022		00006705	Depert Defund Act 6705 5117 Calant Dr	Defunde revel-		14.05
00131	12/04/2023		00000795	Deposit retailia-Act 0132- 2111 COIOUA DI	Refutius payable		14.85

Vendor: U	SB02 - U.S. BANK CO	RPORATE				
1300	11/06/2023	U.S. BANK CORPORATE	23-Oct	Credit Card Purchases	Credit Cards Payment	13073.82
1308	12/06/2023	U.S. BANK CORPORATE	23-Nov	Credit Card Purchases	Credit Cards Payment	16325.22
					Vendor USB02 - U.S. BANK CORPORATE Total:	29399.04
Vendor: U	ND01 - UNDERGROU	IND SERVICE ALERT OF SOUTHERN CALIFORNIA	, INC			
60192	12/06/2023	UNDERGROUND SERVICE ALERT OF SOUTH	E 1120230209	Dig Alert Tickets Montly Charges-November 202	23 Outsd contracts	326.75
60192	12/06/2023	UNDERGROUND SERVICE ALERT OF SOUTH	E 23241747	Dig Alert Tickets Montly Charges-November 202	23 Outsd contracts	123.19
				Vendor UND01 - UNDERGROUND SER	RVICE ALERT OF SOUTHERN CALIFORNIA, INC Total:	449.94
Vendor: U	NI12 - UNIFIED FIELD	SERVICES CORPORATION				
60193	12/06/2023	UNIFIED FIELD SERVICES CORPORATION	Pymt 24-(PW21-01	1) UFS - Change Order No. 5	Construction in progress FY22-0010-R2	17773
60193	12/06/2023	UNIFIED FIELD SERVICES CORPORATION	Pymt 24-(PW21-01	1) Change Order No. 6	Construction in progress FY22-0010-R2	20227
60193	12/06/2023	UNIFIED FIELD SERVICES CORPORATION	Retention-Pymt 24	I Retention-Pymt 24(PW21-01	Contractor's retention	-3800
			,	Vendor UNI	12 - UNIFIED FIELD SERVICES CORPORATION Total:	34200
Vendor: II		PORATION				
60126	11/15/2023	UNIFIRST CORPORATION	2210045024	Office Cleaning Supplies-Towel-Mat Service	Outsd contracts	87.46
60126	11/15/2023		2210045025	Uniform Cleaning Service	Outsd contracts	144.4
60194	12/06/2023		2210019023	Office Cleaning Supplies-Towel -Mat Service	Outsd contracts	87.46
60194	12/06/2023		2210049204	Uniform Cleaning Service	Outsd contracts	192.98
60194	12/06/2023		2210019201	Office Cleaning Supplies-Towel -Mat Service	Outsd contracts	87.46
60194	12/06/2023		2210050719	Uniform Cleaning Service	Outsd contracts	151 59
60194	12/06/2023		2210050715	Office Cleaning Supplies-Towel -Mat Service	Outsd contracts	87.46
60194	12/06/2023		2210052836	Uniform Cleaning Service	Outsd contracts	179.81
00134	12/00/2025		2210052050		Vendor UNI08 - UNIFIRST CORPORATION Total:	1018.62
60195	12/06/2023	UNION MATERIALS TESTING, INC	425	GAC Materials Testing	Construction in progress FY22-0270-R	2377.5
	,,					
Vendor: U	SA01 - USA BLUE BO	OK				
60128	11/15/2023		INV00164787	pH Analizers Conejo GAC	Construction in progress FY24-0093	1042.47
60128	11/14/2023	USA BLUE BOOK	INV00182878	M4 Roller Assembly Conejo GAC	Materials & supplies	690.34
60128	11/14/2023	USA BLUE BOOK	INV00183699	Sludge Judge CWRF	Materials & supplies	531.36
60128	11/09/2023	USA BLUE BOOK	INV00186800	Part for Maintenance on the Myron L	Repair parts & equipment	311.89
60128	11/09/2023	USA BLUE BOOK	INV00189282	Lab Supplies	Materials & supplies	63.57
60128	11/09/2023	USA BLUE BOOK	INV00189455	Lab Supplies	Materials & supplies	351.57
60128	11/09/2023	USA BLUE BOOK	INV00191008	Lab Supplies	Materials & supplies	179.31
60128	11/14/2023	USA BLUE BOOK	INV00191298	Lab Supplies	Materials & supplies	506.97
60196	12/06/2023	USA BLUE BOOK	INV00052145	Nitrile Gloves for O&M	Materials & supplies	978.76
60196	11/28/2023	USA BLUE BOOK	INV00200173	Lab Supplies	Materials & supplies	211.34
60196	11/28/2023	USA BLUE BOOK	INV00203767	Lab Supplies	Materials & supplies	272.82
60196	12/06/2023	USA BLUE BOOK	INV00210394	Lab Supplies	Materials & supplies	287.21
					Vendor USA01 - USA BLUE BOOK Total:	5427.61
Vendor: V	EN38 - VENCO WEST	ERN, INC.				
60197	12/06/2023	VENCO WESTERN, INC.	Pymt-1 (PW23-02)	Landscaping for Lynnwood Well	Construction in progress FY24-0085	56834
60197	12/06/2023	VENCO WESTERN, INC.	Retention-Pymt1(F	PIRetention from invoice 1 -Project PW23-02	Contractor's retention	-2841.7
					Vendor VEN38 - VENCO WESTERN, INC. Total:	53992.3
60129	11/14/2023	VENTURA REGIONAL SANITATION DISTRICT	, 103123	VRSD Sewer Cleaning	Outsd contracts FY24-0009	7185.35
60198	12/06/2023	VERIZON WIRELESS	9949910597	Cellphones	Communications	3360.2

Vendor: WW	G01 - W W GRAIN	GER, INC.					
60130	11/14/2023	W W GRAINGER, INC.	9893183393	Meter Box Pumps and Batteries	Materials & supplies		624.2
60199	12/06/2023	W W GRAINGER, INC.	9910280271	Repair Parts and Equipment-Packing for Pump Repa	ir Repair parts & equip	men	487.28
60199	12/06/2023	W W GRAINGER, INC.	9911263318	Hand Tools	Small tools & equipn	nent	382.93
60199	12/06/2023	W W GRAINGER, INC.	9911263334	Materials & Supplies - Hi-Vis Safety Gear	Materials & supplies		836.4
60199	12/06/2023	W W GRAINGER, INC.	9911263367	Credit-Repair Parts & Equip-Packing for Pump Repa	Repair parts & equip	men	-487.28
60199	12/06/2023	W W GRAINGER, INC.	9913803731	Repair Parts & Equip-Packing for Pump Repair	Repair parts & equip	men	303.81
60199	12/06/2023	W W GRAINGER, INC.	9913803749	Materials & Supplies - Abrasive Roll Paper	Materials & supplies		242.95
					Vendor WWG01 - W W GRA	INGER, INC. Total:	2390.29
60131	11/15/2023	WHITE BRENNER LLP	48826	OPV GMA Legal Services	Legal services		4740.3
60200	12/06/2023	WIENHOFF DRUG TESTING	117551	Annual Consortium Membership	Dues & subscrip		340
Vendor: WOC	004 - WOODARD 8	CURRAN, INC.					
60201	12/06/2023	WOODARD & CURRAN, INC.	227074	2023 Master Plan	Prof services	FY23-0008-R1	4653.72
60201	12/06/2023	WOODARD & CURRAN, INC.	227079	Water Resource Planning	Prof services	FY23-0150-R1	19817.5
				Vend	or WOO04 - WOODARD & CU	IRRAN, INC. Total:	24471.22
60202	12/04/2023	YVONNE PARKER	00000678	Deposit Refund Act 678- 6161 Gitana Ave	Refunds payable		64.71
60203	12/05/2023	ZOEY C GLENN	00001951	Deposit Refund Act 1951- 74 Abrazo Dr	Refunds payable		74.21
60132	11/09/2023	ZOUA VANG	00003405	Deposit Refund Act 3405 - 5230 Laurel Park Dr	Refunds payable		73.73
Vendor: ZWO	01 - ZWORLD GIS,	LLC					
60133	11/07/2023	ZWORLD GIS, LLC	2023-0383	Service Connection GPS Inventory Phase 2	Outsd contracts	FY24-0043	4200
60133	11/07/2023	ZWORLD GIS, LLC	2023-0384	GIS Support Services	Outsd contracts	FY24-0042	4500
60204	12/06/2023	ZWORLD GIS, LLC	2023-0401	Service Connection GPS Inventory Phase 2	Outsd contracts	FY24-0043	4200
60204	12/06/2023	ZWORLD GIS, LLC	2023-0402	GIS Support Services	Outsd contracts	FY24-0042	4500
					Vendor ZWO01 - ZWOF	RLD GIS, LLC Total:	17400
TOTAL VI	ENDOR PAY	MENTS-CAMROSA				\$	2,765,263.07
1303	12/01/2023	ACWA/JPIA	11-23 PR ME	Health, Dental & Vision Ins.	Insurance premium		51394.65
Vendor: PER0	95 - CAL PERS 457 I	PLAN					
DFT0004963	11/02/2023	CAL PERS 457 PLAN	INV0013950	Deferred Compensation	Deferred comp - ee	paid	3183.96
DFT0004983	11/16/2023	CAL PERS 457 PLAN	INV0013995	Deferred Compensation	Deferred comp - ee	paid	3183.96
DFT0004984	11/16/2023	CAL PERS 457 PLAN	INV0013997	Deferred Compensation	Deferred comp - ee	paid	300
DFT0005003	11/30/2023	CAL PERS 457 PLAN	INV0014061	Deferred Compensation	Deferred comp - ee	paid	3183.96
					Vendor PER05 - CAL PER	S 457 PLAN Total:	9851.88
DFT0004979	11/16/2023	COLONIAL SUPPLEMENTAL INS	INV0013991	Colonial Benefits	Colonial benefits		231.8
Vendor: EDDO	01 - EMPLOYMENT	DEVELOP. DEPT.					
DFT0004977	11/02/2023	EMPLOYMENT DEVELOP. DEPT.	INV0013966	Payroll-SIT	P/R-sit		6682.46
DFT0004999	11/16/2023	EMPLOYMENT DEVELOP. DEPT.	INV0014020	Payroll-SIT	P/R-sit		5943.29
DFT0005002	11/16/2023	EMPLOYMENT DEVELOP. DEPT.	INV0014026	Payroll-SIT	P/R-sit		15.03
DFT0005017	11/30/2023	EMPLOYMENT DEVELOP. DEPT.	INV0014077	Payroll-SIT	P/R-sit		6209.23
				Vendor	EDD01 - EMPLOYMENT DEVE	LOP. DEPT. Total:	18850.01

Vendor: HEAO	2 - HealthEquity					
DFT0004966	11/02/2023	HealthEquity	INV0013954	HSA Contributions	HSA Contributions Payabl	50
DFT0004987	11/16/2023	HealthEquity	INV0014001	HSA Contributions	HSA Contributions Payabl	50
DFT0005006	11/30/2023	HealthEquity	INV0014065	HSA Contributions	HSA Contributions Payabl	50
					Vendor HEA02 - HealthEquity Total:	150
Vendor: LNL0	1 - LINCOLN FINA	NCIAL GROUP				
1289	11/02/2023	LINCOLN FINANCIAL GROUP	INV0013951	Deferred Compensation	Deferred comp - ee paid	2836.4
1297	11/16/2023	LINCOLN FINANCIAL GROUP	INV0013996	Deferred Compensation	Deferred comp - ee paid	2836.4
1301	11/30/2023	LINCOLN FINANCIAL GROUP	INV0014062	Deferred Compensation	Deferred comp - ee paid	2836.4
					Vendor LNL01 - LINCOLN FINANCIAL GROUP Total:	8509.2
Vendor: RFS0	1 - LINCOLN FINA	NCIAL GROUP				
1288	11/02/2023	LINCOLN FINANCIAL GROUP	INV0013962	Profit Share Contribution	Profit share contributions	3389.77
1296	11/16/2023	LINCOLN FINANCIAL GROUP	INV0014014	Profit Share Contribution	Profit share contributions	3389.77
1302	11/30/2023	LINCOLN FINANCIAL GROUP	INV0014073	Profit Share Contribution	Profit share contributions	3389.77
					Vendor RFS01 - LINCOLN FINANCIAL GROUP Total:	10169.31
Vendor: PER0	1 - PUBLIC EMPLO	DYEES				
DFT0004964	11/02/2023	PUBLIC EMPLOYEES	INV0013952	PERS-Retirement	P/R-state ret.	21812.85
DFT0004985	11/16/2023	PUBLIC EMPLOYEES	INV0013999	PERS-Retirement	P/R-state ret.	21812.85
DFT0005004	11/30/2023	PUBLIC EMPLOYEES	INV0014063	PERS-Retirement	P/R-state ret.	21812.85
					Vendor PER01 - PUBLIC EMPLOYEES Total:	65438.55
DFT0004988	11/16/2023	SYMETRA LIFE INS CO.	INV0014002	Life Insurance	Life ins.	305.5
Vendor: UNI1	0 - UNITED STATE	ES TREASURY				
DFT0004974	11/02/2023	UNITED STATES TREASURY	INV0013963	FIT	P/R-fit	16049.87
DFT0004975	11/02/2023	UNITED STATES TREASURY	INV0013964	Payroll-Social Security Tax	P/R - ee social security	150.78
DFT0004976	11/02/2023	UNITED STATES TREASURY	INV0013965	Payroll- Medicare Tax	P/R - ee medicare	4118.06
DFT0004996	11/16/2023	UNITED STATES TREASURY	INV0014017	FIT	P/R-fit	14526.2
DFT0004997	11/16/2023	UNITED STATES TREASURY	INV0014018	Payroll-Social Security Tax	P/R - ee social security	598.3
DFT0004998	11/16/2023	UNITED STATES TREASURY	INV0014019	Payroll- Medicare Tax	P/R - ee medicare	4035.33
DFT0005014	11/30/2023	UNITED STATES TREASURY	INV0014074	FIT	P/R-fit	15082.42
DFT0005015	11/30/2023	UNITED STATES TREASURY	INV0014075	Payroll-Social Security Tax	P/R - ee social security	112.46
DFT0005016	11/30/2023	UNITED STATES TREASURY	INV0014076	Payroll- Medicare Tax	P/R - ee medicare	3968.32
					Vendor UNI10 - UNITED STATES TREASURY Total:	58641.74
Vendor: UWA	01 - UNITED WAY	OF VENTURA CO.				
60065	11/02/2023	UNITED WAY OF VENTURA CO.	INV0013949	Charity-United Way	P/R-charity	20
60127	11/16/2023	UNITED WAY OF VENTURA CO.	INV0013990	Charity-United Way	P/R-charity	20
60135	11/30/2023	UNITED WAY OF VENTURA CO.	INV0014060	Charity-United Way	P/R-charity	20
					Vendor UWA01 - UNITED WAY OF VENTURA CO. Total:	60
Vendor: UNU	01 - UNUM LIFE II	NSURANCE				
1304	11/16/2023	UNUM LIFE INSURANCE	INV0014003	Lont Term Disability	Ltd ins.	1146
1304	11/16/2023	UNUM LIFE INSURANCE	INV0014015	Short Term Disability	P/R-std ins.	267.39
					Vendor UNU01 - UNUM LIFE INSURANCE Total:	1413.39
TOTAL P	AYROLL VE	NDOR PAYMENTS-CAMROS	4		\$	225,016.03

TOTAL PAYROLL VENDOR PAYMENTS-CAMROSA

225,016.03



Board Memorandum

December 14, 2023

To: General Manager

From: Tamara Sexton, Deputy General Manager/Finance

Subject: CalPERS Unfunded Accrued Liability

Objective: Receive a briefing from Urban Futures regarding the CalPERS Annual Valuation Report as of June 30, 2022.

Action Required: No action necessary; for information only.

Discussion: For the period ending June 30, 2021, the unfunded accrued liability (UAL) for the CalPERS Classic plan was overfunded by \$1,646,260 (108.4% funded). In August of 2023, CalPERS released the most recent actuarial report, dated June 30, 2022, and reported an investment return of -7.5%, creating a liability of \$1,358,181 (93.3% funded). The PEPRA plan UAL balance went from being overfunded by \$19,071 (109.2%) to a liability of \$22,473 (91.4% funded).

The projected employer contributions for fiscal year (FY) 2024-25 for the Classic plan will increase from 11.84% to 11.88%, and the employee contribution rate will remain unchanged at 7%. The employer contribution rate for the PEPRA plan will increase from 7.68% to 7.87%, and the PEPRA employee contribution rate will remain at 7.75 percent.

Urban Futures will make a presentation on the CalPERS valuation reports, including a forward look into next year's valuation that will include CalPERS preliminary investment return of 6.1% for the period ending June 30, 2023.

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5

General Manager Tony L. Stafford



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 2023

Miscellaneous Plan of the Camrosa Water District (CalPERS ID: 7880235845) Annual Valuation Report as of June 30, 2022

Dear Employer,

Attached to this letter is the June 30, 2022 actuarial valuation report for the rate plan noted above. **Provided in this report is the determination of the minimum required employer contributions for fiscal year (FY) 2024-25**. 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, 2022.

Section 2 can be found on the CalPERS website (www.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, 2022.

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 CaIPERS Board of Administration (board) adopts these assumptions after considering the advice of CaIPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution requirements as needed. This valuation is based on an investment return assumption of 6.8%, which was adopted by the board in November 2021. Other assumptions used in this report are those recommended in the CaIPERS Experience Study and Review of Actuarial Assumptions report from November 2021.

Required Contributions

The table below shows the minimum required employer contributions for FY 2024-25 along with estimates of the required contributions for FY 2025-26. Employee contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. The required employer contributions in this report do not reflect any cost sharing arrangement between the agency and the employees.

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability
2024-25	11.88%	\$55,922
Projected Results		
2025-26	11.9%	\$83,000

Miscellaneous Plan of the Camrosa Water District (CalPERS ID: 7880235845) Annual Valuation Report as of June 30, 2022 Page 2

The actual investment return for FY 2022-23 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 6.8%. *To the extent the actual investment return for FY 2022-23 differs from 6.8%, the actual contribution requirements for FY 2025-26 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 FY 2029-30.

Changes from Previous Year's Valuations

There are no significant changes in actuarial assumptions or policies in the 2022 actuarial valuation. There may be changes specific to the plan such as contract amendments and funding changes.

Further descriptions of general changes are included in "Highlights and Executive Summ ary" and in Appendix A of the Section 2 report in "Actuarial Methods and Assumptions." The effects of any changes on the required contributions are included in "Reconciliation of Required Employer Contributions," also in the Section 2 report.

Questions

A CalPERS actuary is available to answer questions about this report. Other questions may be directed to the Customer Contact Center at (888)-CalPERS or (888-225-7377).

Sincerely,

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

RANDALL DZIUBEK, ASA, MAAA Deputy Chief Actuary, Valuation Services, CalPERS



Actuarial Valuation as of June 30, 2022

for the Miscellaneous Plan of the Camrosa Water District (CalPERS ID: 7880235845)

Required Contributions for Fiscal Year July 1, 2024 - June 30, 2025

Table of Contents

Section 1 – Plan Specific Information

Section 2 – Risk Pool Actuarial Valuation Information

Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the Miscellaneous Plan of the Camrosa Water District

(CaIPERS ID: 7880235845) (Rate Plan ID: 739)

Table of Contents

Actuarial Certification	1
Highlights and Executive Summary	
Introduction Purpose of Section 1 Required Contributions Additional Discretionary Employer Contributions Funded Status – Funding Policy Basis Projected Employer Contributions Other Pooled Miscellaneous Risk Pool Rate Plans Cost Changes Since the Prior Year's Valuation Subsequent Events	3 3 4 5 6 7 8 9 10 10
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 Amortization Bases Amortization Schedule and Alternatives Employer Contribution History Funding History	12 12 13 14 16 16
Risk Analysis	
Future Investment Return Scenarios Discount Rate Sensitivity Mortality Rate Sensitivity Maturity Measures Maturity Measures History Funded Status – Termination Basis	18 19 19 20 21 22
Participant Data	23
List of Class 1 Benefit Provisions	23
Plan's Major Benefit Options	24

Actuarial Certification

To the best of our knowledge, this report, comprised of Sections 1 and 2, is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the Miscellaneous Plan of the Camrosa Water District and satisfies the actuarial valuation requirements of Government Code section 7504. This valuation is based on the member and financial data as of June 30, 2022 provided by the various CalPERS databases and the benefits under this plan with CalPERS as of the date this report was produced. Section 1 of this report is based on the member and financial data for Camrosa Water District, while Section 2 is based on the corresponding information for all agencies participating in the Miscellaneous Risk Pool to which the plan belongs.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the Miscellaneous Risk Pool has been performed in accordance with generally accepted actuarial principles, in accordance 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 rate plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2022 and employer contribution as of July 1, 2024 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.

BILL KARCH, ASA, MAAA Supervising Actuary, CalPERS

Highlights and Executive Summary

- Introduction
- Purpose of Section 1
- Required Contributions
- Additional Discretionary Employer Contributions
- Funded Status Funding Policy Basis
- 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, 2022 actuarial valuation of the Miscellaneous Plan of the Camrosa Water District of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the minimum required contributions for fiscal year (FY) 2024-25.

Purpose of Section 1

This Section 1 report for the Miscellaneous Plan of the Camrosa Water District of CalPERS was prepared by the Actuarial Office using data as of June 30, 2022. The purpose of the valuation is to:

- Set forth the assets and accrued liabilities of this rate plan as of June 30, 2022;
- Determine the minimum required employer contributions for this rate plan for FY July 1, 2024 through June 30, 2025;
- Determine the required member contribution rate for FY July 1, 2024 through June 30, 2025 for employees subject to the California Public Employees' Pension Reform Act of 2013 (PEPRA); and
- Provide actuarial information as of June 30, 2022 to the CalPERS Board of Administration (board) 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 CaIPERS website (www.calpers.ca.gov).

The measurements shown in this actuarial valuation may not be applicable for other purposes. The agency should contact the plan 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; changes in plan provisions or applicable law; and differences between the required contributions determined by the valuation and the actual contributions made by the agency.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the guidance of Actuarial Standard 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 5.8% and 7.8%.
- 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 2021.
- Plan maturity measures indicating how sensitive a plan may be to the risks noted above.

Required Contributions

	Fiscal Year
Required Employer Contributions	2024-25
Employer Normal Cost Rate Plus	11.88%
Required Payment on Amortization Bases ¹ Paid either as	\$55,922
1) Monthly Payment Or	\$4,660.17
2) Annual Prepayment Option*	\$54,112

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 2023-24	Fiscal Year 2024-25
Development of Normal Cost as a Percentage of Payroll		
Base Total Normal Cost for Formula	18.76%	18.81%
Surcharge for Class 1 Benefits ²		
None	0.00%	0.00%
Phase out of Normal Cost Difference ³	0.00%	0.00%
Plan's Total Normal Cost	18.76%	18.81%
Offset Due to Employee Contributions	6.92%	6.93%
Employer Normal Cost Rate	11.84%	11.88%

¹ The required payment on amortization bases does not take into account any additional discretionary payment made after April 28, 2023.

² Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges.

³ When a rate plan joins the pool, the difference in normal cost betw een the pool and the rate plan is phased out over a fiveyear period in accordance with the CaIPERS contribution allocation policy.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for FY 2024-25 is \$55,922. CalPERS allows agencies 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. Agencies 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 FY 2024-25 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.

Agencies considering making an ADP should contact CalPERS for additional information.

Minimum Required Employer Contribution for Fiscal Year 2024-25

Estimated	Minimum UAL	ADP	Total UAL	Estimated Total
Normal Cost	Payment		Contribution	Contribution
\$234,977	\$55,922	\$0	\$55,922	\$290,899

The minimum required contribution above is less than interest on the UAL. With no AD P the UAL is projected to increase over the following year. If the minimum UAL payment were split between interest and principal, the principal portion would be negative. This situation is referred to as **negative amortization**. If only the minimum required contribution is made, contributions are not expected to exceed interest on the UAL until FY **2026-27**, as shown in the "Amortization Schedule and Alternatives" section of the report (see columns labeled "Current Amortization Schedule").

Fiscal Year 2024-25 Employer Contribution Necessary to Avoid Negative Amortization

Estimated	Minimum UAL	ADP ¹	Total UAL	Estimated Total
Normal Cost	Payment		Contribution	Contribution
\$234,977	\$55,922	\$47,334	\$103,256	\$338,233

Alternative Fiscal Year 2024-25 Employer Contributions for Greater UAL Reduction

Funding Horizon	Estimated Normal Cost	Minimum UAL Payment	ADP ¹	Total UAL Contribution	Estimated Total Contribution
20 years	\$234,977	\$55,922	\$85,191	\$141,113	\$376,090
15 years	\$234,977	\$55,922	\$108,699	\$164,621	\$399,598
10 years	\$234,977	\$55,922	\$158,281	\$214,203	\$449,180
5 years	\$234,977	\$55,922	\$312,439	\$368,361	\$603,338

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 show n to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected UAL as of June 30, 2024 as determined in the June 30, 2022 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.

Funded Status – Funding Policy Basis

The table below provides information on the current funded status of the plan under the funding policy. The funded status for this purpose is based on the market value of assets relative to the funding target produced by the entry age actuarial cost method and actuarial assumptions adopted by the board. The actuarial cost method allocates the total expected cost of a member's projected benefit (**Present Value of Benefits**) to individual years of service (the **Normal Cost**). The value of the projected benefit that is not allocated to future service is referred to as the **Accrued Liability** and is the plan's funding target on the valuation date. The **Unfunded Accrued Liability** (UAL) equals the funding target minus the assets. The UAL is an absolute measure of funded status and can be viewed as employer debt. The **funded ratio** equals the assets divided by the funding target. The funded ratio is a relative measure of the funded status and allows for comparisons between plans of different sizes.

	June 30, 2021	June 30, 2022
1. Present Value of Benefits	\$22,812,607	\$23,407,807
2. Entry Age Accrued Liability	19,644,693	20,230,268
3. Market Value of Assets (MVA)	21,290,953	18,872,087
4. Unfunded Accrued Liability (UAL) [(2) – (3)]	(\$1,646,260)	\$1,358,181
5. Funded Ratio [(3) / (2)]	108.4%	93.3%

A funded ratio of 100% (UAL of \$0) implies that the funding of the plan is on target and that future contributions equal to the normal cost of the active plan members will be sufficient to fully fund all retirement benefits if future experience matches the actuarial assumptions. A funded ratio of less than 100% (positive UAL) implies that in addition to normal costs, payments toward the UAL will be required. Plans with a funded ratio greater than 100% have a negative UAL (or surplus) but are required under current law to continue contributing the normal cost in most cases, preserving the surplus for future contingencies.

Calculations for the funding target reflect the expected long-term investment return of 6.8%. If it were known on the valuation date that future investment returns will average something greater/less than the expected return, calculated normal costs and accrued liabilities provided in this report would be less/greater than the results shown. Therefore, for example, if actual average future returns are less than the expected return, calculated normal costs and UAL contributions will not be sufficient to fully fund all retirement benefits. Under this scenario, required future normal cost contributions will need to increase from those provided in this report, and the plan will develop unfunded liabilities that will also add to required future contributions. For illustrative purposes, funded statuses based on a 1% lower and higher average future investment return (discount rate) are as follows:

	1% Lower Average Return	Current Assumption	1% Higher Average Return
Discount Rate	5.8%	6.8%	7.8%
1. Entry Age Accrued Liability	\$22,746,923	\$20,230,268	\$18,116,796
2. Market Value of Assets (MVA)	18,872,087	18,872,087	18,872,087
3. Unfunded Accrued Liability (UAL) [(1) – (2)]	\$3,874,836	\$1,358,181	(\$755,291)
4. Funded Ratio [(2) / (1)]	83.0%	93.3%	104.2%

The "Risk Analysis" section of the report provides additional information regarding the sensitivity of valuation results to the expected investment return and other factors. Also provided in that section are measures of funded status that are appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities.

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. In particular, the investment return beginning with FY 2022-23 is assumed to be 6.80% per year, net of investment and administrative expenses. Future contribution requirements may differ significantly from those shown below. The actual long-term cost of the plan will depend on the actual benefits and expenses paid and the actual investment experience of the fund.

	Required Contribution	Projected Future Employer Contributions (Assumes 6.80% Return for Fiscal Year 2022-23 and Beyond)				
Fiscal Year	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
	Rate Plan 739 Results					
Normal Cost %	11.88%	11.9%	11.9%	11.9%	11.9%	11.9%
UAL Payment	\$55,922	\$83,000	\$109,000	\$136,000	\$163,000	\$163,000

For ongoing plans, investment gains and losses are 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 investment loss, the relatively small amortization payments during the ramp up period could result in contributions that are less than interest on the UAL (i.e. negative amortization) while the contribution impact of the increase in the UAL is phased in.

The required contribution for FY 2024-25 is less than interest on the UAL, a situation referred to as negative amortization, as explained in the "Additional Discretionary Employer Contributions" section earlier in this report. If only the minimum required contribution is made, contributions are not expected to exceed interest on the UAL until FY 2026-27, as shown in the "Amortization Schedule and Alternatives" section of the report (see columns labelled "Current Amortization Schedule").

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section. Our online pension plan projection tool, Pension Outlook, is available in the Employers section of the CaIPERS website. Pension Outlook can help plan and budget pension costs under various scenarios.
Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown on this page, correspond to rate plan 739. 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 total employer payroll within the Miscellaneous Risk Pool will grow according to the overall payroll growth assumption of 2.80% per year for three years. In a refinement since the prior year's report, Classic members who are projected to terminate employment are assumed to be replaced by PEPRA members.

	Fiscal Year	Fiscal Year
	2023-24	2024-25
Estimated Combined Employer Contributions for all Pooled Mis	cellaneous Rate Plans	5
Projected Payroll for the Contribution Year	\$2,666,053	\$2,758,850
Estimated Employer Normal Cost	\$303,906	\$296,436
Required Payment on Amortization Bases	\$0	\$56,840
Estimated Total Employer Contributions	\$303,906	\$353,276
Estimated Total Employer Contribution Rate (illustrative only)	11.40%	12.81%

Cost

Actuarial Determination of Plan Cost

Contributions to fund the 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 2015-16, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with FY 2015-16, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There is 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 CaIPERS' 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 CaIPERS have averaged 6.9% over the 20 years ending June 30, 2022, yet individual fiscal year returns have ranged from -23.6% to +21.3%. In addition, CaIPERS reviews all actuarial assumptions by conducting in -depth experience studies every four years, with the most recent experience study completed in 2021.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CaIPERS 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 amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" in this report and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

In 2022, SB 1168 increased the standard retiree lump sum death benefit from \$500 to \$2,000 for any death occurring on or after July1, 2023. For pooled plans this is a Class 3 benefit and there is no normal cost surcharge. The impact on the unfunded liability is included in the pool's (gain)/loss.

Actuarial Methods and Assumptions

There are no significant changes to the actuarial methods or assumptions for the June 30, 2022 actuarial valuation.

Subsequent Events

This actuarial valuation report reflects fund investment return through June 30, 2022 and statutory/regulatory changes and board actions through January 2023.

During the time period between the valuation date and the publication of this report, inflation has been significantly higher than the expected inflation of 2.3% per annum. Since inflation influences cost-of-living increases for retirees and beneficiaries and active member payincreases, higher inflation is likely to put at least some upward pressure on contribution requirements and downward pressure on the funded status in the June 30, 2023 valuation. The actual impact of higher inflation on future valuation results will depend on, among other factors, how long higher inflation persists. At this time, we continue to believe the long-term inflation assumption of 2.3% is appropriate.

To the best of our knowledge, there have been no other subsequent events that could materially affect current or future certifications rendered in this report.

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 Amortization Bases
- Amortization Schedule and Alternatives
- Employer Contribution History
- Funding History

Breakdown of Entry Age Accrued Liability

Active Members	\$8,677,672
Transferred Members	1,371,012
Separated Members	5,206
Members and Beneficiaries Receiving Payments	<u>10,176,378</u>
Total	\$20,230,268

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	\$20,230,268
2.	Projected UAL Balance at 6/30/2022	(1,879,260)
3.	Other UAL Adjustments (Golden Handshake, Prior Service Purchase, etc.)	0
4.	Adjusted UAL Balance at 6/30/2022 for Asset Share	(1,875,532)
5.	Pool's Accrued Liability ¹	22,021,735,002
6.	Sum of Pool's Individual Plan UAL Balances at 6/30/2022 ¹	2,453,954,297
7.	Pool's 2021-22 Investment (Gain)/Loss ¹	2,614,071,182
8.	Pool's 2021-22 Non-Investment (Gain)/Loss ¹	309,490,972
9.	Plan's Share of Pool's Investment (Gain)/Loss: [(1) - (4)] ÷ [(5) - (6)] × (7)	2,953,127
10.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) \div (5) \times (8)	284,314
11.	Plan's New (Gain)/Loss as of 6/30/2022: (9) + (10)	3,237,441
12.	Increase in Pool's Accrued Liability due to Change in Assumptions ¹	0
13.	Plan's Share of Pool's Change in Assumptions: (1) \div (5) \times (12)	0
14.	Increase in Pool's Accrued Liability due to Funding Risk Mitigation ¹	0
15.	Plan's Share of Pool's Change due to Funding Risk Mitigation: $(1) \div (5) \times (14)$	0
16.	Offset due to Funding Risk Mitigation	0
17.	Plan's Investment (Gain)/Loss: (9) – (16)	2,953,127
18.	Partial Fresh Start Base: (2) + (17)	1,073,867

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

19.	Plan's UAL: (2) + (3) + (11) + (13) + (15)	\$1,358,181
20.	Plan's Share of Pool's MVA: (1) - (19)	\$18,872,087

Schedule of Amortization Bases

Below is the schedule of the plan's amortization bases. Note that there is a two-year lag between the valuation date and the start of the contribution year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2022.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: FY 2024-25.

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.

		Ramp	_	Escala-			Expected		Expected		Required
Reason for Base	Date Est.	Level 2024-25	Ram p Shape	tion Rate	Amort. Period	Balance 6/30/22	Payment 2022-23	Balance 6/30/23	Payment 2023-24	Balance 6/30/24	Payment 2024-25
Non-Investment (Gain)/Loss	6/30/22	No	Ramp	0.00%	20	284,314	0	303,647	0	324,295	29,162
Partial Fresh Start	6/30/22	20%	Up Only	0.00%	20	1,073,867	(18,196)	1,165,694	0	1,244,961	26,760
Total						1,358,181	(18,196)	1,469,341	0	1,569,256	55,922

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 CaIPERS amortization policy in effect at the time the base was established.

The partial fresh start base established June 30, 2022 is the sum of the UAL balance from the June 30, 2021 valuation (projected to June 30, 2022) and the June 30, 2022 investment loss, as shown on the previous page.

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Amortization Schedule and Alternatives

The amortization schedule on the previous page(s) shows the minimum contributions required according to the CaIPERS 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 contact the 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 an appropriate 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 Am Sched	<u>ortization</u> Jule	20 Year Am	20 Year Amortization		ortization	
Date	Balance	Payment	Balance	Payment	Balance	Payment	
6/30/2024	1,569,256	55,922	1,569,256	141,113	1,569,256	164,621	
6/30/2025	1,618,173	82,682	1,530,133	141,113	1,505,839	164,621	
6/30/2026	1,642,762	109,442	1,488,350	141,113	1,438,110	164,621	
6/30/2027	1,641,368	136,202	1,443,726	141,113	1,365,775	164,620	
6/30/2028	1,612,225	162,962	1,396,067	141,113	1,288,523	164,621	
6/30/2029	1,553,445	162,962	1,345,168	141,113	1,206,016	164,620	
6/30/2030	1,490,668	162,962	1,290,807	141,113	1,117,900	164,621	
6/30/2031	1,423,622	162,963	1,232,750	141,113	1,023,791	164,620	
6/30/2032	1,352,016	162,963	1,170,745	141,113	923,284	164,621	
6/30/2033	1,275,541	162,963	1,104,524	141,113	815,941	164,620	
6/30/2034	1,193,865	162,961	1,033,800	141,113	701,300	164,621	
6/30/2035	1,106,637	162,962	958,266	141,113	578,862	164,620	
6/30/2036	1,013,477	162,962	877,596	141,113	448,100	164,621	
6/30/2037	913,982	162,963	791,441	141,113	308,445	164,621	
6/30/2038	807,720	162,962	699,427	141,113	159,293	164,620	
6/30/2039	694,233	162,961	601,156	141,113			
6/30/2040	573,030	162,962	496,203	141,113			
6/30/2041	443,585	162,961	384,113	141,113			
6/30/2042	305,339	162,963	264,401	141,114			
6/30/2043	157,689	162,962	136,547	141,113			
6/30/2044							
6/30/2045							
6/30/2046							
6/30/2047							
6/30/2048							
6/30/2049							
Total		2,991,642		2,822,261		2,469,309	
Interest Paid		1,422,386		1,253,005		900,053	
Estimated Sav	rings		_	169,381		522,333	

Employer Contribution History

The table below provides a recent history of the required and discretionary employer contributions for the plan. The required amounts are based on the actuarial valuation from two years prior without subsequent adjustments, if any. Additional discretionary payments before July 1, 2019 or after April 28, 2023 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment (\$)	Additional Discretionary Payments
2016 - 17	8.377%	\$182,571	N/A
2017 - 18	8.418%	216,199	N/A
2018 - 19	8.892%	265,076	N/A
2019 - 20	9.680%	318,111	4,996,392
2020 - 21	10.484%	358,956	0
2021 - 22	10.34%	8,521	137,830
2022 - 23	10.32%	26,349	0
2023 - 24	11.84%	0	
2024 - 25	11.88%	55,922	

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
06/30/2013	\$12,592,951	\$9,681,315	\$2,911,636	76.9%	\$1,741,274
06/30/2014	13,764,728	11,082,877	2,681,851	80.5%	1,797,398
06/30/2015	14,561,699	11,235,393	3,326,306	77.2%	1,740,039
06/30/2016	15,330,114	10,996,602	4,333,512	71.7%	1,785,296
06/30/2017	15,349,965	11,025,714	4,324,251	71.8%	2,068,770
06/30/2018	16,705,025	11,766,229	4,938,796	70.4%	2,178,221
06/30/2019	17,401,149	12,230,212	5,170,937	70.3%	2,254,883
06/30/2020	18,180,076	17,572,272	607,804	96.7%	2,356,643
06/30/2021	19,644,693	21,290,953	(1,646,260)	108.4%	2,193,987
06/30/2022	20,230,268	18,872,087	1,358,181	93.3%	2,252,098

Risk Analysis

- Future Investment Return Scenarios
- Discount Rate Sensitivity
- Mortality Rate Sensitivity
- Maturity Measures
- Maturity Measures History
- Funded Status Termination Basis

Future Investment Return Scenarios

Analysis using the investment return scenarios from the Asset Liability Management process completed in 2021 was performed to determine the effects of various future investment returns on required employer contributions. The projections below reflect the impact of the CaIPERS Funding Risk Mitigation policy. The projections also assume that all other actuarial assumptions will be realized and that no further changes in assumptions, contributions, benefits, or funding will occur.

The first table shows projected contribution requirements if the fund were to earn either 3.0% or 10.8% annually. These alternate investment returns were chosen because 90% of long-term average returns are expected to fall between them over the 20-year period ending June 30, 2042.

Assumed Annual Return FY 2022-23	Projected Employer Contributions				
through 2041-42	2025-26	2026-27	2027-28	2028-29	2029-30
3.0% (5 th percentile)					
Normal Cost Rate	11.9%	11.9%	11.9%	11.9%	11.9%
UAL Contribution	\$100,000	\$162,000	\$243,000	\$342,000	\$434,000
10.8% (95 th percentile)					
Normal Cost Rate	12.1%	12.4%	12.6%	12.9%	13.1%
UAL Contribution	\$68,000	\$64,000	\$0	\$0	\$0

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 3.0% or greater than 10.8% over a 20-year period, the likelihood of a single investment return less than 3.0% or greater than 10.8% in any given year is much greater. The following analysis illustrates the effect of an extreme, single year investment return.

The portfolio has an expected volatility (or standard deviation) of 12.0% per year. Accordingly, in any given year there is a 16% probability that the annual return will be -5.2% or less and a 2.5% probability that the annual return will be -17.2% or less. These returns represent one and two standard deviations below the expected return of 6.8%.

The following table shows the effect of a one or two standard deviation investment loss in FY 2022-23 on the FY 2025-26 contribution requirements. Note that a single-year investment gain or loss decreases or increases the required UAL contribution amount incrementally for each of the next five years, not just one, due to the 5-year ramp in the amortization policy. However, the contribution requirements beyond the first year are also impacted by investment returns beyond the first year. Historically, significant downturns in the market are often followed by higher than average returns. Such investment gains would offset the impact of these single year negative returns in years beyond FY 2025-26.

Assumed Annual Return for Fiscal Year 2022-23	Required Employer Contributions	Projected Employer Contributions
	2024-25	2025-26
(17.2)% (2 standard deviation loss)		
Normal Cost Rate	11.88%	11.9%
UAL Contribution	\$55,922	\$193,000
(5.2)% (1 standard deviation loss)		
Normal Cost Rate	11.88%	11.9%
UAL Contribution	\$55,922	\$138,000

- Without investment gains (returns higher than 6.8%) in FY 2023-24 or later, projected contributions rates would continue to rise over the next four years due to the continued phase-in of the impact of the illustrated investment loss in FY 2022-23.
- The Pension Outlook Tool can be used to model projected contributions for these scenarios beyond FY 2025-26 as well as to model other investment return scenarios.

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 4.5% and 2.3%, 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, 2022 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 6.8% as well as alternate discount rates of 5.8% and 7.8%. The rates of 5.8% and 7.8% were selected since they illustrate the impact of a 1.0% increase or decrease to the 6.8% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2022	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	5.8%	6.8%	7.8%
Price Inflation	2.3%	2.3%	2.3%
Real Rate of Return	3.5%	4.5%	5.5%
a) Total Normal Cost	23.67%	18.81%	15.11%
b) Accrued Liability	\$22,746,923	\$20,230,268	\$18,116,796
c) Market Value of Assets	\$18,872,087	\$18,872,087	\$18,872,087
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$3,874,836	\$1,358,181	(\$755,291)
e) Funded Ratio	83.0%	93.3%	104.2%

Sensitivity to the Price Inflation Assumption

As of June 30, 2022	1% Lower Price Inflation	Current Assumptions	1% Higher Price Inflation
Discount Rate	5.8%	6.8%	7.8%
Price Inflation	1.3%	2.3%	3.3%
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	19.74%	18.81%	17.15%
b) Accrued Liability	\$20,963,992	\$20,230,268	\$18,608,475
c) Market Value of Assets	\$18,872,087	\$18,872,087	\$18,872,087
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$2,091,905	\$1,358,181	(\$263,612)
e) Funded Ratio	90.0%	93.3%	101.4%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2022 plan costs and funded status under two different longevity scenarios, namelyassuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2021. This type of analysis highlights the impact on the plan of a change in the mortality assumption.

As of June 30, 2022	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	19.13%	18.81%	18.51%
b) Accrued Liability	\$20,701,933	\$20,230,268	\$19,797,183
c) Market Value of Assets	\$18,872,087	\$18,872,087	\$18,872,087
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$1,829,846	\$1,358,181	\$925,096
e) Funded Ratio	91.2%	93.3%	95.3%

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 CaIPERS 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, 2021	June 30, 2022	
1. Retired Accrued Liability	\$10,289,974	\$10,176,378	
2. Total Accrued Liability	19,644,693	20,230,268	
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.52	0.50	

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 declines. A mature plan will often have a ratio near or b elow one.

To calculate the support ratio for the rate plan, retirees and beneficiaries receiving a continuance are each counted as one, even though they may have only worked a portion of their careers as an active member of this rate plan. For this reason, the support ratio, while intuitive, maybe less informative than the ratio of retiree liability to total accrued liability above.

For comparison, the support ratio for all CalPERS public agency plans as of June 30, 2021, was 0.78 and was calculated consistently with how it is for the individual rate plan. Note that to calculate the support ratio for all public agency plans, a retiree with service from more than one CalPERS agency is counted as a retiree more than once.

Support Ratio	June 30, 2021	June 30, 2022
1. Number of Actives	19	19
2. Number of Retirees	33	31
3. Support Ratio [(1) / (2)]	0.58	0.61

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, 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

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 AVR of 8 may experience twice the contribution volatility due to investment return volatility than a plan with AVR 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 a plan matures.

Liability Volatility Ratio

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 changes in liability. For example, a plan with LVR 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, since the AVR, described above, will tend to move closer to the LVR as the funded ratio approaches 100%.

Contribution Volatility	June 30, 2021	June 30, 2022
1. Market Value of Assets	\$21,290,953	\$18,872,087
2. Payroll	2,193,987	2,252,098
3. Asset Volatility Ratio (AVR) [(1) / (2)]	9.7	8.4
4. Accrued Liability	\$19,644,693	\$20,230,268
5. Liability Volatility Ratio (LVR) [(4) / (2)]	9.0	9.0

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	0.47	0.68	5.3	7.4
06/30/2018	0.49	0.64	5.4	7.7
06/30/2019	0.47	0.64	5.4	7.7
06/30/2020	0.43	0.66	7.5	7.7
06/30/2021	0.52	0.58	9.7	9.0
06/30/2022	0.50	0.61	8.4	9.0

Funded Status – Termination Basis

The funded status measured on a termination basis is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2022. The accrued liability on a termination basis (termination liability) is calculated differently compared to the plan's ongoing funding liability. For the 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. Unlike the actuarial cost method used for ongoing plans, the termination liability is the present value of the benefits earned through the valuation date.

A more conservative investment policy and asset allocation strategy was adopted by the 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 seven months after.

	Discount Rate: 1.75% Price Inflation: 2.50%			Disco Price	unt Rate: 4 Inflation: 2	1.50% 2.75%
Market Value of Assets (MVA)	Termination Liability ^{1,2}	Funded Ratio	Unfunded Termination Liability	Termination Liability ^{1,2}	Funded Ratio	Unfunded Termination Liability
\$18,872,087	\$39,753,357	47.5%	\$20,881,270	\$26,880,104	70.2%	\$8,008,017

¹ The termination liabilities calculated above include a 5% contingency load. The contingency load and other actuarial assumptions can be found in Appendix A of the Section 2 report.

² The discount rate used for termination valuations is a w eighted 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 w as 3.38% on June 30, 2022, the valuation date.

In order to terminate the plan, first contact our Pension Contract Services unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to provide a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. Before beginning this process, please consult with the plan actuary.

Participant Data

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

	June 30, 2021	June 30, 2022
Active Members		
Counts	19	19
Average Attained Age	48.4	49.1
Average Entry Age to Rate Plan	35.0	35.3
Average Years of Credited Service	13.0	13.3
Average Annual Covered Pay	\$115,473	\$118,531
Annual Covered Payroll	\$2,193,987	\$2,252,098
Present Value of Future Payroll	\$17,564,348	\$17,475,631
Transferred Members	5	5
Separated Members	4	4
Retired Members and Beneficiaries*		
Counts	33	31
Average Annual Benefits	\$26,005	\$27,568
Total Annual Benefits	\$858,158	\$854,620

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 <u>optional</u> benefits for which the agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

	Benefit Group	
Member Category	Misc	Misc
Demographics Actives Transfers/Separated Receiving	Yes Yes Yes	No No Yes
Benefit Provision		
Benefit Formula Social Security Coverage Full/Modified	2% @ 55 No Full	
Employee Contribution Rate	7.00%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits Optional Settlement 2 1959 Survivor Benefit Level Special Alternate (firefighters)	Yes Level 3 No No	
Post-Retirement Death Benefits Lump Sum Survivor Allowance (PRSA)	\$2000 No	\$2000 No
COLA	2%	2%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

Section 2 may be found on the CalPERS website (www.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 2023

PEPRA Miscellaneous Plan of the Camrosa Water District (CalPERS ID: 7880235845) Annual Valuation Report as of June 30, 2022

Dear Employer,

Attached to this letter is the June 30, 2022 actuarial valuation report for the rate plan noted above. **Provided in this report is the determination of the minimum required employer contributions for fiscal year (FY) 2024-25**. 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, 2022.

Section 2 can be found on the CaIPERS website (www.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, 2022.

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 CaIPERS Board of Administration (board) adopts these assumptions after considering the advice of CaIPERS actuarial and investment teams and other professionals. Each actuarial valuation reflects all prior differences between actual and assumed experience and adjusts the contribution requirements as needed. This valuation is based on an investment return assumption of 6.8%, which was adopted by the board in November 2021. Other assumptions used in this report are those recommended in the CaIPERS Experience Study and Review of Actuarial Assumptions report from November 2021.

Required Contributions

The table below shows the minimum required employer contributions and the PEPRA member contribution rate for FY 2024-25 along with estimates of the required contributions for FY 2025-26. Employee contributions other than cost sharing (whether paid by the employer or the employee) are in addition to the results shown below. The required employer contributions in this report do not reflect any cost sharing arrangement between the agency and the employees.

Fiscal Year	Employer Normal Cost Rate	Employer Amortization of Unfunded Accrued Liability	PEPRA Member Contribution Rate
2024-25	7.87%	\$918	7.75%
Projected Results			
2025-26	7.9%	\$1,500	TBD

PEPRA Miscellaneous Plan of the Camrosa Water District (CaIPERS ID: 7880235845) Annual Valuation Report as of June 30, 2022 Page 2

The actual investment return for FY 2022-23 was not known at the time this report was prepared. The projections above assume the investment return for that year would be 6.8%. *To the extent the actual investment return for FY 2022-23 differs from 6.8%, the actual contribution requirements for FY 2025-26 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 FY 2029-30.

Changes from Previous Year's Valuations

There are no significant changes in actuarial assumptions or policies in the 2022 actuarial valuation. There may be changes specific to the plan such as contract amendments and funding changes.

Further descriptions of general changes are included in "Highlights and Executive Summary" and in Appendix A of the Section 2 report in "Actuarial Methods and Assumptions." The effects of any changes on the required contributions are included in "Reconciliation of Required Employer Contributions," also in the Section 2 report.

Questions

A CalPERS actuary is available to answer questions about this report. Other questions may be directed to the Customer Contact Center at (888)-CalPERS or (888-225-7377).

Sincerely,

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

RANDALL DZIUBEK, ASA, MAAA Deputy Chief Actuary, Valuation Services, CalPERS



Actuarial Valuation as of June 30, 2022

for the PEPRA Miscellaneous Plan of the Camrosa Water District (CalPERS ID: 7880235845)

Required Contributions for Fiscal Year July 1, 2024 - June 30, 2025

Table of Contents

Section 1 – Plan Specific Information

Section 2 – Risk Pool Actuarial Valuation Information

Section 1

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Plan Specific Information for the PEPRA Miscellaneous Plan of the Camrosa Water District

(CaIPERS ID: 7880235845) (Rate Plan ID: 27306)

Table of Contents

Actuarial Certification	1
Highlights and Executive Summary	
Introduction Purpose of Section 1 Required Contributions Additional Discretionary Employer Contributions Funded Status – Funding Policy Basis Projected Employer Contributions Other Pooled Miscellaneous Risk Pool Rate Plans Cost Changes Since the Prior Year's Valuation Subsequent Events	3 3 4 5 6 7 8 9 10 10
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 Amortization Bases Amortization Schedule and Alternatives Employer Contribution History Funding History	12 12 13 13 14 16 16
Risk Analysis	
Future Investment Return Scenarios Discount Rate Sensitivity Mortality Rate Sensitivity Maturity Measures Maturity Measures History Funded Status – Termination Basis	18 19 19 20 21 22
Participant Data	23
List of Class 1 Benefit Provisions	23
Plan's Major Benefit Options	24
PEPRA Member Contribution Rates	25

Actuarial Certification

To the best of our knowledge, this report, comprised of Sections 1 and 2, is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the PEPRA Miscellaneous Plan of the Camrosa Water District and satisfies the actuarial valuation requirements of Government Code section 7504. This valuation is based on the member and financial data as of June 30, 2022 provided by the various CaIPERS databases and the benefits under this plan with CaIPERS as of the date this report was produced. Section 1 of this report is based on the member and financial data for Camrosa Water District, while Section 2 is based on the corresponding information for all agencies participating in the Miscellaneous Risk Pool to which the plan belongs.

As set forth in Section 2 of this report, the pool actuaries have certified that, in their opinion, the valuation of the Miscellaneous Risk Pool has been performed in accordance with generally accepted actuarial principles, in accordance 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 rate plan, it is my opinion as the plan actuary that the Unfunded Accrued Liability amortization bases as of June 30, 2022 and employer contribution as of July 1, 2024 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.

BILL KARCH, ASA, MAAA Supervising Actuary, CalPERS

Highlights and Executive Summary

- Introduction
- Purpose of Section 1
- Required Contributions
- Additional Discretionary Employer Contributions
- Funded Status Funding Policy Basis
- 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, 2022 actuarial valuation of the PEPRA Miscellaneous Plan of the Camrosa Water District of the California Public Employees' Retirement System (CalPERS). This actuarial valuation sets the minimum required contributions for fiscal year (FY) 2024-25.

Purpose of Section 1

This Section 1 report for the PEPRA Miscellaneous Plan of the Camrosa Water District of CalPERS was prepared by the Actuarial Office using data as of June 30, 2022. The purpose of the valuation is to:

- Set forth the assets and accrued liabilities of this rate plan as of June 30, 2022;
- Determine the minimum required employer contributions for this rate plan for FY July 1, 2024 through June 30, 2025;
- Determine the required member contribution rate for FY July 1, 2024 through June 30, 2025 for employees subject to the California Public Employees' Pension Reform Act of 2013 (PEPRA); and
- Provide actuarial information as of June 30, 2022 to the CalPERS Board of Administration (board) 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 CaIPERS website (www.calpers.ca.gov).

The measurements shown in this actuarial valuation may not be applicable for other purposes. The agency should contact the plan 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; changes in plan provisions or applicable law; and differences between the required contributions determined by the valuation and the actual contributions made by the agency.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with the guidance of Actuarial Standard 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 5.8% and 7.8%.
- 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 2021.
- Plan maturity measures indicating how sensitive a plan may be to the risks noted above.

Required Contributions

	Fiscal Year
Required Employer Contributions	2024-25
Employer Normal Cost Rate	7.87%
Plus	
Required Payment on Amortization Bases ¹	\$918
Paid either as	
1) Monthly Payment	\$76.50
Or	
2) Annual Prepayment Option*	\$888
Required PEPRA Member Contribution Rate	7.75%

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).

For additional detail regarding the determination of the required contribution rate for PEPRA members, see "PEPRA Member Contribution Rates" section.

	Fiscal Year	Fiscal Year
	2023-24	2024-25
Development of Normal Cost as a Percentage of Payroll		
Base Total Normal Cost for Formula	15.43%	15.62%
Surcharge for Class 1 Benefits ²		
None	0.00%	0.00%
Phase out of Normal Cost Difference ³	0.00%	0.00%
Plan's Total Normal Cost	15.43%	15.62%
Offset Due to Employee Contributions	7.75%	7.75%
Employer Normal Cost Rate	7.68%	7.87%

¹ The required payment on amortization bases does not take into account any additional discretionary payment made after April 28, 2023.

² Section 2 of this report contains a list of Class 1 benefits and corresponding surcharges.

³ When a rate plan joins the pool, the difference in normal cost betw een the pool and the rate plan is phased out over a fiveyear period in accordance with the CaIPERS contribution allocation policy.

Additional Discretionary Employer Contributions

The minimum required employer contribution towards the Unfunded Accrued Liability (UAL) for this rate plan for FY 2024-25 is \$918. CalPERS allows agencies 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. Agencies 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 FY 2024-25 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.

Agencies considering making an ADP should contact CaIPERS for additional information.

Minimum Required Employer Contribution for Fiscal Year 2024-25

Estimated	Minimum UAL	ADP	Total UAL	Estimated Total
Normal Cost	Payment		Contribution	Contribution
\$61,459	\$918	\$0	\$918	\$62,377

The minimum required contribution above is less than interest on the UAL. With no ADP the UAL is projected to increase over the following year. If the minimum UAL payment were split between interest and principal, the principal portion would be negative. This situation is referred to as **negative amortization**. If only the minimum required contribution is made, contributions are not expected to exceed interest on the UAL until FY **2027-28**, as shown in the "Amortization Schedule and Alternatives" section of the report (see columns labeled "Current Amortization Schedule").

Fiscal Year 2024-25 Employer Contribution Necessary to Avoid Negative Amortization

Estimated	Minimum UAL	ADP ¹	Total UAL	Estimated Total
Normal Cost	Payment		Contribution	Contribution
\$61,459	\$918	\$1,011	\$1,929	\$63,388

Alternative Fiscal Year 2024-25 Employer Contributions for Greater UAL Reduction

Funding Horizon	Estimated Normal Cost	Minimum UAL Payment	ADP ¹	Total UAL Contribution	Estimated Total Contribution
20 years	\$61,459	\$918	\$1,718	\$2,636	\$64,095
15 years	\$61,459	\$918	\$2,158	\$3,076	\$64,535
10 years	\$61,459	\$918	\$3,084	\$4,002	\$65,461
5 years	\$61,459	\$918	\$5,964	\$6,882	\$68,341

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 show n to have the same effect on the UAL amortization.

Note that the calculations above are based on the projected UAL as of June 30, 2024 as determined in the June 30, 2022 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.

Funded Status – Funding Policy Basis

The table below provides information on the current funded status of the plan under the funding policy. The funded status for this purpose is based on the market value of assets relative to the funding target produced by the entry age actuarial cost method and actuarial assumptions adopted by the board. The actuarial cost method allocates the total expected cost of a member's projected benefit (**Present Value of Benefits**) to individual years of service (the **Normal Cost**). The value of the projected benefit that is not allocated to future service is referred to as the **Accrued Liability** and is the plan's funding target on the valuation date. The **Unfunded Accrued Liability** (UAL) equals the funding target minus the assets. The UAL is an absolute measure of funded status and can be viewed as employer debt. The **funded ratio** equals the assets divided by the funding target. The funded ratio is a relative measure of the funded status and allows for comparisons between plans of different sizes.

	June 30, 2021	June 30, 2022
1. Present Value of Benefits	\$676,995	\$815,499
2. Entry Age Accrued Liability	206,612	262,227
3. Market Value of Assets (MVA)	225,683	239,754
4. Unfunded Accrued Liability (UAL) [(2) – (3)]	(\$19,071)	\$22,473
5. Funded Ratio [(3) / (2)]	109.2%	91.4%

A funded ratio of 100% (UAL of \$0) implies that the funding of the plan is on target and that future contributions equal to the normal cost of the active plan members will be sufficient to fully fund all retirement benefits if future experience matches the actuarial assumptions. A funded ratio of less than 100% (positive UAL) implies that in addition to normal costs, payments toward the UAL will be required. Plans with a funded ratio greater than 100% have a negative UAL (or surplus) but are required under current law to continue contributing the normal cost in most cases, preserving the surplus for future contingencies.

Calculations for the funding target reflect the expected long-term investment return of 6.8%. If it were known on the valuation date that future investment returns will average something greater/less than the expected return, calculated normal costs and accrued liabilities provided in this report would be less/greater than the results shown. Therefore, for example, if actual average future returns are less than the expected return, calculated normal costs and UAL contributions will not be sufficient to fully fund all retirement benefits. Under this scenario, required future normal cost contributions will need to increase from those provided in this report, and the plan will develop unfunded liabilities that will also add to required future contributions. For illustrative purposes, funded statuses based on a 1% lower and higher average future investment return (discount rate) are as follows:

	1% Lower Average Return	Current Assumption	1% Higher Average Return
DiscountRate	5.8%	6.8%	7.8%
1. Entry Age Accrued Liability	\$316,298	\$262,227	\$220,549
2. Market Value of Assets (MVA)	239,754	239,754	239,754
3. Unfunded Accrued Liability (UAL) [(1) – (2)]	\$76,544	\$22,473	(\$19,205)
4. Funded Ratio [(2) / (1)]	75.8%	91.4%	108.7%

The "Risk Analysis" section of the report provides additional information regarding the sensitivity of valuation results to the expected investment return and other factors. Also provided in that section are measures of funded status that are appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities.

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. In particular, the investment return beginning with FY 2022-23 is assumed to be 6.80% per year, net of investment and administrative expenses. Future contribution requirements may differ significantly from those shown below. The actual long-term cost of the plan will depend on the actual benefits and expenses paid and the actual investment experience of the fund.

	Required Contribution	Projected Future Employer Contributions (Assumes 6.80% Return for Fiscal Year 2022-23 and Beyond)				
Fiscal Year	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30
	Rate Plan 27306 Results					
Normal Cost %	7.87%	7.9%	7.9%	7.9%	7.9%	7.9%
UAL Payment	\$918	\$1,500	\$2,000	\$2,500	\$3,100	\$3,100

For ongoing plans, investment gains and losses are 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 investment loss, the relatively small amortization payments during the ramp up period could result in contributions that are less than interest on the UAL (i.e. negative amortization) while the contribution impact of the increase in the UAL is phased in.

The required contribution for FY 2024-25 is less than interest on the UAL, a situation referred to as negative amortization, as explained in the "Additional Discretionary Employer Contributions" section earlier in this report. If only the minimum required contribution is made, contributions are not expected to exceed interest on the UAL until FY 2027-28, as shown in the "Amortization Schedule and Alternatives" section of the report (see columns labelled "Current Amortization Schedule").

For projected contributions under alternate investment return scenarios, please see the "Future Investment Return Scenarios" in the "Risk Analysis" section. Our online pension plan projection tool, Pension Outlook, is available in the Employers section of the CaIPERS website. Pension Outlook can help plan and budget pension costs under various scenarios.

Other Pooled Miscellaneous Risk Pool Rate Plans

All of the results presented in this Section 1 report, except those shown on this page, correspond to rate plan 27306. 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 total employer payroll within the Miscellaneous Risk Pool will grow according to the overall payroll growth assumption of 2.80% per year for three years. In a refinement since the prior year's report, Classic members who are projected to terminate employment are assumed to be replaced by PEPRA members.

	Fiscal Year	Fiscal Year
	2023-24	2024-25
Estimated Combined Employer Contributions for all Pooled Mis	scellaneous Rate Plans	
Projected Payroll for the Contribution Year	\$2,666,053	\$2,758,850
Estimated Employer Normal Cost	\$303,906	\$296,436
Required Payment on Amortization Bases	\$0	\$56,840
Estimated Total Employer Contributions	\$303,906	\$353,276
Estimated Total Employer Contribution Rate (illustrative only)	11.40%	12.81%

Cost

Actuarial Determination of Plan Cost

Contributions to fund the 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 2015-16, the Amortization of UAL component was expressed as a percentage of total active payroll. Starting with FY 2015-16, the Amortization of UAL component was expressed as a dollar amount and invoiced on a monthly basis. There is 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, disabilityrates)
- Economic assumptions (e.g., future investment earnings, inflation, salary growth rates)

These assumptions reflect CaIPERS' 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 CaIPERS have averaged 6.9% over the 20 years ending June 30, 2022, yet individual fiscal year returns have ranged from -23.6% to +21.3%. In addition, CaIPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2021.

Changes Since the Prior Year's Valuation

Benefits

The standard actuarial practice at CaIPERS 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 amendments effective before the date of the report. Please refer to the "Plan's Major Benefit Options" in this report and Appendix B of the Section 2 Report for a summary of the plan provisions used in this valuation.

In 2022, SB 1168 increased the standard retiree lump sum death benefit from \$500 to \$2,000 for any death occurring on or after July1, 2023. For pooled plans this is a Class 3 benefit and there is no normal cost surcharge. The impact on the unfunded liability is included in the pool's (gain)/loss.

Actuarial Methods and Assumptions

There are no significant changes to the actuarial methods or assumptions for the June 30, 2022 actuarial valuation.

Subsequent Events

This actuarial valuation report reflects fund investment return through June 30, 2022 and statutory/regulatory changes and board actions through January 2023.

During the time period between the valuation date and the publication of this report, inflation has been significantly higher than the expected inflation of 2.3% per annum. Since inflation influences cost-of-living increases for retirees and beneficiaries and active member payincreases, higher inflation is likely to put at least some upward pressure on contribution requirements and downward pressure on the funded status in the June 30, 2023 valuation. The actual impact of higher inflation on future valuation results will depend on, among other factors, how long higher inflation persists. At this time, we continue to believe the long-term inflation assumption of 2.3% is appropriate.

To the best of our knowledge, there have been no other subsequent events that could materially affect current or future certifications rendered in this report.

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 Amortization Bases
- Amortization Schedule and Alternatives
- Employer Contribution History
- Funding History

Breakdown of Entry Age Accrued Liability

Active Members	\$107,967
Transferred Members	114,194
Separated Members	40,066
Members and Beneficiaries Receiving Payments Total	<u>0</u> \$262,227

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

It is the policy of CaIPERS 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	\$262,227
2.	Projected UAL Balance at 6/30/2022	(18,728)
3.	Other UAL Adjustments (Golden Handshake, Prior Service Purchase, etc.)	0
4.	Adjusted UAL Balance at 6/30/2022 for Asset Share	(18,602)
5.	Pool's Accrued Liability ¹	22,021,735,002
6.	Sum of Pool's Individual Plan UAL Balances at 6/30/2022 ¹	2,453,954,297
7.	Pool's 2021-22 Investment (Gain)/Loss ¹	2,614,071,182
8.	Pool's 2021-22 Non-Investment (Gain)/Loss ¹	309,490,972
9.	Plan's Share of Pool's Investment (Gain)/Loss: [(1) - (4)] ÷ [(5) - (6)] × (7)	37,516
10.	Plan's Share of Pool's Non-Investment (Gain)/Loss: (1) ÷ (5) × (8)	3,685
11.	Plan's New (Gain)/Loss as of 6/30/2022: (9) + (10)	41,201
12.	Increase in Pool's Accrued Liability due to Change in Assumptions ¹	0
13.	Plan's Share of Pool's Change in Assumptions: $(1) \div (5) \times (12)$	0
14.	Increase in Pool's Accrued Liability due to Funding Risk Mitigation ¹	0
15.	Plan's Share of Pool's Change due to Funding Risk Mitigation: $(1) \div (5) \times (14)$	0
16.	Offset due to Funding Risk Mitigation	0
17.	Plan's Investment (Gain)/Loss: (9)– (16)	37,516
18.	Partial Fresh Start Base: (2) + (17)	18,788

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

19.	Plan's UAL: (2) + (3) + (11) + (13) + (15)	\$22,473
20.	Plan's Share of Pool's MVA: (1) - (19)	\$239,754
Schedule of Amortization Bases

Below is the schedule of the plan's amortization bases. Note that there is a two-year lag between the valuation date and the start of the contribution year.

- The assets, liabilities, and funded status of the plan are measured as of the valuation date: June 30, 2022.
- The required employer contributions determined by the valuation are for the fiscal year beginning two years after the valuation date: FY 2024-25.

This two-year lag is necessarydue 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.

		Ramp		Es cala-			Expected		Expected		Minim um Required
	Date	Leve	Ramp	tion	Amort.	Balance	Payment	Balance	Payment	Balance	Payment
Reason for Base	Est.	2024-25	Shape	Rate	Period	6/30/22	2022-23	6/30/23	2023-24	6/30/24	2024-25
Non-Investment (Gain)/Loss	6/30/22	o N	Ramp	0.00%	20	3,685	0	3,936	0	4,204	378
Partial Fresh Start	6/30/22	20%	Up Only	0.00%	20	18,788	(3,338)	23,515	0	25,114	540
Total						22,473	(3,338)	27,451	0	29,318	918

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 (gain)/loss bases are the plan's allocated share of the risk pool's (gain)/loss for the fiscal year as disclosed in "Allo cation of Plan's Share of Pool's the base was established.

The partial fresh start base established June 30, 2022 is the sum of the UAL balance from the June 30, 2021 valuation (projected to June 30, 2022) and the June 30, 2022 investment loss, as shown on the previous page.

Amortization Schedule and Alternatives

The amortization schedule on the previous page(s) shows the minimum contributions required according to the CaIPERS 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 contact the 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 an appropriate period.

The Current Amortization Schedule on the following page mayappear 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			
	<u>Current Am</u> Scheo	<u>ortization</u> Jule	20 Year Am	ortization	15 Year Am	ortization
Date	Balance	 Payment	Balance	Payment	Balance	Payment
6/30/2024	29,318	918	29,318	2,636	29,318	3,076
6/30/2025	30,363	1,458	28,587	2,636	28,133	3,076
6/30/2026	30,921	1,997	27,807	2,636	26,867	3,075
6/30/2027	30,959	2,537	26,974	2,636	25,516	3,076
6/30/2028	30,442	3,077	26,084	2,637	24,072	3,075
6/30/2029	29,333	3,077	25,133	2,637	22,531	3,075
6/30/2030	28,147	3,077	24,117	2,637	20,885	3,075
6/30/2031	26,881	3,077	23,032	2,636	19,127	3,076
6/30/2032	25,529	3,077	21,874	2,637	17,249	3,075
6/30/2033	24,086	3,077	20,636	2,636	15,244	3,076
6/30/2034	22,544	3,077	19,315	2,636	13,102	3,076
6/30/2035	20,897	3,077	17,904	2,637	10,814	3,075
6/30/2036	19,138	3,077	16,396	2,636	8,372	3,076
6/30/2037	17,259	3,077	14,787	2,637	5,762	3,075
6/30/2038	15,253	3,077	13,067	2,636	2,976	3,076
6/30/2039	13,111	3,077	11,231	2,636		
6/30/2040	10,823	3,078	9,271	2,637		
6/30/2041	8,378	3,077	7,176	2,636		
6/30/2042	5,767	3,078	4,940	2,637		
6/30/2043	2,979	3,078	2,551	2,636		
6/30/2044						
6/30/2045						
6/30/2046						
6/30/2047						
6/30/2048						
6/30/2049						
- ()						
		56,145		52,728		46,133
Interest Paid		26,827	_	23,410		16,815
Estimated Sav	ings			3,417		10,012

Employer Contribution History

The table below provides a recent history of the required and discretionary employer contributions for the plan. The required amounts are based on the actuarial valuation from two years prior without subsequent adjustments, if any. Additional discretionary payments before July 1, 2019 or after April 28, 2023 are not included.

Fiscal Year	Employer Normal Cost	Unfunded Liability Payment (\$)	Additional Discretionary Payments
2017 - 18	6.533%	\$63	N/A
2018 - 19	6.842%	104	N/A
2019 - 20	6.985%	633	2,205
2020 - 21	7.732%	1,954	5,001
2021 - 22	7.59%	1,520	2,072
2022 - 23	7.47%	1,275	0
2023 - 24	7.68%	0	
2024 - 25	7.87%	918	

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
06/30/2015	\$5,024	\$4,780	\$244	95.2%	\$94,952
06/30/2016	18,274	16,674	1,600	91.2%	87,067
06/30/2017	51,511	50,336	1,175	97.7%	240,658
06/30/2018	69,025	66,288	2,737	96.0%	257,499
06/30/2019	114,244	106,440	7,804	93.2%	289,593
06/30/2020	156,941	145,610	11,331	92.8%	206,721
06/30/2021	206,612	225,683	(19,071)	109.2%	260,097
06/30/2022	262,227	239,754	22,473	91.4%	287,405

Risk Analysis

- Future Investment Return Scenarios
- Discount Rate Sensitivity
- Mortality Rate Sensitivity
- Maturity Measures
- Maturity Measures History
- Funded Status Termination Basis

Future Investment Return Scenarios

Analysis using the investment return scenarios from the Asset Liability Management process completed in 2021 was performed to determine the effects of various future investment returns on required employer contributions. The projections below reflect the impact of the CaIPERS Funding Risk Mitigation policy. The projections also assume that all other actuarial assumptions will be realized and that no further changes in assumptions, contributions, benefits, or funding will occur.

The first table shows projected contribution requirements if the fund were to earn either 3.0% or 10.8% annually. These alternate investment returns were chosen because 90% of long-term average returns are expected to fall between them over the 20-year period ending June 30, 2042.

Assumed Annual Return FY 2022-23		Projected	d Employer Cor	ntributions	
through 2041-42	2025-26	2026-27	2027-28	2028-29	2029-30
3.0% (5 th percentile)					
Normal Cost Rate	7.9%	7.9%	7.9%	7.9%	7.9%
UAL Contribution	\$1,700	\$2,700	\$3,900	\$5,400	\$6,500
10.8% (95 th percentile)					
NormalCostRate	8.1%	8.3%	8.5%	8.7%	8.4%
UAL Contribution	\$1,300	\$1,400	\$1,100	\$0	\$0

Required contributions outside of this range are also possible. In particular, whereas it is unlikely that investment returns will average less than 3.0% or greater than 10.8% over a 20-year period, the likelihood of a single investment return less than 3.0% or greater than 10.8% in any given year is much greater. The following analysis illustrates the effect of an extreme, single year investment return.

The portfolio has an expected volatility (or standard deviation) of 12.0% per year. Accordingly, in any given year there is a 16% probability that the annual return will be -5.2% or less and a 2.5% probability that the annual return will be -17.2% or less. These returns represent one and two standard deviations below the expected return of 6.8%.

The following table shows the effect of a one or two standard deviation investment loss in FY 2022-23 on the FY 2025-26 contribution requirements. Note that a single-year investment gain or loss decreases or increases the required UAL contribution amount incrementally for each of the next five years, not just one, due to the 5-year ramp in the amortization policy. However, the contribution requirements beyond the first year are also impacted by investment returns beyond the first year. Historically, significant downturns in the market are often followed by higher than average returns. Such investment gains would offset the impact of these single year negative returns in years beyond FY 2025-26.

Assumed Annual Return for Fiscal Year 2022-23	Required Employer Contributions	Projected Employer Contributions
	2024-25	2025-26
(17.2)% (2 standard deviation loss)		
NormalCostRate	7.87%	7.9%
UAL Contribution	\$918	\$2,900
(5.2)% (1 standard deviation loss)		
NormalCostRate	7.87%	7.9%
UAL Contribution	\$918	\$2,200

- Without investment gains (returns higher than 6.8%) in FY 2023-24 or later, projected contributions rates would continue to rise over the next four years due to the continued phase-in of the impact of the illustrated investment loss in FY 2022-23.
- The Pension Outlook Tool can be used to model projected contributions for these scenarios beyond FY 2025-26 as well as to model other investment return scenarios.

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 4.5% and 2.3%, 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, 2022 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 6.8% as well as alternate discount rates of 5.8% and 7.8%. The rates of 5.8% and 7.8% were selected since they illustrate the impact of a 1.0% increase or decrease to the 6.8% assumption.

Sensitivity to the Real Rate of Return Assumption

As of June 30, 2022	1% Lower Real Return Rate	Current Assumptions	1% Higher Real Return Rate
Discount Rate	5.8%	6.8%	7.8%
Price Inflation	2.3%	2.3%	2.3%
Real Rate of Return	3.5%	4.5%	5.5%
a) Total Normal Cost	19.53%	15.62%	12.65%
b) Accrued Liability	\$316,298	\$262,227	\$220,549
c) Market Value of Assets	\$239,754	\$239,754	\$239,754
d) Unfunded Liability/(Surplus)[(b) - (c)]	\$76,544	\$22,473	(\$19,205)
e) Funded Ratio	75.8%	91.4%	108.7%

Sensitivity to the Price Inflation Assumption

As of June 30, 2022	1% Lower Price Inflation	Current Assumptions	1% Higher Price Inflation
Discount Rate	5.8%	6.8%	7.8%
Price Inflation	1.3%	2.3%	3.3%
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	16.48%	15.62%	14.20%
b) Accrued Liability	\$273,546	\$262,227	\$241,440
c) Market Value of Assets	\$239,754	\$239,754	\$239,754
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$33,792	\$22,473	\$1,686
e) Funded Ratio	87.6%	91.4%	99.3%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2022 plan costs and funded status under two different longevity scenarios, namelyassuming post-retirement rates of mortality are 10% lower or 10% higher than our current mortality assumptions adopted in 2021. This type of analysis highlights the impact on the plan of a change in the mortality assumption.

As of June 30, 2022	10% Lower Mortality Rates	Current Assumptions	10% Higher Mortality Rates
a) Total Normal Cost	15.89%	15.62%	15.37%
b) Accrued Liability	\$266,391	\$262,227	\$258,381
c) Market Value of Assets	\$239,754	\$239,754	\$239,754
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$26,637	\$22,473	\$18,627
e) Funded Ratio	90.0%	91.4%	92.8%

Maturity Measures

As pension plans mature they become more sensitive to risks. Understanding plan maturity and how it affects the ability of a pension plan sponsor to tolerate risk is important in understanding how the pension plan is impacted by investment return volatility, other economic variables, and changes in longevity or other demographic assumptions.

Since it is the employer that bears the risk, it is appropriate to perform this analysis on a pension plan level considering all rate plans. The following measures are for one rate plan only. One way to look at the maturity level of CaIPERS 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, 2021	June 30, 2022
1. Retired Accrued Liability	\$0	\$0
2. Total Accrued Liability	206,612	262,227
3. Ratio of Retiree AL to Total AL [(1) / (2)]	0.00	0.00

Another measure of maturity level of CaIPERS 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 declines. Amature plan will often have a ratio near or b elow one.

To calculate the support ratio for the rate plan, retirees and beneficiaries receiving a continuance are each counted as one, even though they may have only worked a portion of their careers as an active member of this rate plan. For this reason, the support ratio, while intuitive, may be less informative than the ratio of retiree liability to total accrued liability above.

For comparison, the support ratio for all CalPERS public agency plans as of June 30, 2021, was 0.78 and was calculated consistently with how it is for the individual rate plan. Note that to calculate the support ratio for all public agency plans, a retiree with service from more than one CalPERS agency is counted as a retiree more than once.

Support Ratio	June 30, 2021	June 30, 2022
1. Number of Actives	4	4
2. Number of Retirees	0	0
3. Support Ratio [(1) / (2)]	N/A	N/A

Maturity Measures (continued)

The actuarial calculations supplied in this communication are based on various assumptions about long-term demographic and economic behavior. Unless these assumptions (e.g., terminations, deaths, disabilities, retirements, salary growth, 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

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 AVR of 8 may experience twice the contribution volatility due to investment return volatility than a plan with AVR 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 a plan matures.

Liability Volatility Ratio

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 changes in liability. For example, a plan with LVR 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, since the AVR, described above, will tend to move closer to the LVR as the funded ratio approaches 100%.

Contribution Volatility	June 30, 2021	June 30, 2022
1. Market Value of Assets	\$225,683	\$239,754
2. Payroll	260,097	287,405
3. Asset Volatility Ratio (AVR) [(1) / (2)]	0.9	0.8
4. Accrued Liability	\$206,612	\$262,227
5. Liability Volatility Ratio (LVR) [(4) / (2)]	0.8	0.9

Maturity Measures History

Valuation Date	Ratio of Retiree Accrued Liability to Total Accrued Liability	Support Ratio	Asset Volatility Ratio	Liability Volatility Ratio
06/30/2017	0.00	N/A	0.2	0.2
06/30/2018	0.00	N/A	0.3	0.3
06/30/2019	0.00	N/A	0.4	0.4
06/30/2020	0.00	N/A	0.7	0.8
06/30/2021	0.00	N/A	0.9	0.8
06/30/2022	0.00	N/A	0.8	0.9

Funded Status – Termination Basis

The funded status measured on a termination basis is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2022. The accrued liability on a termination basis (termination liability) is calculated differently compared to the plan's ongoing funding liability. For the 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. Unlike the actuarial cost method used for ongoing plans, the termination liability is the present value of the benefits earned through the valuation date.

A more conservative investment policy and asset allocation strategy was adopted by the 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 seven months after.

	Disco Price	unt Rate: 1 Inflation: 2	1.75% 2.50%	Disco Price	unt Rate: 4 Inflation: 2	1.50% 2.75%
Market Value of Assets (MVA)	Termination Liability ^{1,2}	Funded Ratio	Unfunded Termination Liability	Termination Liability ^{1,2}	Funded Ratio	Unfunded Termination Liability
\$239,754	\$662,502	36.2%	\$422,748	\$306,291	78.3%	\$66,537

¹ The termination liabilities calculated above include a 5% contingency load. The contingency load and other actuarial assumptions can be found in Appendix A of the Section 2 report.

² The discount rate 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 3.38% on June 30, 2022, the valuation date.

In order to terminate the plan, first contact our Pension Contract Services unit to initiate a Resolution of Intent to Terminate. The completed Resolution will allow the plan actuary to provide a preliminary termination valuation with a more up-to-date estimate of the plan liabilities. Before beginning this process, please consult with the plan actuary.

Participant Data

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

	June 30, 2021	June 30, 2022
Active Members		
Counts	4	4
Average Attained Age	33.5	41.2
Average Entry Age to Rate Plan	31.5	39.1
Average Years of Credited Service	2.0	2.2
Average Annual Covered Pay	\$65,024	\$71,851
Annual Covered Payroll	\$260,097	\$287,405
Present Value of Future Payroll	\$3,313,817	\$3,448,535
Transferred Members	3	4
Separated Members	5	6
Retired Members and Beneficiaries*		
Counts	0	0
Average Annual Benefits	\$0	\$0
Total Annual Benefits	\$0	\$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 the agency has contracted. A description of principal standard and optional plan provisions is in Section 2.

	Benefit Group	
Member Category	Misc	
Demographics Actives Transfers/Separated Receiving	Yes No No	
Benefit Provision		
Benefit Formula Social Security Coverage Full/Modified	2% @ 62 No Full	
Employee Contribution Rate	7.75%	
Final Average Compensation Period	Three Year	
Sick Leave Credit	Yes	
Non-Industrial Disability	Standard	
Industrial Disability	No	
Pre-Retirement Death Benefits Optional Settlement 2 1959 Survivor Benefit Level Special Aternate (firefighters)	Yes Level 3 No No	
Post-Retirement Death Benefits Lump Sum Survivor Allowance (PRSA)	\$2000 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 for the plan is dependent on the benefit levels, 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, 2024, based on 50% of the total normal cost rate as of the June 30, 2022 valuation.

		Basis for C	<u>urrent Rate</u>	<u>R</u>	Rates Effecti	<u>ve July 1,20</u>	<u>)24</u>
Rate Plan Identifier	Benefit Group Name	Total Normal Cost	Member Rate	Total Normal Cost	Change	Change Needed	Member Rate
27306	Miscellaneous PEPRALevel	15.43%	7.75%	15.62%	0.19%	No	7.75%

Section 2

CALIFORNIA PUBLIC EMPLOYEES' RETIREMENT SYSTEM

Risk Pool Actuarial Valuation Information

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



Section 2

Actuarial Valuation as of June 30, 2022

for CalPERS

Miscellaneous Risk Pool

Required Contributions for Fiscal Year July 1, 2024 – June 30, 2025

Table of Contents

Actuarial Certification	1
Highlights and Executive Summary	
Introduction Purpose of Section 2 Risk Pool's Required Employer Contribution Risk Pool's Normal Cost by Benefit Formula Funded Status of the Risk Pool Cost Changes since the Prior Year's Valuation Subsequent Events	3 3 4 4 4 5 6 6
Assets	
Reconciliation of Risk Pool's Market Value of Assets Asset Allocation CalPERS History of Investment Returns	8 9 10
Liabilities and Contributions	
Risk Pool's Accrued and Unfunded Liabilities (Gain)/Loss Analysis 06/30/21 – 06/30/22 Risk Pool's Annual Required Contributions Risk Pool's Contribution History Funding History	12 13 14 14 15
Risk Analysis	
Discount Rate Sensitivity Mortality Rate Sensitivity Maturity Measures Maturity Measures History Funded Status – Termination Basis	17 18 18 19 20
Appendix A – Actuarial Methods and Assumptions	
Actuarial Data Actuarial Methods Actuarial Assumptions Miscellaneous	A1 A1 – A3 A4 – A23 A24
Appendix B – Principal Plan Provisions	B1 – B9
Appendix C – Classification of Optional Benefits	C1 – C2
Appendix D – Participant Data	
Source of the Participant Data Data Validation Tests and Adjustments Summary of Pool Participants Summary of Valuation Data Active Members Transferred and Separated Members Retired Members and Beneficiaries Distribution of Plan Costs by Benefit Formula	D1 D1 D2 D2 D3 D4 D5 - D7 D8
Appendix E – Glossary	E1 – E3

Actuarial Certification

To the best of our knowledge, this **Section 2** report is complete and accurate and contains sufficient information to disclose, fully and fairly, the funded condition of the Miscellaneous Risk Pool and satisfies the actuarial valuation of Government Code section 7504. This valuation and related valuation work is performed by the CalPERS Actuarial Office and is based on the member and financial data as of June 30, 2022 provided by the various CalPERS databases and the benefits under this risk pool with CalPERS as of the date this report was produced.

It is our opinion that the valuation has been performed in accordance with generally accepted actuarial principles, in accordance with standards of practice prescribed by the Actuarial Standards Board, and that the assumptions and methods, as prescribed by the CaIPERS Board of Administration, are internally consistent and reasonable for this plan.

The undersigned are actuaries who satisfy the *Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States* with regard to pensions.

CHEUK KIU (JET) AU, ASA, MAAA Senior Pension Actuary, CalPERS Pool Actuary

IAN OSUGI, ASA, MAAA Senior Pension Actuary, CalPERS Pool Actuary

Highlights and Executive Summary

- Introduction
- Purpose of Section 2
- Risk Pool's Required Employer Contribution
- Risk Pool's Normal Cost by Benefit Formula
- Funded Status of the Risk Pool
- Cost
- Changes Since the Prior Year's Valuation
- Subsequent Events

Introduction

This Section 2 report presents the results of the June 30, 2022 actuarial valuation of the Miscellaneous Risk Pool of the California Public Employees' Retirement System (CalPERS). This report shows the required employer normal cost contribution rates and the risk pool's payment on amortization bases for fiscal year (FY) 2024-25 for plans participating in the risk pool.

The actuarial assumptions and methods used in CalPERS public agency valuations are approved by the Board of Administration upon the recommendation of the Chief Actuary. The assumptions and methods used for the Miscellaneous Risk Pool are provided in Appendix A.

Purpose of Section 2

This actuarial valuation for the Miscellaneous Risk Pool of the California Public Employees' Retirement System (CalPERS) was prepared by CalPERS Actuarial Office using data as of June 30, 2022. The purpose of the valuation is to:

- Set forth the assets and accrued liabilities of this risk pool as of June 30, 2022
- Determine the minimum required contributions of the pool for the FY July 1, 2024 through June 30, 2025
- Provide actuarial information as of June 30, 2022 to the CalPERS Board of Administration (board) 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 from CaIPERS and details for ordering are available on the CaIPERS website (www.calpers.ca.gov).

The measurements shown in this actuarial valuation may not be applicable for other purposes. Agencies should contact a CalPERS 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 actuarial policies; changes in plan provisions or applicable law; and differences between the required contributions determined by the valuation and the actual contributions made by the agency.

Assessment and Disclosure of Risk

This report includes the following risk disclosures consistent with guidance 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 5.8% and 7.8%.
- 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 2021.
- Plan maturity measures indicating how sensitive a plan may be to the risks noted above.

Risk Pool's Required Employer Contribution

		Fiscal Year	Fiscal Year
		2023-24	2024-25
Cont	ribution in Projected Dollars		
a)	Risk Pool's Normal Cost	\$532,074,722	\$554,676,161
b)	Employee Contribution	217,682,980	236,441,255
c)	Risk Pool's Gross Employer Normal Cost [(a) - (b)]	\$314,391,742	\$318,234,906
d)	Payment on Risk Pool's Amortization Bases	<u>319,167,469</u>	<u>396,879,977</u>
e)	Total Required Employer Contribution* [(c) + (d)]	\$633,559,211	\$715,114,883

* Total may not add up due to rounding

Risk Pool's Normal Cost by Benefit Formula

			Benefit	Formula		
Normal Cost Rate as Percentage of Projected Payroll for Fiscal Year 2024-25	2% at Age 62	2% at Age 60	2% at Age 55	2.5% at Age 55	2.7% at Age 55	3% at Age 60
1) Total Normal Cost Rate	15.62%	17.08%	18.81%	21.37%	23.20%	24.32%
2) Offset due to Employee Contribution	<u>7.75%</u>	<u>6.93%</u>	<u>6.93%</u>	<u>7.96%</u>	<u>7.96%</u>	<u>7.81%</u>
3) Total Employer Normal Cost Base Benefit [(1)-(2)]	7.87%	10.15%	11.88%	13.41%	15.24%	16.51%

Class 1 benefits as provided in Appendix C-1 are in addition to these costs.

Funded Status of the Risk Pool

		June 30, 2021	June 30, 2022
1.	Present Value of Projected Benefits	\$25,080,186,044	\$26,647,911,023
2.	Entry Age Accrued Liability	\$20,794,529,023	\$22,021,735,002
3.	Market Value of Assets (MVA)	<u>\$18,063,262,515</u>	<u>\$16,768,718,642</u>
4.	Unfunded Accrued Liability (UAL) [(2) - (3)]	\$2,731,266,508	\$5,253,016,360
5.	Funded Ratio [(3) / (2)]	86.9%	76.1%

The UAL and funded ratio are assessments of the need for future employer contributions based on the selected actuarial cost method used to fund the plans. 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. The funded ratio, on the other hand, is a relative measure of the funded status that allows for comparison between plans of different sizes. For a measure of funded status that is appropriate for assessing the sufficiency of plan assets to cover estimated termination liabilities, please see "Funded Status - Termination Basis" in the "Risk Analysis" section within the Section 1 report.

Cost

Actuarial Determination of 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.

The Amortization of the UAL component is expressed as a dollar amount and invoiced on a monthly basis. There is 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 CaIPERS' 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 CaIPERS have averaged 6.9% over the 20 years ending June 30, 2022, yet individual fiscal year returns have ranged from -23.6% to +21.3%. In addition, CaIPERS reviews all actuarial assumptions by conducting in-depth experience studies every four years, with the most recent experience study completed in 2021.

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 for a summary of the plan provisions used in this valuation. The effect of any mandated benefit changes or plan amendments on the unfunded liability is shown in the "(Gain) / Loss Analysis 6/30/21 - 6/30/22" and the effect on the employer contribution is shown in the "Reconciliation of Required Employer Contributions." It should be noted that no change in liability or contribution is shown for any plan changes which were already included in the prior year's valuation.

In 2022, SB 1168 increased the standard retiree lump sum death benefit from \$500 to \$2,000 for any death occurring on or after July 1, 2023. The impact is included in non-investment (gain)/loss in the "(Gain) / Loss Analysis 6/30/21 - 6/30/22".

Actuarial Methods and Assumptions

There are no significant changes to the actuarial methods or assumptions for the June 30, 2022 actuarial valuation.

Subsequent Events

This actuarial valuation report reflects fund investment return through June 30, 2022 and statutory/regulatory changes and board actions through January 2023.

During the time period between the valuation date and the publication of this report, inflation has been significantly higher than the expected inflation of 2.3% per annum. Since inflation influences cost-of-living increases for retirees and beneficiaries and active member pay increases, higher inflation is likely to put at least some upward pressure on contribution requirements and downward pressure on the funded status in the June 30, 2023 valuation. The actual impact of higher inflation on future valuation results will depend on, among other things, how long higher inflation persists. At this time, we continue to believe the long-term inflation assumption of 2.3% is appropriate.

To the best of our knowledge, there have been no other subsequent events that could materially affect current or future certifications rendered in this report.

Assets

- Reconciliation of Risk Pool's Market Value of Assets
- Asset Allocation
- CalPERS History of Investment Returns

Reconciliation of Risk Pool's Market Value of Assets

Market Value of Assets as of June 30, 2021 including Receivables	\$18,063,262,515
Change in Receivables for Service Buybacks	(1,820,736)
Employer Contributions	895,185,313
Employee Contributions	179,964,415
Benefit Payments to Retirees and Beneficiaries	(966,209,175)
Refunds	(15,112,611)
Service Credit Purchase (SCP) Payments and Interest	5,718,506
Administrative Expenses	(14,334,891)
Transfers and Miscellaneous Adjustments	(8,366,463)
Investment Return (Net of Investment Expenses)	<u>(1,369,568,230)</u>
Market Value of Assets as of June 30, 2022 including Receivables	\$16,768,718,642
	Market Value of Assets as of June 30, 2021 including Receivables Change in Receivables for Service Buybacks Employer Contributions Employee Contributions Benefit Payments to Retirees and Beneficiaries Refunds Service Credit Purchase (SCP) Payments and Interest Administrative Expenses Transfers and Miscellaneous Adjustments Investment Return (Net of Investment Expenses) Market Value of Assets as of June 30, 2022 including Receivables

Asset Allocation

CalPERS adheres to an Asset Allocation Strategy which establishes asset class allocation policy targets and ranges and manages those asset class allocations within their policy ranges. CalPERS Investment Belief No. 6 recognizes that strategic asset allocation is the dominant determinant of portfolio risk and return.

On November 17, 2021, the board adopted changes to the strategic asset allocation. The new allocation was effective July 1, 2022, and is shown below, expressed as a percentage of total assets.

Assot Class	Actual Allocation 9/30/2022	Policy Target Allocation effective 7/1/2022
Global Public Equity	5/50/2022	11112022
Market Capitalization Weighted	33.7%	30.0%
Factor Weighted	12.6%	12.0%
Private Equity	11.6%	13.0%
Income		
Treasuries	3.9%	5.0%
Mortgage-backed Securities	5.6%	5.0%
Investment Grade Corporates	5.8%	10.0%
High Yield Bonds	4.6%	5.0%
Emerging Market Sovereign Bonds	2.1%	5.0%
Total Fund Income	1.5%	-
Real Assets	17.1%	15.0%
Private Debt	1.8%	5.0%
Other Trust Level	3.8%	-
Leverage		
Strategic	(0.3%)	(5.0%)
Active	<u>(3.8%)</u>	
Total Fund	100.00%	100.0%

Strategic Asset Allocation Policy Targets

CalPERS History of Investment Returns

The following is a chart with the 20-year historical annual returns of the PERF for each fiscal year ending on June 30 as reported by the Investment Office. Investment returns reported are net of investment expenses but without reduction for administrative expenses. The assumed rate of return, however, is net of both investment and administrative expenses. Also, the Investment Office uses a three-month lag on private equity and real assets for investment performance reporting purposes. This can lead to a timing difference in the returns below and those used for financial reporting purposes. The investment gain or loss calculation in this report relies on final assets that have been audited and are appropriate for financial reporting. Because of these differences, the effective investment return for funding purposes can be higher or lower than the return reported by the Investment Office shown here.



History of Investment Returns (2003 - 2022)

* As reported by the Investment Office with a 3-month lag on private equity and real assets.

The table below shows annualized investment returns of the PERF for various time periods ending on June 30, 2022 (figures reported are net of investment expenses but without reduction for administrative expenses). These returns are the annual rates that if compounded over the indicated number of years would equate to the actual time-weighted investment performance of the PERF. It should be recognized that in any given year the rate of return is volatile. The portfolio has an expected volatility of 12.1% per year based on the most recent Asset Liability Management study. The realized volatility is a measure of the risk of the portfolio expressed as the standard deviation of the fund's total monthly return distribution, expressed as an annual percentage. Due to their volatile nature, when looking at investment returns, it is more instructive to look at returns over longer time horizons.

History of CalP	of CalPERS Compound Annual Rates of Return and Volatilities						
	1 year	5 year	10 year	20 year	30 year		
Compound Annual Return	-6.1%	6.7%	7.7%	6.9%	7.7%		
Realized Volatility	-	8.3%	7.1%	8.5%	8.6%		

Liabilities and Contributions

- Risk Pool's Accrued and Unfunded Liabilities
- (Gain) / Loss Analysis 6/30/21 6/30/22
- Risk Pool's Annual Required Contributions
- Risk Pool's Contribution History
- Funding History

Risk Pool's Accrued and Unfunded Liabilities

1.	 Present Value of Projected Benefits a) Active Members b) Transferred Members c) Separated Members d) Members and Beneficiaries Receiving Payments e) Total 	June 30, 2021 \$11,110,584,581 1,449,796,038 723,006,379 <u>11,796,799,046</u> \$25,080,186,044	June 30, 2022 \$11,599,380,325 1,515,266,240 774,746,871 <u>12,758,517,587</u> \$26,647,911,023
2.	Present Value of Future Employer Normal Costs	\$2,540,591,354	\$2,581,860,906
3.	Present Value of Future Employee Contributions	\$1,745,065,667	\$2,044,315,115
4.	 Entry Age Accrued Liability a) Active Members [(1a) - (2) - (3)] b) Transferred Members (1b) c) Separated Members (1c) d) Members and Beneficiaries Receiving Payments (1d) e) Total 	\$6,824,927,560 1,449,796,038 723,006,379 <u>11,796,799,046</u> \$20,794,529,023	\$6,973,204,304 1,515,266,240 774,746,871 <u>12,758,517,587</u> \$22,021,735,002
5. 6. 7.	Market Value of Assets (MVA) Including Receivables Unfunded Accrued Liability [(4e) - (5)] Funded Ratio [(5) / (4e)]	\$18,063,262,515 \$2,731,266,508 86.9%	\$16,768,718,642 \$5,253,016,360 76.1%

(Gain)/Loss Analysis 6/30/21 - 6/30/22

To calculate the cost requirements of the pool, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year, actual experience is compared to the expected experience based on the actuarial assumptions. This results in actuarial gains or losses, as shown below.

1.	Total (Gain)/Loss for the Year	
	a) Unfunded Accrued Liability (UAL) as of 6/30/21	\$2,731,266,508
	 b) Expected Payment on the UAL during FY 2021-22 	567,100,895
	c) Interest through 6/30/22 [.068 x (a) - ((1.068) ^{1/2} - 1) x (b)]	166,761,784
	 d) Expected UAL before all other changes [(a) - (b) + (c)] 	2,330,927,397
	e) Change due to plan Amendments	0
	f) Change due to plan Golden Handshakes and Service Purchases	161,249
	g) Transfers out of Risk Pool	(1,734,445)
	h) Transfers into Risk Pool	0
	 i) Change due to assumption change 	0
	 j) Change due to method change 	0
	 k) Change due to Funding Risk Mitigation 	0
	 Change due to excessive liability 	100,004
	m) Expected UAL after all other changes [sum of (d) through (l)]	2,329,454,205
	n) Actual UAL as of 6/30/22	5,253,016,360
	o) Total (Gain)/Loss for 2021-22 [(n) - (m)]	\$2,923,562,155
2.	Investment (Gain)/Loss for the Year	
	 a) Market Value of Assets as of 6/30/21, including Receivables 	\$18,063,262,515
	b) Transfers out of Pool	0
	c) Transfers into Pool	0
	 Adjusted MVA at beginning of year [(a) + (b) + (c)] 	18,063,262,515
	e) Prior Fiscal Year Receivables	(17,395,973)
	f) Current Fiscal Year Receivables	15,575,237
	g) Contributions Received	1,075,149,727
	h) Benefits and Refunds Paid	(981,321,786)
	i) Transfers and Miscellaneous Adjustments	(2,647,957)
	j) Expected Return at 6.8% per year	1,230,168,061
	 k) Expected Assets as of 6/30/22 [sum of (d) through (j)] 	\$19,382,789,824
	 Market Value of Assets as of 06/30/22, including Receivables 	16,768,718,642
	m) Investment (Gain)/Loss [(k) - (l)]	\$2,614,071,182
3.	Non-Investment (Gain)/Loss for the Year	
	a) Total (Gain)/Loss (10)	\$2,923,562,155
	b) Investment (Gain)/Loss (2m)	2,614,071,182
	c) Non-Investment (Gain)/Loss [(3a) - (3b)]	\$309,490,972

Items 1i, 1j, 1k, 2m, and 3c above were allocated on a proportional basis to each individual risk pooled plan. The allocation of each plan's share of the UAL is developed in Section 1 of the report.

Differences between the (gains)/losses shown on this page and the ones used for allocating a plan's (gains)/losses on Section 1 Page 11 is attributed to non-pooled plans that transferred into the risk pool. (Gains)/losses on this page include (gains)/losses incurred by the transferred plans during the year, whereas the numbers used for plan allocation on Section 1 Page 11 do not.

Risk Pool's Annual Required Contributions

		Fiscal Year	Fiscal Year
		2023-24	2024-25
1.	Contribution in Projected Dollars		
	a) Total Normal Cost	\$532,074,722	\$554,676,161
	b) Employee Contribution	<u>\$217,682,980</u>	<u>\$236,441,255</u>
	c) Risk Pool's Employer Normal Cost [(1a) - (1b)]	\$314,391,742	\$318,234,906
	d) Payment on Pool's Amortization Bases	<u>\$319,167,469</u>	<u>\$396,879,977</u>
	e) Total Required Employer Contributions [(1c) + (1d)]	\$633,559,211	\$715,114,883
2.	Annual Covered Payroll as of Valuation Date	\$2,641,544,193	\$2,845,309,050
3.	Projected Payroll for Contribution Fiscal Year	\$2,869,704,804	\$3,091,069,637

Risk Pool's Contribution History

The table below provides a recent history of the required and discretionary employer contributions for the pool. The required amounts are based on the actuarial valuation from two years prior without subsequent adjustments, if any. Additional discretionary payments after June 30, 2022 are not included.

Valuation Date	Contribution Year	Total Employer Normal Cost	Payments on Risk Pool's Amortization Bases	Additional Discretionary Payment	Total Required Employer Contribution
06/30/2013	2015-16	\$196,320,163	\$160,711,302	\$67,116,678	\$357,031,465
06/30/2014	2016-17	\$191,941,367	\$175,416,476	\$76,726,801	\$367,357,843
06/30/2015	2017-18	\$194,813,943	\$201,429,027	\$100,574,381	\$396,242,970
06/30/2016	2018-19	\$209,211,669	\$239,409,456	\$119,628,369	\$448,621,125
06/30/2017	2019-20	\$250,677,723	\$282,330,885	\$141,820,652	\$533,008,608
06/30/2018	2020-21	\$274,379,000	\$310,060,000	\$147,842,662	\$584,439,000
06/30/2019	2021-22	\$278,286,901	\$349,138,593	\$267,409,917	\$627,425,494
06/30/2020	2022-23	\$285,364,494	\$385,689,552		\$671,054,046
06/30/2021	2023-24	\$314,391,742	\$319,167,469		\$633,559,211
06/30/2022	2024-25	\$318,234,906	\$396,879,977		\$715,114,883

Funding History

The table below shows the recent history of actuarial accrued liability, market value of assets, unfunded accrued liability, funded ratio, annual covered payroll and UAL as a percent of Payroll.

Valuation Date	Accrued Liabilities (AL)	Market Value of Assets (MVA)	Unfunded Accrued Liabilities (UAL)	Funded Ratio (MVA/AL)	Annual Covered Payroll	UAL as a % of Payroll
06/30/2013	\$11,805,627,557	\$9,093,458,815	\$2,712,168,742	77.0%	\$1,909,639,449	142.0%
06/30/2014	\$13,137,020,035	\$10,686,754,939	\$2,450,265,096	81.3%	\$1,982,241,289	123.6%
06/30/2015	\$13,889,938,645	\$10,919,134,771	\$2,970,803,874	78.6%	\$2,055,683,261	144.5%
06/30/2016	\$14,775,287,594	\$10,897,707,800	\$3,877,579,794	73.8%	\$2,153,642,973	180.0%
06/30/2017	\$15,944,026,687	\$12,162,131,074	\$3,781,895,613	76.3%	\$2,277,295,097	166.1%
06/30/2018	\$17,461,594,826	\$13,162,719,111	\$4,298,875,715	75.4%	\$2,359,859,508	182.2%
06/30/2019	\$18,394,114,919	\$13,985,117,157	\$4,408,997,762	76.0%	\$2,482,824,265	177.6%
06/30/2020	\$19,437,975,961	\$14,709,505,985	\$4,728,469,976	75.7%	\$2,606,753,697	181.4%
06/30/2021	\$20,794,529,023	\$18,063,262,515	\$2,731,266,508	86.9%	\$2,641,544,193	103.4%
06/30/2022	\$22,021,735,002	\$16,768,718,642	\$5,253,016,360	76.1%	\$2,845,309,050	184.6%

Risk Analysis

- Discount Rate Sensitivity
- Mortality Rate Sensitivity
- Maturity Measures
- Maturity Measures History
- Funded Status Termination Basis

The risk analysis information in this section is on a pool level. The risk associated with the defined benefits paid from this pool are primarily borne by the employer. Agencies should refer to Section 1 for risk measures applicable to individual agencies.

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 4.5% and 2.3%, 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, 2022 assuming alternate discount rates by changing the two components independently. Results are shown using the current discount rate of 6.8% as well as alternate discount rates of 5.8% and 7.8%. The rates of 5.8% and 7.8% were selected since they illustrate the impact of a 1.0% increase or decrease to the 6.8% assumption.

Sensitivity to the Real Rate of Return Assumption

	1% Lower	Current	1% Higher
As of June 30, 2022	Real Return Rate	Assumptions	Real Return Rate
Discount Rate	5.8%	6.8%	7.8%
Price Inflation	2.3%	2.3%	2.3%
Real Rate of Return	3.5%	4.5%	5.5%
a) Total Normal Cost	23.04%	18.35%	14.79%
b) Accrued Liability	\$25,022,955,013	\$22,021,735,002	\$19,553,715,172
c) Market Value of Assets	\$16,768,718,642	\$16,768,718,642	\$16,768,718,642
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$8,254,236,371	\$5,253,016,360	\$2,784,996,530
e) Funded Ratio	67.0%	76.1%	85.8%

Sensitivity to the Price Inflation Assumption

As of June 30, 2022	1% Lower Price Inflation	Current Assumptions	1% Higher Price Inflation
Discount Rate	5.8%	6.8%	7.8%
Price Inflation	1.3%	2.3%	3.3%
Real Rate of Return	4.5%	4.5%	4.5%
a) Total Normal Cost	19.31%	18.35%	16.71%
b) Accrued Liability	\$22,742,372,013	\$22,021,735,002	\$20,382,828,485
c) Market Value of Assets	\$16,768,718,642	\$16,768,718,642	\$16,768,718,642
d) Unfunded Liability/(Surplus) [(b) - (c)]	\$5,973,653,371	\$5,253,016,360	\$3,614,109,843
e) Funded Ratio	73.7%	76.1%	82.3%

Mortality Rate Sensitivity

The following table looks at the change in the June 30, 2022 plan costs and funded status for the risk pool under two different longevity scenarios, namely assuming rates of post-retirement mortality are 10% lower or 10% higher than our current mortality assumptions. This type of analysis highlights the impact on the plan of a change in the mortality assumption.

	10% Lower	Current	10% Higher
As of June 30, 2022	Mortality Rates	Assumptions	Mortality Rates
a) Risk Pool's Total Normal Cost	18.67%	18.35%	18.06%
b) Risk Pool's Accrued Liability	\$22,481,014,723	\$22,021,735,002	\$21,599,641,914
c) Risk Pool's Market Value of Assets	<u>16,768,718,642</u>	<u>16,768,718,642</u>	<u>16,768,718,642</u>
d) Risk Pool's Unfunded Liability/(Surplus) [(b)-(c)]	\$5,712,296,081	\$5,253,016,360	\$4,830,923,272
e) Risk Pool's Funded Ratio	74.6%	76.1%	77.6%

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 to tolerate risk is important in understanding how the plan is impacted by investment return volatility, other economic variables and changes in longevity or other demographic assumptions. One way to look at the maturity level of CaIPERS 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 increases. A mature plan will often have a ratio above 60%-65%.

Ratio of Retiree Accrued Liability to Total Accrued Liability	June 30, 2021	June 30, 2022	
1. Risk Pool's Retiree Accrued Liability	\$11,796,799,046	\$12,758,517,587	
2. Risk Pool's Total Accrued Liability	\$20,794,529,023	\$22,021,735,002	
3. Risk Pool's Ratio of Retiree AL to Total AL [(1) / (2)]	57%	58%	

Another measure of the maturity level of CaIPERS and its plans is 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.

To calculate the support ratio for the rate plan, retirees and beneficiaries receiving a continuance are each counted as one, even though they may have only worked a portion of their careers as an active member of this rate plan. For this reason, the support ratio, while intuitive, may be less informative than the ratio of retiree liability to total accrued liability above. Note that to calculate the support ratio for all public agency plans, a retiree with service from more than one CaIPERS agency is counted as a retiree more than once.

Support Ratio	June 30, 2021	June 30, 2022	
1. Number of Actives in the Risk Pool	33,339	34,926	
2. Number of Retirees in the Risk Pool	39,859	41,551	
3. Risk Pool's Support Ratio [(1) / (2)]	0.84	0.84	

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

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 AVR of 8 may experience twice the contribution volatility due to investment return volatility than a plan with AVR 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

Also shown in the table below is the liability volatility ratio (LVR), which is the ratio of accrued liability to payroll. Plans that have higher LVR experience more volatile employer contributions (as a percentage of payroll) due to changes in liability. For example, a plan with LVR of 8 is expected to have twice the contribution volatility of a plan with LVR of 4 when there is a change in accrued liability, such as when there is a change in actuarial assumptions. It should be noted that this ratio indicates a longer-term potential for contribution volatility, since the AVR, described above, will tend to move closer to the LVR as the funded ratio approaches 100%.

Contribution Volatility	June 30, 2021	June 30, 2022	
1. Risk Pool's Market Value of Assets without Receivables	\$18,045,866,542	\$16,753,143,405	
2. Risk Pool's Payroll	2,641,544,193	2,845,309,050	
3. Risk Pool's Asset Volatility Ratio (AVR) [(1) / (2)]	6.8	5.9	
4. Risk Pool's Accrued Liability	\$20,794,529,023	\$22,021,735,002	
5. Risk Pool's Liability Volatility Ratio (LVR) [(4) / (2)]	7.9	7.7	

Maturity Measures History

Valuation Date	Ratio of Retiree Accrued Liability to Total Accrued Liability	Support Ratio	Asset Volatility Ratio	Liability Volatility Ratio
06/30/17	0.53	0.98	5.3	7.0
06/30/18	0.54	0.95	5.6	7.4
06/30/19	0.55	0.93	5.6	7.4
06/30/20	0.56	0.88	5.6	7.5
06/30/21	0.57	0.84	6.8	7.9
06/30/22	0.58	0.84	5.9	7.7

Funded Status – Termination Basis

Contracting agencies with an individual plan(s) in the Miscellaneous Risk Pool have the ability to terminate their contract with CalPERS. Terminating the contract results in a termination of the plan(s). Such terminations occur on an agency-by-agency basis – the Miscellaneous Risk Pool in total is not subject to termination.

The funded status measured on a termination basis is an estimate of the financial position of the plan had the contract with CalPERS been terminated as of June 30, 2022. The accrued liability on a termination basis (termination liability) is calculated differently from the plan's ongoing funding liability. For the 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. Unlike the actuarial cost method used for ongoing plans, the termination liability is the present value of the benefits earned through the valuation date.

A more conservative investment policy and asset allocation strategy was adopted by the 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 remainder of the PERF and consequently, a lower discount rate assumption. 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 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 seven months after.

	Discount Rate: 1.75% Price Inflation: 2.50%			Discount Rate: 4.50% Price Inflation: 2.75%		
Risk Pool Market Value of Assets (MVA)	Risk Pool Termination Liability ^{1,2}	Risk Pool Funded Ratio	Risk Pool Unfunded Termination Liability	Risk Pool Termination Liability ^{1,2}	Risk Pool Funded Ratio	Risk Pool Unfunded Termination Liability
16,768,718,642	44,538,949,522	37.6%	27,770,230,880	28,675,745,713	58.5%	11,907,027,071

¹ The termination liabilities calculated above include a 5% contingency load. The contingency load and other actuarial assumptions can be found in Appendix A.

² The discount rate 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 3.38% on June 30, 2022, the valuation date.
Appendices

- Appendix A Actuarial Methods and Assumptions
- Appendix B Principal Plan Provisions
- Appendix C Classification of Optional Benefits
- Appendix D Participant Data
- Appendix E Glossary of Actuarial Terms

Appendix A

Actuarial Methods and Assumptions

- Actuarial Data
- Actuarial Methods
- Actuarial Assumptions
- Miscellaneous

Actuarial Data

As stated in the Actuarial Certification, the data which serves as the basis of this valuation has been obtained from the various CalPERS databases. We have reviewed the valuation data and believe that it is reasonable and appropriate in aggregate. We are unaware of any potential data issues that would have a material effect on the results of this valuation, except that data does not always contain the latest salary information for former members now in reciprocal systems and does not recognize the potential for unusually large salary deviation in certain cases such as elected officials. Therefore, salary information in these cases may not be accurate. These situations are relatively infrequent, however, and generally do not have a material impact on the required employer contributions.

Actuarial Methods

Actuarial Cost Method

The actuarial cost method used is the Entry Age Actuarial Cost Method. Under this method, projected benefits are determined for all members and the associated liabilities are spread in a manner that produces level annual cost as a percentage of pay in each year from the member's entry age to their assumed retirement age on the valuation date. The cost allocated to the current fiscal year is called the normal cost.

The actuarial accrued liability for active members is then calculated as the portion of the total cost of the plan allocated to prior years. The actuarial accrued liability for members currently receiving benefits and for members entitled to deferred benefits is equal to the present value of the benefits expected to be paid. No normal costs are applicable for these participants.

CalPERS uses an in-house proprietary actuarial model for calculating plan costs. We believe this model is fit for its intended purpose and meets all applicable Actuarial Standards of Practice. Furthermore, the actuarial results of our model are independently confirmed periodically by outside auditing actuaries. The actuarial assumptions used are internally consistent and the generated results are reasonable.

Amortization of Unfunded Actuarial Accrued Liability

The excess of the total actuarial accrued liability over the market value of plan assets is called the unfunded actuarial accrued liability (UAL). Funding requirements are determined by adding the normal cost and a payment toward the UAL. The UAL payment is equal to the sum of individual amortization payments, each representing a different source of UAL for a given measurement period.

Amortization payments are determined according to the CalPERS amortization policy. The board adopted a new policy effective for the June 30, 2019 actuarial valuation. The new policy applies prospectively only; amortization bases (sources of UAL) established prior to the June 30, 2019 valuation will continue to be amortized according to the prior policy.

Prior Policy (Bases Established prior to June 30, 2019)

Amortization payments are determined as a level percentage of payroll whereby the payment increases each year at an escalation rate. Gains or losses are amortized over a fixed 30-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortization period. All changes in liability due to plan amendments (other than golden handshakes) are amortized over a 20-year period with no ramp. Changes in actuarial assumptions or changes in actuarial methodology are amortized over a 20-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortized over a 20-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortized over a 20-year period with a 5-year ramp up at the beginning and a 5-year ramp down at the end of the amortization period. Changes in unfunded accrued liability due to a Golden Handshake will be amortized over a period of five years. Bases established prior to June 30, 2013 may be amortized differently. A summary is provided in the following table:

	Source							
	(Gain)/Loss						
Driver	Investment	Non- investment	Assumption/Method Change	Benefit Change	Golden Handshake			
Amortization Period	30 Years	30 Years	20 Years	20 Years	5 Years			
Escalation Rate - Active Plans - Inactive Plans	2.80% 0%	2.80% 0%	2.80% 0%	2.80% 0%	2.80% 0%			
Ramp Up	5	5	5	0	0			
Ramp Down	5	5	5	0	0			

The 5-year ramp up means that the payments in the first four years of the amortization period are 20%, 40%, 60% and 80% of the "full" payment which begins in year five. The 5-year ramp down means that the reverse is true in the final four years of the amortization period.

Current Policy (Bases Established on or after June 30, 2019)

Amortization payments are determined as a level dollar amount. Investment gains or losses are amortized over a fixed 20-year period with a 5-year ramp up at the beginning of the amortization period. Non-investment gains or losses are amortized over a fixed 20-year period with no ramps. All changes in liability due to plan amendments (other than golden handshakes) are amortized over a 20-year period with no ramps. Changes in actuarial assumptions or changes in actuarial methodology are amortized over a 20-year period with no ramps. Changes in unfunded accrued liability due to a Golden Handshake are amortized over a period of five years. A summary is provided in the table below:

	Source								
	(Gain)/Loss							
	Investment	Non- investment	Assumption/ Method Change	Benefit Change	Golden Handshake				
Amortization Period	20 Years	20 Years	20 Years	20 Years	5 Years				
Escalation Rate	0%	0%	0%	0%	0%				
Ramp Up	5	0	0	0	0				
Ramp Down	0	0	0	0	0				

Exceptions for Inconsistencies

An exception to the amortization rules above is used whenever their application results in inconsistencies. In these cases, a "fresh start" approach is used. This means that the current unfunded actuarial liability is projected and amortized over a set number of years. For example, a fresh start is needed in the following situations:

- 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.

It should be noted that the actuary may determine that a fresh start is necessary under other circumstances. In all cases of a fresh start, the period is set by the actuary at what is deemed appropriate; however, the period will not be greater than 20 years.

Exceptions for Plans in Surplus

If a surplus exists (i.e., the Market Value of Assets exceeds the plan's accrued liability) any prior amortization layers shall be considered fully amortized, and the surplus shall not be amortized.

In the event of any subsequent unfunded liability, a Fresh Start shall be used with an amortization period of 20 years or less.

Exceptions for Small Amounts

Where small unfunded liabilities are identified in annual valuations which result in small payment amounts, the actuary may shorten the remaining period for these bases.

- When the balance of a single amortization base has an absolute value less than \$250, the amortization period is reduced to one year.
- When the entire unfunded liability is a small amount, the actuary may perform a Fresh Start and use an appropriate amortization period.

Exceptions for Inactive Plans

The following exceptions apply to plans classified as Inactive. These plans have no active members and no expectation to have active members in the future.

- Amortization of the unfunded liability is on a "level dollar" basis rather than a "level percent of pay" basis. For amortization layers which utilize a ramp up and ramp down, the "ultimate" payment is constant.
- Actuarial judgment will be used to shorten amortization periods for Inactive plans with existing
 periods that are deemed too long given the duration of the liability. The specific demographics of
 the plan will be used to determine if shorter periods may be more appropriate.

Exceptions for Inactive Agencies

For a public agency with no active members in any CalPERS rate plan, the unfunded liability shall be amortized over a closed amortization period of no more than 15 years.

Asset Valuation Method

The Actuarial Value of Assets is set equal to the Market Value of Assets. Asset values include accounts receivable.

PEPRA Normal Cost Rate Methodology

Per Government Code Section 7522.30(b), the "normal cost rate" shall mean the annual actuarially determined normal cost for the plan of retirement benefits provided to the new member and shall be established based on actuarial assumptions used to determine the liabilities and costs as part of the annual actuarial valuation. The plan of retirement benefits shall include any elements that would impact the actuarial determination of the normal cost, including, but not limited to, the retirement formula, eligibility and vesting criteria, ancillary benefit provisions, and any automatic cost-of-living adjustments as determined by the public retirement system.

For purposes of setting member rates, it is preferable to determine total normal cost using a large active population so that the rate remains relatively stable. While each CaIPERS non-pooled plan has a sufficiently large active population for this purpose, the PEPRA active population by itself may not be sufficiently large. The total PEPRA normal cost will be determined based on the plan's PEPRA membership only if the number of members covered under the PEPRA formula meets either:

- 1. 50% of the active population, or
- 2. 25% of the active population and 100 or more PEPRA members

Until one of these conditions is met, the plan's total PEPRA normal cost will be determined using the entire active plan population (both PEPRA and Classic) based on the PEPRA benefit provisions.

Actuarial Assumptions

In 2021, CalPERS completed its most recent asset liability management study incorporating actuarial assumptions and strategic asset allocation. In November 2021, the board adopted changes to the asset allocation that increased the expected volatility of returns. The adopted asset allocation was expected to have a long-term blended return that continued to support a discount rate assumption of 6.80%. The board also approved several changes to the demographic assumptions that more closely aligned with actual experience.

For more details and additional rationale for the selection of the actuarial assumptions, please refer to the CaIPERS Experience Study and Review of Actuarial Assumptions report from November 2021 that can be found on the CaIPERS website under: Forms and Publications. Click on "View All" and search for Experience Study.

All actuarial assumptions (except the discount rates and price inflation assumption used for the accrued liability on a termination basis) represent an estimate of future experience rather than observations of the estimates inherent in market data.

Economic Assumptions

Discount Rate

The prescribed discount rate assumption, adopted by the board on November 17, 2021, is 6.80% compounded annually (net of investment and administrative expenses) as of June 30, 2022.

Termination Liability Discount Rate

The current discount rate assumption used for termination valuations is a weighted average of the 10year and 30-year U.S. Treasury yields where the weights are based on matching asset and liability durations as of the termination date.

The accrued liabilities on a termination basis in this report are calculated using an observed range of market interest rates. This range is based on the lowest and highest 20-year Treasury bond observed during an approximate 19-month period from 12 months before the valuation date to seven months after. The 20-year Treasury bond has a similar duration to most plan liabilities and serves as a good proxy for the termination discount rate. The 20-year Treasury yield was 3.38% on June 30, 2022.

Salary Growth

Annual increases vary by category, entry age, and duration of service. Merit rates in the tables below are adjusted for wage inflation to develop the total salary growth. A sample of assumed merit increases are shown below.

	Public Agency Miscellaneous								
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)						
0	0.0764	0.0621	0.0521						
1	0.0663	0.0528	0.0424						
2	0.0576	0.0449	0.0346						
3	0.0501	0.0381	0.0282						
4	0.0435	0.0324	0.0229						
5	0.0378	0.0276	0.0187						
10	0.0201	0.0126	0.0108						
15	0.0155	0.0102	0.0071						
20	0.0119	0.0083	0.0047						
25	0.0091	0.0067	0.0031						
30	0.0070	0.0054	0.0020						
	_								
	Public Ager	ncy Fire							
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)						
0	0.1517	0.1549	0.0631						
1	0.1191	0.1138	0.0517						
2	0.0936	0.0835	0.0423						
3	0.0735	0.0613	0.0346						
4	0.0577	0.0451	0.0284						
5	0.0453	0.0331	0.0232						
10	0.0188	0.0143	0.0077						
15	0.0165	0.0124	0.0088						
20	0.0145	0.0108	0.0101						
25	0.0127	0.0094	0.0115						
30	0.0112	0.0082	0.0132						
Duration of Ormi			(Entry Are 40)						
	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)						
0	0.1181	0.1051	0.0653						
1	0.0934	0.0812	0.0532						
2	0.0738	0.0628	0.0434						
3	0.0584	0.0485	0.0353						
4	0.0462	0.0375	0.0288						
5	0.0365	0.0290	0.0235						
10	0.0185	0.0155	0.0118						
15	0.0183	0.0150	0.0131						
20	0.0181	0.0145	0.0145						
25	0.0179	0.0141	0.0161						
30	0.0178	0.0136	0.0179						

Public Agency County Peace Officers									
Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)						
0	0.1238	0.1053	0.0890						
1	0.0941	0.0805	0.0674						
2	0.0715	0.0616	0.0510						
3	0.0544	0.0471	0.0387						
4	0.0413	0.0360	0.0293						
5	0.0314	0.0276	0.0222						
10	0.0184	0.0142	0.0072						
15	0.0174	0.0124	0.0073						
20	0.0164	0.0108	0.0074						
25	0.0155	0.0094	0.0075						
30	0.0147	0.0083	0.0077						

Salary Growth (continued)

Schools

Duration of Service	(Entry Age 20)	(Entry Age 30)	(Entry Age 40)
0	0.0275	0.0275	0.0200
1	0.0422	0.0373	0.0298
2	0.0422	0.0373	0.0298
3	0.0422	0.0373	0.0298
4	0.0388	0.0314	0.0245
5	0.0308	0.0239	0.0179
10	0.0236	0.0160	0.0121
15	0.0182	0.0135	0.0103
20	0.0145	0.0109	0.0085
25	0.0124	0.0102	0.0058
30	0.0075	0.0053	0.0019

• The Miscellaneous salary scale is used for Local Prosecutors.

• The Police salary scale is used for Other Safety, Local Sheriff, and School Police.

Price Inflation

2.30% compounded annually.

Wage Inflation

2.80% compounded annually (used in projecting individual salary increases).

Payroll Growth

2.80% compounded annually (used in projecting the payroll over which the unfunded liability is amortized for level percent of payroll bases). This assumption is used for all plans with active members.

Non-valued Potential Additional Liabilities

The potential liability loss for a cost-of-living increase exceeding the 2.30% price inflation assumption and any potential liability loss from future member service purchases that are not reflected in the valuation.

Miscellaneous Loading Factors

Credit for Unused Sick Leave

Total years of service is increased by 1% for those plans that have adopted the provision of providing Credit for Unused Sick Leave.

Conversion of Employer Paid Member Contributions (EPMC)

Total years of service is increased by the Employee Contribution Rate for those plans with the provision providing for the Conversion of Employer Paid Member Contributions (EPMC) during the final compensation period.

Norris Decision (Best Factors)

Employees hired prior to July 1, 1982 have projected benefit amounts increased in order to reflect the use of "Best Factors" in the calculation of optional benefit forms. This is due to a 1983 Supreme Court decision, known as the Norris decision, which required males and females to be treated equally in the determination of benefit amounts. Consequently, anyone already employed at that time is given the best possible conversion factor when optional benefits are determined. No loading is necessary for employees hired after July 1, 1982.

Termination Liability

The termination liabilities include a 5% contingency load. This load is for unforeseen improvements in mortality.

Demographic Assumptions

Pre-Retirement Mortality

The mortality assumptions are based on mortality rates resulting from the most recent CalPERS Experience Study adopted by the CalPERS Board in November 2021. For purposes of the mortality rates, the rates incorporate generational mortality to capture on-going mortality improvement. Generational mortality explicitly assumes that members born more recently will live longer than the members born before them thereby capturing the mortality improvement seen in the past and expected continued improvement. For more details, please refer to the 2021 experience study report that can be found on the CalPERS website.

Rates vary by age and gender are shown in the table below. This table only contains a sample of the 2017 base table rates for illustrative purposes. The non-industrial death rates are used for all plans. The industrial death rates are used for Safety plans (except for local Safety members described in Section 20423.6 where the agency has not specifically contracted for industrial death benefits.)

	Miscell	aneous		ety			
	Non-Indus (Not Job	trial Death -Related)	Non-Indus (Not Job	trial Death -Related)	Industrial Death (Job-Related)		
Age	Male	Female	Male	Female	Male	Female	
20	0.00039	0.00014	0.00038	0.00014	0.00004	0.00002	
25	0.00033	0.00013	0.00034	0.00018	0.00004	0.00002	
30	0.00044	0.00019	0.00042	0.00025	0.00005	0.00003	
35	0.00058	0.00029	0.00048	0.00034	0.00005	0.00004	
40	0.00075	0.00039	0.00055	0.00042	0.00006	0.00005	
45	0.00093	0.00054	0.00066	0.00053	0.00007	0.00006	
50	0.00134	0.00081	0.00092	0.00073	0.00010	0.00008	
55	0.00198	0.00123	0.00138	0.00106	0.00015	0.00012	
60	0.00287	0.00179	0.00221	0.00151	0.00025	0.00017	
65	0.00403	0.00250	0.00346	0.00194	0.00038	0.00022	
70	0.00594	0.00404	0.00606	0.00358	0.00067	0.00040	
75	0.00933	0.00688	0.01099	0.00699	0.00122	0.00078	
80	0.01515	0.01149	0.02027	0.01410	0.00225	0.00157	

• The pre-retirement mortality rates above are for 2017 and are projected generationally for future years using 80% of the Society of Actuaries' Scale MP-2020.

• Miscellaneous plans usually have industrial death rates set to zero unless the agency has specifically contracted for industrial death benefits. If so, each non-industrial death rate shown above will be split into two components: 99% will become the non-industrial death rate and 1% will become the industrial death rate.

Post-Retirement Mortality

Rates vary by age, type of retirement, and gender. See sample rates in table below. These rates are used for all plans.

	Service R	Retirement	Non-Industri (Not Job	ally Disabled -Related)	Industrially Disabled (Job-Related)		
Age	Male	Female	Male	Female	Male	Female	
50	0.00267	0.00199	0.01701	0.01439	0.00430	0.00311	
55	0.00390	0.00325	0.02210	0.01734	0.00621	0.00550	
60	0.00578	0.00455	0.02708	0.01962	0.00944	0.00868	
65	0.00857	0.00612	0.03334	0.02276	0.01394	0.01190	
70	0.01333	0.00996	0.04001	0.02910	0.02163	0.01858	
75	0.02391	0.01783	0.05376	0.04160	0.03446	0.03134	
80	0.04371	0.03403	0.07936	0.06112	0.05853	0.05183	
85	0.08274	0.06166	0.11561	0.09385	0.10137	0.08045	
90	0.14539	0.11086	0.16608	0.14396	0.16584	0.12434	
95	0.24665	0.20364	0.24665	0.20364	0.24665	0.20364	
100	0.36198	0.31582	0.36198	0.31582	0.36198	0.31582	
105	0.52229	0.44679	0.52229	0.44679	0.52229	0.44679	
110	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	

The post-retirement mortality rates above are for 2017 and are projected generationally for future years using 80% of the Society of Actuaries' Scale MP-2020.

Marital Status

For active members, a percentage who are married upon retirement is assumed according to the member category as shown in the following table.

Member Category	Percent Married
Miscellaneous Member	70%
Local Police	85%
Local Fire	85%
Other Local Safety	70%
School Police	85%
Local County Peace Officers	75%

Age of Spouse

It is assumed that female spouses are 3 years younger than male spouses. This assumption is used for all plans.

Separated Members

It is assumed that separated members refund immediately if non-vested. Separated members who are vested are assumed to retire at age 59 for Miscellaneous members and age 54 for Safety members.

Termination with Refund

Rates vary by entry age and service for Miscellaneous plans. Rates vary by service for Safety plans. See sample rates in tables below.

Public Agency Miscellaneous												
Duration of												
Service	Entry	Age 20	Entry	Age 25	Entry	Age 30	Entry	Age 35	Entry	Age 40	Entry Age 45	
	Male	Female	Male	Female								
0	0.1851	0.1944	0.1769	0.1899	0.1631	0.1824	0.1493	0.1749	0.1490	0.1731	0.1487	0.1713
1	0.1531	0.1673	0.1432	0.1602	0.1266	0.1484	0.1101	0.1366	0.1069	0.1323	0.1037	0.1280
2	0.1218	0.1381	0.1125	0.1307	0.0970	0.1183	0.0815	0.1058	0.0771	0.0998	0.0726	0.0938
3	0.0927	0.1085	0.0852	0.1020	0.0727	0.0912	0.0601	0.0804	0.0556	0.0737	0.0511	0.0669
4	0.0672	0.0801	0.0616	0.0752	0.0524	0.0670	0.0431	0.0587	0.0392	0.0523	0.0352	0.0459
5	0.0463	0.0551	0.0423	0.0517	0.0358	0.0461	0.0292	0.0404	0.0261	0.0350	0.0230	0.0296
10	0.0112	0.0140	0.0101	0.0129	0.0083	0.0112	0.0064	0.0094	0.0048	0.0071	0.0033	0.0049
15	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Public Agency Safety

Duration of							
Service	Fi	re	Poli	ice	County Peace Officer		
	Male	Female	Male	Female	Male	Female	
0	0.1022	0.1317	0.1298	0.1389	0.1086	0.1284	
1	0.0686	0.1007	0.0789	0.0904	0.0777	0.0998	
2	0.0441	0.0743	0.0464	0.0566	0.0549	0.0759	
3	0.0272	0.0524	0.0274	0.0343	0.0385	0.0562	
4	0.0161	0.0349	0.0170	0.0206	0.0268	0.0402	
5	0.0092	0.0214	0.0113	0.0128	0.0186	0.0276	
10	0.0015	0.0000	0.0032	0.0047	0.0046	0.0038	
15	0.0000	0.0000	0.0000	0.0000	0.0023	0.0036	
20	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
25	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
30	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	
35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	

• The police termination and refund rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

Termination with Refund (continued)

	Schools											
Duration of												
Service	Entry	Age 20	Entry	Age 25	Entry	Age 30	Entry	Age 35	Entry	Age 40	Entry /	Age 45
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
0	0.2054	0.2120	0.1933	0.1952	0.1730	0.1672	0.1527	0.1392	0.1423	0.1212	0.1318	0.1032
1	0.1922	0.2069	0.1778	0.1883	0.1539	0.1573	0.1300	0.1264	0.1191	0.1087	0.1083	0.0910
2	0.1678	0.1859	0.1536	0.1681	0.1298	0.1383	0.1060	0.1086	0.0957	0.0934	0.0853	0.0782
3	0.1384	0.1575	0.1256	0.1417	0.1042	0.1155	0.0829	0.0893	0.0736	0.0774	0.0643	0.0656
4	0.1085	0.1274	0.0978	0.1143	0.0800	0.0925	0.0622	0.0707	0.0542	0.0620	0.0462	0.0533
5	0.0816	0.0991	0.0732	0.0887	0.0590	0.0713	0.0449	0.0539	0.0383	0.0476	0.0317	0.0413
10	0.0222	0.0248	0.0200	0.0221	0.0163	0.0174	0.0125	0.0128	0.0094	0.0100	0.0063	0.0072
15	0.0106	0.0132	0.0095	0.0113	0.0077	0.0083	0.0058	0.0052	0.0040	0.0039	0.0021	0.0026
20	0.0059	0.0065	0.0050	0.0054	0.0035	0.0036	0.0021	0.0019	0.0010	0.0009	0.0000	0.0000
25	0.0029	0.0034	0.0025	0.0029	0.0018	0.0020	0.0010	0.0012	0.0005	0.0006	0.0000	0.0000
30	0.0012	0.0015	0.0011	0.0013	0.0011	0.0011	0.0010	0.0009	0.0005	0.0005	0.0000	0.0000
35	0.0006	0.0007	0.0006	0.0007	0.0005	0.0006	0.0005	0.0005	0.0003	0.0002	0.0000	0.0000

Termination with Vested Benefits

Rates vary by entry age and service for Miscellaneous plans. Rates vary by service for Safety plans. See sample rates in tables below.

Public Agency Miscellaneous										
Duration of Service	Entry Age 20		Entry Age 25		Entry Age 30		Entry Age 35		Entry Age 40	
	Male	Female								
5	0.0381	0.0524	0.0381	0.0524	0.0358	0.0464	0.0334	0.0405	0.0301	0.0380
10	0.0265	0.0362	0.0265	0.0362	0.0254	0.0334	0.0244	0.0307	0.0197	0.0236
15	0.0180	0.0252	0.0180	0.0252	0.0166	0.0213	0.0152	0.0174	0.0119	0.0132
20	0.0141	0.0175	0.0141	0.0175	0.0110	0.0131	0.0079	0.0087	0.0000	0.0000
25	0.0084	0.0108	0.0084	0.0108	0.0064	0.0076	0.0000	0.0000	0.0000	0.0000
30	0.0047	0.0056	0.0047	0.0056	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0038	0.0041	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Public Agency Safety

Service	Fire		Police		County Peace Officer	
	Male	Female	Male	Female	Male	Female
5	0.0089	0.0224	0.0156	0.0272	0.0177	0.0266
10	0.0066	0.0164	0.0113	0.0198	0.0126	0.0189
15	0.0048	0.0120	0.0083	0.0144	0.0089	0.0134
20	0.0035	0.0088	0.0060	0.0105	0.0063	0.0095
25	0.0024	0.0061	0.0042	0.0073	0.0042	0.0063
30	0.0012	0.0031	0.0021	0.0037	0.0021	0.0031
35	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

• After termination with vested benefits, a Miscellaneous member is assumed to retire at age 59 and a Safety member at age 54.

• The Police termination with vested benefits rates are also used for Public Agency Local Prosecutors, Other Safety, Local Sheriff, and School Police.

	Schools									
Duration of Service	Entry /	Age 20	Entry /	Age 25	Entry /	Age 30	Entry	Age 35	Entry A	Age 40
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
5	0.0359	0.0501	0.0359	0.0501	0.0332	0.0402	0.0305	0.0304	0.0266	0.0272
10	0.0311	0.0417	0.0311	0.0417	0.0269	0.0341	0.0228	0.0265	0.0193	0.0233
15	0.0193	0.0264	0.0193	0.0264	0.0172	0.0220	0.0151	0.0175	0.0123	0.0142
20	0.0145	0.0185	0.0145	0.0185	0.0113	0.0141	0.0080	0.0097	0.0000	0.0000
25	0.0089	0.0123	0.0089	0.0123	0.0074	0.0093	0.0000	0.0000	0.0000	0.0000
30	0.0057	0.0064	0.0057	0.0064	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
35	0.0040	0.0049	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Non-Industrial (Not Job-Related) Disability

Rates vary by age and gender for Miscellaneous plans. Rates vary by age and category for Safety plans.

	Miscellaneous		ellaneous Fire Police County		County Peace Officer	Schools	
Age	Male	Female	Male and Female	Male and Female	Male and Female	Male	Female
20	0.0001	0.0000	0.0001	0.0001	0.0001	0.0000	0.0002
25	0.0001	0.0001	0.0001	0.0001	0.0001	0.0000	0.0002
30	0.0002	0.0003	0.0001	0.0001	0.0001	0.0002	0.0002
35	0.0004	0.0007	0.0001	0.0002	0.0003	0.0005	0.0004
40	0.0009	0.0012	0.0001	0.0002	0.0006	0.0010	0.0008
45	0.0015	0.0019	0.0002	0.0003	0.0011	0.0019	0.0015
50	0.0015	0.0019	0.0004	0.0005	0.0016	0.0027	0.0021
55	0.0014	0.0013	0.0006	0.0007	0.0009	0.0024	0.0017
60	0.0012	0.0009	0.0006	0.0011	0.0005	0.0020	0.0010

• The Miscellaneous non-industrial disability rates are used for Local Prosecutors.

• The police non-industrial disability rates are also used for Other Safety, Local Sheriff, and School Police.

Industrial (Job-Related) Disability

Rates vary by age and category.

Age	Fire	Police	County Peace Officer
20	0.0001	0.0000	0.0004
25	0.0002	0.0017	0.0013
30	0.0006	0.0048	0.0025
35	0.0012	0.0079	0.0037
40	0.0023	0.0110	0.0051
45	0.0040	0.0141	0.0067
50	0.0208	0.0185	0.0092
55	0.0307	0.0479	0.0151
60	0.0438	0.0602	0.0174

• The police industrial disability rates are also used for Local Sheriff and Other Safety.

• 50% of the police industrial disability rates are used for School Police.

• 1% of the police industrial disability rates are used for Local Prosecutors.

• Normally, rates are zero for Miscellaneous plans unless the agency has specifically contracted for industrial disability benefits. If so, each Miscellaneous non-industrial disability rate will be split into two components: 50% will become the non-industrial disability rate and 50% will become the industrial disability rate.

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Retirement rates vary by age, service, and formula, except for the Safety Half Pay at 55 and 2% at 55 formulas, where retirement rates vary by age only.

Public Agency Miscellaneous 1.5% at Age 65									
	_	Duration of Service							
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years			
50	0.008	0.011	0.013	0.015	0.017	0.019			
51	0.007	0.010	0.012	0.013	0.015	0.017			
52	0.010	0.014	0.017	0.019	0.021	0.024			
53	0.008	0.012	0.015	0.017	0.019	0.022			
54	0.012	0.016	0.019	0.022	0.025	0.028			
55	0.018	0.025	0.031	0.035	0.038	0.043			
56	0.015	0.021	0.025	0.029	0.032	0.036			
57	0.020	0.028	0.033	0.038	0.043	0.048			
58	0.024	0.033	0.040	0.046	0.052	0.058			
59	0.028	0.039	0.048	0.054	0.060	0.067			
60	0.049	0.069	0.083	0.094	0.105	0.118			
61	0.062	0.087	0.106	0.120	0.133	0.150			
62	0.104	0.146	0.177	0.200	0.223	0.251			
63	0.099	0.139	0.169	0.191	0.213	0.239			
64	0.097	0.136	0.165	0.186	0.209	0.233			
65	0.140	0.197	0.240	0.271	0.302	0.339			
66	0.092	0.130	0.157	0.177	0.198	0.222			
67	0.129	0.181	0.220	0.249	0.277	0.311			
68	0.092	0.129	0.156	0.177	0.197	0.221			
69	0.092	0.130	0.158	0.178	0.199	0.224			
70	0.103	0.144	0.175	0.198	0.221	0.248			

Public Agency Miscellaneous 2% at Age 60

	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.010	0.011	0.014	0.014	0.017	0.017
51	0.017	0.013	0.014	0.010	0.010	0.010
52	0.014	0.014	0.018	0.015	0.016	0.016
53	0.015	0.012	0.013	0.010	0.011	0.011
54	0.006	0.010	0.017	0.016	0.018	0.018
55	0.012	0.016	0.024	0.032	0.036	0.036
56	0.010	0.014	0.023	0.030	0.034	0.034
57	0.006	0.018	0.030	0.040	0.044	0.044
58	0.022	0.023	0.033	0.042	0.046	0.046
59	0.039	0.033	0.040	0.047	0.050	0.050
60	0.063	0.069	0.074	0.090	0.137	0.116
61	0.044	0.058	0.066	0.083	0.131	0.113
62	0.084	0.107	0.121	0.153	0.238	0.205
63	0.173	0.166	0.165	0.191	0.283	0.235
64	0.120	0.145	0.164	0.147	0.160	0.172
65	0.138	0.160	0.214	0.216	0.237	0.283
66	0.198	0.228	0.249	0.216	0.228	0.239
67	0.207	0.242	0.230	0.233	0.233	0.233
68	0.201	0.234	0.225	0.231	0.231	0.231
69	0.152	0.173	0.164	0.166	0.166	0.166
70	0.200	0.200	0.200	0.200	0.200	0.200

Public Agency Miscellaneous 2% at Age 55

					90 00		
	Duration of Service						
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years	
50	0.014	0.014	0.017	0.021	0.023	0.024	
51	0.013	0.017	0.017	0.018	0.018	0.019	
52	0.013	0.018	0.018	0.020	0.020	0.021	
53	0.013	0.019	0.021	0.024	0.025	0.026	
54	0.017	0.025	0.028	0.032	0.033	0.035	
55	0.045	0.042	0.053	0.086	0.098	0.123	
56	0.018	0.036	0.056	0.086	0.102	0.119	
57	0.041	0.046	0.056	0.076	0.094	0.120	
58	0.052	0.044	0.048	0.074	0.106	0.123	
59	0.043	0.058	0.073	0.092	0.105	0.126	
60	0.059	0.064	0.083	0.115	0.154	0.170	
61	0.087	0.074	0.087	0.107	0.147	0.168	
62	0.115	0.123	0.151	0.180	0.227	0.237	
63	0.116	0.127	0.164	0.202	0.252	0.261	
64	0.084	0.138	0.153	0.190	0.227	0.228	
65	0.167	0.187	0.210	0.262	0.288	0.291	
66	0.187	0.258	0.280	0.308	0.318	0.319	
67	0.195	0.235	0.244	0.277	0.269	0.280	
68	0.228	0.248	0.250	0.241	0.245	0.245	
69	0.188	0.201	0.209	0.219	0.231	0.231	
70	0.229	0.229	0.229	0.229	0.229	0.229	

Public Agency Miscellaneous 2.5% at Age 55

	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.014	0.017	0.027	0.035	0.046	0.050
51	0.019	0.021	0.025	0.030	0.038	0.040
52	0.018	0.020	0.026	0.034	0.038	0.037
53	0.013	0.021	0.031	0.045	0.052	0.053
54	0.025	0.025	0.030	0.046	0.057	0.068
55	0.029	0.042	0.064	0.109	0.150	0.225
56	0.036	0.047	0.068	0.106	0.134	0.194
57	0.051	0.047	0.060	0.092	0.116	0.166
58	0.035	0.046	0.062	0.093	0.119	0.170
59	0.029	0.053	0.072	0.112	0.139	0.165
60	0.039	0.069	0.094	0.157	0.177	0.221
61	0.080	0.077	0.086	0.140	0.167	0.205
62	0.086	0.131	0.149	0.220	0.244	0.284
63	0.135	0.135	0.147	0.214	0.222	0.262
64	0.114	0.128	0.158	0.177	0.233	0.229
65	0.112	0.174	0.222	0.209	0.268	0.273
66	0.235	0.254	0.297	0.289	0.321	0.337
67	0.237	0.240	0.267	0.249	0.267	0.277
68	0.258	0.271	0.275	0.207	0.210	0.212
69	0.117	0.208	0.266	0.219	0.250	0.270
70	0.229	0.229	0.229	0.229	0.229	0.229

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	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.011	0.016	0.022	0.033	0.034	0.038
51	0.018	0.019	0.023	0.032	0.031	0.031
52	0.019	0.020	0.026	0.035	0.034	0.037
53	0.020	0.020	0.025	0.043	0.048	0.053
54	0.018	0.030	0.040	0.052	0.053	0.070
55	0.045	0.058	0.082	0.138	0.208	0.278
56	0.057	0.062	0.080	0.121	0.178	0.222
57	0.045	0.052	0.071	0.106	0.147	0.182
58	0.074	0.060	0.074	0.118	0.163	0.182
59	0.058	0.067	0.086	0.123	0.158	0.187
60	0.087	0.084	0.096	0.142	0.165	0.198
61	0.073	0.084	0.101	0.138	0.173	0.218
62	0.130	0.133	0.146	0.187	0.214	0.249
63	0.122	0.140	0.160	0.204	0.209	0.243
64	0.104	0.124	0.154	0.202	0.214	0.230
65	0.182	0.201	0.242	0.264	0.293	0.293
66	0.272	0.249	0.273	0.285	0.312	0.312
67	0.182	0.217	0.254	0.249	0.264	0.264
68	0.223	0.197	0.218	0.242	0.273	0.273
69	0.217	0.217	0.217	0.217	0.217	0.217
70	0.227	0.227	0.227	0.227	0.227	0.227

Public Agency Miscellaneous 3% at Age 60

	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.015	0.020	0.025	0.039	0.040	0.044
51	0.041	0.034	0.032	0.041	0.036	0.037
52	0.024	0.020	0.022	0.039	0.040	0.041
53	0.018	0.024	0.032	0.047	0.048	0.057
54	0.033	0.033	0.035	0.051	0.049	0.052
55	0.137	0.043	0.051	0.065	0.076	0.108
56	0.173	0.038	0.054	0.075	0.085	0.117
57	0.019	0.035	0.059	0.088	0.111	0.134
58	0.011	0.040	0.070	0.105	0.133	0.162
59	0.194	0.056	0.064	0.081	0.113	0.163
60	0.081	0.085	0.133	0.215	0.280	0.333
61	0.080	0.090	0.134	0.170	0.223	0.292
62	0.137	0.153	0.201	0.250	0.278	0.288
63	0.128	0.140	0.183	0.227	0.251	0.260
64	0.174	0.147	0.173	0.224	0.239	0.264
65	0.152	0.201	0.262	0.299	0.323	0.323
66	0.272	0.273	0.317	0.355	0.380	0.380
67	0.218	0.237	0.268	0.274	0.284	0.284
68	0.200	0.228	0.269	0.285	0.299	0.299
69	0.250	0.250	0.250	0.250	0.250	0.250
70	0.245	0.245	0.245	0.245	0.245	0.245

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	Duration of Service						
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years	
50	0.000	0.000	0.000	0.000	0.000	0.000	
51	0.000	0.000	0.000	0.000	0.000	0.000	
52	0.005	0.008	0.012	0.015	0.019	0.031	
53	0.007	0.011	0.014	0.018	0.021	0.032	
54	0.007	0.011	0.015	0.019	0.023	0.034	
55	0.010	0.019	0.028	0.036	0.061	0.096	
56	0.014	0.026	0.038	0.050	0.075	0.108	
57	0.018	0.029	0.039	0.050	0.074	0.107	
58	0.023	0.035	0.048	0.060	0.073	0.099	
59	0.025	0.038	0.051	0.065	0.092	0.128	
60	0.031	0.051	0.071	0.091	0.111	0.138	
61	0.038	0.058	0.079	0.100	0.121	0.167	
62	0.044	0.074	0.104	0.134	0.164	0.214	
63	0.077	0.105	0.134	0.163	0.192	0.237	
64	0.072	0.101	0.129	0.158	0.187	0.242	
65	0.108	0.141	0.173	0.206	0.239	0.300	
66	0.132	0.172	0.212	0.252	0.292	0.366	
67	0.132	0.172	0.212	0.252	0.292	0.366	
68	0.120	0.156	0.193	0.229	0.265	0.333	
69	0.120	0.156	0.193	0.229	0.265	0.333	
70	0.120	0.156	0.193	0.229	0.265	0.333	

Public Agency Miscellaneous 2% at Age 62

Public Agency Fire Half Pay at 55 and 2% at Age 55						
Age	Rate	Age	Rate			
50	0.016	56	0.111			
51	0.000	57	0.000			
52	0.034	58	0.095			
53	0.020	59	0.044			
54	0.041	60	1.000			
55	0.075					

Public Agency Police Half Pay at 55 and 2% at Age 55						
Age	Rate	Age	Rate			
50	0.026	56	0.069			
51	0.000	57	0.051			
52	0.016	58	0.072			
53	0.027	59	0.070			
54	0.010	60	0.300			
55	0.167					

Appendix A

Public Agency Police 2% at Age 50						
	_		Duration	of Service		
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.018	0.077	0.056	0.046	0.043	0.046
51	0.022	0.087	0.060	0.048	0.044	0.047
52	0.020	0.102	0.081	0.071	0.069	0.075
53	0.016	0.072	0.053	0.045	0.042	0.046
54	0.006	0.071	0.071	0.069	0.072	0.080
55	0.009	0.040	0.099	0.157	0.186	0.186
56	0.020	0.051	0.108	0.165	0.194	0.194
57	0.036	0.072	0.106	0.139	0.156	0.156
58	0.001	0.046	0.089	0.130	0.152	0.152
59	0.066	0.094	0.119	0.143	0.155	0.155
60	0.177	0.177	0.177	0.177	0.177	0.177
61	0.134	0.134	0.134	0.134	0.134	0.134
62	0.184	0.184	0.184	0.184	0.184	0.184
63	0.250	0.250	0.250	0.250	0.250	0.250
64	0.177	0.177	0.177	0.177	0.177	0.177
65	1.000	1.000	1.000	1.000	1.000	1.000

• These rates also apply to County Peace officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Public Agency Fire 2% at Age 50						
			Duration o	f Service		
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.054	0.054	0.056	0.080	0.064	0.066
51	0.020	0.020	0.021	0.030	0.024	0.024
52	0.037	0.037	0.038	0.054	0.043	0.045
53	0.051	0.051	0.053	0.076	0.061	0.063
54	0.082	0.082	0.085	0.121	0.097	0.100
55	0.139	0.139	0.139	0.139	0.139	0.139
56	0.129	0.129	0.129	0.129	0.129	0.129
57	0.085	0.085	0.085	0.085	0.085	0.085
58	0.119	0.119	0.119	0.119	0.119	0.119
59	0.167	0.167	0.167	0.167	0.167	0.167
60	0.152	0.152	0.152	0.152	0.152	0.152
61	0.179	0.179	0.179	0.179	0.179	0.179
62	0.179	0.179	0.179	0.179	0.179	0.179
63	0.179	0.179	0.179	0.179	0.179	0.179
64	0.179	0.179	0.179	0.179	0.179	0.179
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Police 3% at Age 55						
			Duration	of Service		
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.019	0.053	0.045	0.054	0.057	0.061
51	0.002	0.017	0.028	0.044	0.053	0.060
52	0.002	0.031	0.037	0.051	0.059	0.066
53	0.026	0.049	0.049	0.080	0.099	0.114
54	0.019	0.034	0.047	0.091	0.121	0.142
55	0.006	0.115	0.141	0.199	0.231	0.259
56	0.017	0.188	0.121	0.173	0.199	0.199
57	0.008	0.137	0.093	0.136	0.157	0.157
58	0.017	0.126	0.105	0.164	0.194	0.194
59	0.026	0.146	0.110	0.167	0.195	0.195
60	0.155	0.155	0.155	0.155	0.155	0.155
61	0.210	0.210	0.210	0.210	0.210	0.210
62	0.262	0.262	0.262	0.262	0.262	0.262
63	0.172	0.172	0.172	0.172	0.172	0.172
64	0.227	0.227	0.227	0.227	0.227	0.227
65	1.000	1.000	1.000	1.000	1.000	1.000

• These rates also apply to County Peace officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Service Retirement

		Fublic Age	ncy File 3%	at Aye 55		
			Duration c	of Service		
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.003	0.006	0.013	0.019	0.025	0.028
51	0.004	0.008	0.017	0.026	0.034	0.038
52	0.005	0.011	0.022	0.033	0.044	0.049
53	0.005	0.034	0.024	0.038	0.069	0.138
54	0.007	0.047	0.032	0.051	0.094	0.187
55	0.010	0.067	0.046	0.073	0.134	0.266
56	0.010	0.063	0.044	0.069	0.127	0.253
57	0.135	0.100	0.148	0.196	0.220	0.220
58	0.083	0.062	0.091	0.120	0.135	0.135
59	0.137	0.053	0.084	0.146	0.177	0.177
60	0.162	0.063	0.099	0.172	0.208	0.208
61	0.598	0.231	0.231	0.231	0.231	0.231
62	0.621	0.240	0.240	0.240	0.240	0.240
63	0.236	0.236	0.236	0.236	0.236	0.236
64	0.236	0.236	0.236	0.236	0.236	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Fire 3% at Age 55

Public Agency Police 3% at Age 50						
	_		Duration	of Service		
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.124	0.103	0.113	0.143	0.244	0.376
51	0.060	0.081	0.087	0.125	0.207	0.294
52	0.016	0.055	0.111	0.148	0.192	0.235
53	0.072	0.074	0.098	0.142	0.189	0.237
54	0.018	0.049	0.105	0.123	0.187	0.271
55	0.069	0.074	0.081	0.113	0.209	0.305
56	0.064	0.108	0.113	0.125	0.190	0.288
57	0.056	0.109	0.160	0.182	0.210	0.210
58	0.108	0.129	0.173	0.189	0.214	0.214
59	0.093	0.144	0.204	0.229	0.262	0.262
60	0.343	0.180	0.159	0.188	0.247	0.247
61	0.221	0.221	0.221	0.221	0.221	0.221
62	0.213	0.213	0.213	0.213	0.213	0.213
63	0.233	0.233	0.233	0.233	0.233	0.233
64	0.234	0.234	0.234	0.234	0.234	0.234
65	1.000	1.000	1.000	1.000	1.000	1.000

• These rates also apply to County Peace officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Public Agency Fire 3% at Age 50							
			Duration c	f Service			
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years	
50	0.095	0.048	0.053	0.093	0.134	0.175	
51	0.016	0.032	0.053	0.085	0.117	0.149	
52	0.013	0.032	0.054	0.087	0.120	0.154	
53	0.085	0.044	0.049	0.089	0.129	0.170	
54	0.038	0.065	0.074	0.105	0.136	0.167	
55	0.042	0.043	0.049	0.085	0.132	0.215	
56	0.133	0.103	0.075	0.113	0.151	0.209	
57	0.062	0.048	0.060	0.124	0.172	0.213	
58	0.124	0.097	0.092	0.153	0.194	0.227	
59	0.092	0.071	0.078	0.144	0.192	0.233	
60	0.056	0.044	0.061	0.131	0.186	0.233	
61	0.282	0.219	0.158	0.198	0.233	0.260	
62	0.292	0.227	0.164	0.205	0.241	0.269	
63	0.196	0.196	0.196	0.196	0.196	0.196	
64	0.197	0.197	0.197	0.197	0.197	0.197	
65	1.000	1.000	1.000	1.000	1.000	1.000	

Public	Agency	/ Fire	3% a	t Ane	50
i ublic	Agency	y 1 11 C	J /0 a	LAGE	50

Public Agency Police 2% at Age 57							
	Duration of Service						
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years	
50	0.040	0.040	0.040	0.040	0.040	0.080	
51	0.028	0.028	0.028	0.028	0.040	0.066	
52	0.028	0.028	0.028	0.028	0.043	0.061	
53	0.028	0.028	0.028	0.028	0.057	0.086	
54	0.028	0.028	0.028	0.032	0.069	0.110	
55	0.050	0.050	0.050	0.067	0.099	0.179	
56	0.046	0.046	0.046	0.062	0.090	0.160	
57	0.054	0.054	0.054	0.072	0.106	0.191	
58	0.060	0.060	0.060	0.066	0.103	0.171	
59	0.060	0.060	0.060	0.069	0.105	0.171	
60	0.113	0.113	0.113	0.113	0.113	0.171	
61	0.108	0.108	0.108	0.108	0.108	0.128	
62	0.113	0.113	0.113	0.113	0.113	0.159	
63	0.113	0.113	0.113	0.113	0.113	0.159	
64	0.113	0.113	0.113	0.113	0.113	0.239	
65	1.000	1.000	1.000	1.000	1.000	1.000	

• These rates also apply to County Peace officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

		Fublic Age	ncy File 2%	al Age 57			
	Duration of Service						
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years	
50	0.005	0.005	0.005	0.005	0.008	0.012	
51	0.006	0.006	0.006	0.006	0.009	0.013	
52	0.012	0.012	0.012	0.012	0.019	0.028	
53	0.033	0.033	0.033	0.033	0.050	0.075	
54	0.045	0.045	0.045	0.045	0.069	0.103	
55	0.061	0.061	0.061	0.061	0.094	0.140	
56	0.055	0.055	0.055	0.055	0.084	0.126	
57	0.081	0.081	0.081	0.081	0.125	0.187	
58	0.059	0.059	0.059	0.059	0.091	0.137	
59	0.055	0.055	0.055	0.055	0.084	0.126	
60	0.085	0.085	0.085	0.085	0.131	0.196	
61	0.085	0.085	0.085	0.085	0.131	0.196	
62	0.085	0.085	0.085	0.085	0.131	0.196	
63	0.085	0.085	0.085	0.085	0.131	0.196	
64	0.085	0.085	0.085	0.085	0.131	0.196	
65	1.000	1.000	1.000	1.000	1.000	1.000	

Public	Agency	Fire	2%	at	Aae	57
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Fublic Agency Folice 2.5% at Age 57						
	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.050	0.050	0.050	0.050	0.050	0.100
51	0.038	0.038	0.038	0.038	0.055	0.089
52	0.038	0.038	0.038	0.038	0.058	0.082
53	0.036	0.036	0.036	0.036	0.073	0.111
54	0.036	0.036	0.036	0.041	0.088	0.142
55	0.061	0.061	0.061	0.082	0.120	0.217
56	0.056	0.056	0.056	0.075	0.110	0.194
57	0.060	0.060	0.060	0.080	0.118	0.213
58	0.072	0.072	0.072	0.079	0.124	0.205
59	0.072	0.072	0.072	0.083	0.126	0.205
60	0.135	0.135	0.135	0.135	0.135	0.205
61	0.130	0.130	0.130	0.130	0.130	0.153
62	0.135	0.135	0.135	0.135	0.135	0.191
63	0.135	0.135	0.135	0.135	0.135	0.191
64	0.135	0.135	0.135	0.135	0.135	0.287
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Police 2.5% at Age 57

• These rates also apply to County Peace officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

Public Agency Fire 2.5% at Age 57						
	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.012	0.018
52	0.016	0.016	0.016	0.016	0.025	0.038
53	0.042	0.042	0.042	0.042	0.064	0.096
54	0.057	0.057	0.057	0.057	0.088	0.132
55	0.074	0.074	0.074	0.074	0.114	0.170
56	0.066	0.066	0.066	0.066	0.102	0.153
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.071	0.071	0.071	0.071	0.110	0.164
59	0.066	0.066	0.066	0.066	0.101	0.151
60	0.102	0.102	0.102	0.102	0.157	0.235
61	0.102	0.102	0.102	0.102	0.157	0.236
62	0.102	0.102	0.102	0.102	0.157	0.236
63	0.102	0.102	0.102	0.102	0.157	0.236
64	0.102	0.102	0.102	0.102	0.157	0.236
65	1.000	1.000	1.000	1.000	1.000	1.000

	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.050	0.050	0.050	0.050	0.050	0.100
51	0.040	0.040	0.040	0.040	0.058	0.094
52	0.038	0.038	0.038	0.038	0.058	0.083
53	0.038	0.038	0.038	0.038	0.077	0.117
54	0.038	0.038	0.038	0.044	0.093	0.150
55	0.068	0.068	0.068	0.091	0.134	0.242
56	0.063	0.063	0.063	0.084	0.123	0.217
57	0.060	0.060	0.060	0.080	0.118	0.213
58	0.080	0.080	0.080	0.088	0.138	0.228
59	0.080	0.080	0.080	0.092	0.140	0.228
60	0.150	0.150	0.150	0.150	0.150	0.228
61	0.144	0.144	0.144	0.144	0.144	0.170
62	0.150	0.150	0.150	0.150	0.150	0.213
63	0.150	0.150	0.150	0.150	0.150	0.213
64	0.150	0.150	0.150	0.150	0.150	0.319
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Police 2.7% at Age 57

• These rates also apply to County Peace officers, Local Prosecutors, Local Sheriff, School Police, and Other Safety.

		0		<u> </u>		
	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.007	0.007	0.007	0.007	0.010	0.015
51	0.008	0.008	0.008	0.008	0.013	0.019
52	0.016	0.016	0.016	0.016	0.025	0.038
53	0.044	0.044	0.044	0.044	0.068	0.102
54	0.061	0.061	0.061	0.061	0.093	0.140
55	0.083	0.083	0.083	0.083	0.127	0.190
56	0.074	0.074	0.074	0.074	0.114	0.171
57	0.090	0.090	0.090	0.090	0.139	0.208
58	0.079	0.079	0.079	0.079	0.122	0.182
59	0.073	0.073	0.073	0.073	0.112	0.168
60	0.114	0.114	0.114	0.114	0.175	0.262
61	0.114	0.114	0.114	0.114	0.175	0.262
62	0.114	0.114	0.114	0.114	0.175	0.262
63	0.114	0.114	0.114	0.114	0.175	0.262
64	0.114	0.114	0.114	0.114	0.175	0.262
65	1.000	1.000	1.000	1.000	1.000	1.000

Public Agency Fire 2.7% at Age 57

Schools 2% at Age 55						
			Duration	of Service		
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.003	0.004	0.006	0.007	0.010	0.010
51	0.004	0.005	0.007	0.008	0.011	0.011
52	0.005	0.007	0.008	0.009	0.012	0.012
53	0.007	0.008	0.010	0.012	0.015	0.015
54	0.006	0.009	0.012	0.015	0.020	0.021
55	0.011	0.023	0.034	0.057	0.070	0.090
56	0.012	0.027	0.036	0.056	0.073	0.095
57	0.016	0.027	0.036	0.055	0.068	0.087
58	0.019	0.030	0.040	0.062	0.078	0.103
59	0.023	0.034	0.046	0.070	0.085	0.109
60	0.022	0.043	0.062	0.095	0.113	0.141
61	0.030	0.051	0.071	0.103	0.124	0.154
62	0.065	0.098	0.128	0.188	0.216	0.248
63	0.075	0.112	0.144	0.197	0.222	0.268
64	0.091	0.116	0.138	0.180	0.196	0.231
65	0.163	0.164	0.197	0.232	0.250	0.271
66	0.208	0.204	0.243	0.282	0.301	0.315
67	0.189	0.185	0.221	0.257	0.274	0.287
68	0.127	0.158	0.200	0.227	0.241	0.244
69	0.168	0.162	0.189	0.217	0.229	0.238
70	0.191	0.190	0.237	0.250	0.246	0.254

Schools 2% at Age 62

	Duration of Service					
Age	5 Years	10 Years	15 Years	20 Years	25 Years	30 Years
50	0.000	0.000	0.000	0.000	0.000	0.000
51	0.000	0.000	0.000	0.000	0.000	0.000
52	0.004	0.007	0.010	0.011	0.013	0.015
53	0.004	0.008	0.010	0.013	0.014	0.016
54	0.005	0.011	0.015	0.018	0.020	0.022
55	0.014	0.027	0.038	0.045	0.050	0.056
56	0.013	0.026	0.037	0.043	0.048	0.055
57	0.013	0.027	0.038	0.045	0.050	0.055
58	0.017	0.034	0.047	0.056	0.062	0.069
59	0.019	0.037	0.052	0.062	0.068	0.076
60	0.026	0.053	0.074	0.087	0.097	0.108
61	0.030	0.058	0.081	0.095	0.106	0.119
62	0.053	0.105	0.147	0.174	0.194	0.217
63	0.054	0.107	0.151	0.178	0.198	0.222
64	0.053	0.105	0.147	0.174	0.194	0.216
65	0.072	0.142	0.199	0.235	0.262	0.293
66	0.077	0.152	0.213	0.252	0.281	0.314
67	0.070	0.139	0.194	0.229	0.255	0.286
68	0.063	0.124	0.173	0.205	0.228	0.255
69	0.066	0.130	0.183	0.216	0.241	0.270
70	0.071	0.140	0.196	0.231	0.258	0.289

Miscellaneous

Internal Revenue Code Section 415

The limitations on benefits imposed by Internal Revenue Code Section 415 are taken into account in this valuation. Each year the impact of any changes in this limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. This results in lower contributions for those employers contributing to the Replacement Benefit Fund and protects CalPERS from prefunding expected benefits in excess of limits imposed by federal tax law. The Section 415(b) dollar limit for the 2022 calendar year is \$245,000.

Internal Revenue Code Section 401(a)(17)

The limitations on compensation imposed by Internal Revenue Code Section 401(a)(17) are taken into account in this valuation. Each year, the impact of any changes in the compensation limitation since the prior valuation is included and amortized as part of the actuarial gain or loss base. The compensation limit for classic members for the 2022 calendar year is \$305,000. Appendix B Principal Plan Provisions The following is a description of the principal plan provisions used in calculating costs and liabilities. We have indicated whether a plan provision is standard or optional. Standard benefits are applicable to all members while optional benefits vary among employers. Optional benefits that apply to a single period of time, such as Golden Handshakes, have not been included. Many of the statements in this summary are general in nature and are intended to provide an easily understood summary of the Public Employees' Retirement Law and the California Public Employees' Pension Reform Act of 2013. The law itself governs in all situations.

Service Retirement

Eligibility

A classic CalPERS member or PEPRA Safety member becomes eligible for Service Retirement upon attainment of age 50 with at least 5 years of credited service (total service across all CalPERS employers, and with certain other retirement systems with which CalPERS has reciprocity agreements). For employees hired into a plan with the 1.5% at age 65 formula, eligibility for service retirement is age 55 with at least 5 years of service. PEPRA miscellaneous members become eligible for service retirement upon attainment of age 52 with at least 5 years of service.

Benefit

The service retirement benefit is a monthly allowance equal to the product of the *benefit factor*, *years of service*, and *final compensation*.

• The *benefit factor* depends on the benefit formula specified in the agency's contract. The table below shows the factors for each of the available formulas. Factors vary by the member's age at retirement. Listed are the factors for retirement at whole year ages:

Retirement Age	1.5% at age 65	2% at age 60	2% at age 55	2.5% at age 55	2.7% at age 55	3% at age 60	PEPRA 2% at age 62
50	0.5000%	1.092%	1.426%	2.000%	2.000%	2.000%	N/A
51	0.5667%	1.156%	1.522%	2.100%	2.140%	2.100%	N/A
52	0.6334%	1.224%	1.628%	2.200%	2.280%	2.200%	1.000%
53	0.7000%	1.296%	1.742%	2.300%	2.420%	2.300%	1.100%
54	0.7667%	1.376%	1.866%	2.400%	2.560%	2.400%	1.200%
55	0.8334%	1.460%	2.000%	2.500%	2.700%	2.500%	1.300%
56	0.9000%	1.552%	2.052%	2.500%	2.700%	2.600%	1.400%
57	0.9667%	1.650%	2.104%	2.500%	2.700%	2.700%	1.500%
58	1.0334%	1.758%	2.156%	2.500%	2.700%	2.800%	1.600%
59	1.1000%	1.874%	2.210%	2.500%	2.700%	2.900%	1.700%
60	1.1667%	2.000%	2.262%	2.500%	2.700%	3.000%	1.800%
61	1.2334%	2.134%	2.314%	2.500%	2.700%	3.000%	1.900%
62	1.3000%	2.272%	2.366%	2.500%	2.700%	3.000%	2.000%
63	1.3667%	2.418%	2.418%	2.500%	2.700%	3.000%	2.100%
64	1.4334%	2.418%	2.418%	2.500%	2.700%	3.000%	2.200%
65	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.300%
66	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.400%
67 & up	1.5000%	2.418%	2.418%	2.500%	2.700%	3.000%	2.500%

Miscellaneous Plan Formulas

Safety Plan Formulas

Retirement Age	Half Pay at age 55*	2% at age 55	2% at age 50	3% at age 55	3% at age 50
50	1.783%	1.426%	2.000%	2.400%	3.000%
51	1.903%	1.522%	2.140%	2.520%	3.000%
52	2.035%	1.628%	2.280%	2.640%	3.000%
53	2.178%	1.742%	2.420%	2.760%	3.000%
54	2.333%	1.866%	2.560%	2.880%	3.000%
55 & Up	2.500%	2.000%	2.700%	3.000%	3.000%

* For this formula, the benefit factor also varies by entry age. The factors shown are for members with an entry age of 35 or greater. If entry age is less than 35, then the age 55 benefit factor is 50% divided by the difference between age 55 and entry age. The benefit factor for ages prior to age 55 is the same proportion of the age 55 benefit factor as in the above table.

PEPRA Safety Plan Formulas

Retirement Age	2% at age 57	2.5% at age 57	2.7% at age 57
50	1.426%	2.000%	2.000%
51	1.508%	2.071%	2.100%
52	1.590%	2.143%	2.200%
53	1.672%	2.214%	2.300%
54	1.754%	2.286%	2.400%
55	1.836%	2.357%	2.500%
56	1.918%	2.429%	2.600%
57 & Up	2.000%	2.500%	2.700%

- The years of service is the amount credited by CalPERS to a member while he or she is employed in this group (or for other periods that are recognized under the employer's contract with CalPERS). For a member who has earned service with multiple CalPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance. Any unused sick leave accumulated at the time of retirement will be converted to credited service at a rate of 0.004 years of service for each day of sick leave.
- The *final compensation* is the monthly average of the member's highest 36 or 12 consecutive months' full-time equivalent monthly pay (no matter which CalPERS employer paid this compensation). The standard benefit is 36 months. Employers had the option of providing a final compensation equal to the highest 12 consecutive months for classic plans only. Final compensation must be defined by the highest 36 consecutive months' pay under the 1.5% at 65 formula. PEPRA members have a cap on the annual salary that can be used to calculate final compensation for all new members based on the Social Security contribution and benefit base. For employees that participate in Social Security this cap is \$134,974 for 2022 and for those employees that do not participate in Social Security the cap for 2022 is \$161,969. Adjustments to the caps are permitted annually based on changes to the CPI for all urban consumers.
- PEPRA benefit formulas have no Social Security offsets and Social Security coverage is optional. For Classic benefit formulas, employees must be covered by Social Security with the 1.5% at 65 formula. Social Security is optional for all other Classic benefit formulas. For employees covered by Social Security, the modified formula is the standard benefit. Under this type of formula, the final compensation is offset by \$133.33 (or by one third if the final compensation is less than \$400). Employers may contract for the full benefit with Social Security that will eliminate the offset applicable to the final compensation. For employees not covered by Social Security, the full benefit is paid with no offsets. Auxiliary organizations of the CSUC system may elect reduced contribution rates, in which case the offset is \$317 if members are not covered by Social Security or \$513 if members are covered by Social Security.

• The Miscellaneous and PEPRA Safety service retirement benefit is not capped. The Classic Safety service retirement benefit is capped at 90% of final compensation.

Vested Deferred Retirement

Eligibility for Deferred Status

A CalPERS member becomes eligible for a deferred vested retirement benefit when he or she leaves employment, keeps his or her contribution account balance on deposit with CalPERS, **and** has earned at least 5 years of credited service (total service across all CalPERS employers, and with certain other retirement systems with which CalPERS has reciprocity agreements).

Eligibility to Start Receiving Benefits

The CalPERS classic members and PEPRA safety members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for deferred status and upon attainment of age 50 (55 for employees hired into a 1.5% at age 65 plan). PEPRA miscellaneous members become eligible to receive the deferred retirement benefit upon satisfying the eligibility requirements for deferred status and upon attainment of age 52.

Benefit

The vested deferred retirement benefit is the same as the service retirement benefit, where the benefit factor is based on the member's age at allowance commencement. For members who have earned service with multiple CaIPERS employers, the benefit from each employer is calculated separately according to each employer's contract, and then added together for the total allowance.

Non-Industrial (Non-Job Related) Disability Retirement

Eligibility

A CalPERS member is eligible for Non-Industrial Disability Retirement if he or she becomes *disabled* and has at least 5 years of credited service (total service across all CalPERS employers, and with certain other retirement systems with which CalPERS has reciprocity agreements). There is no special age requirement. *Disabled* means the member is unable to perform his or her job because of an illness or injury, which is expected to be permanent or to last indefinitely. The illness or injury does not have to be job related. A CalPERS member must be actively employed by any CalPERS employer at the time of disability in order to be eligible for this benefit.

Standard Benefit

The standard Non-Industrial Disability Retirement benefit is a monthly allowance equal to 1.8% of final compensation, multiplied by *service*, which is determined as follows:

- Service is CalPERS credited service, for members with less than 10 years of service or greater than 18.518 years of service; or
- Service is CalPERS credited service plus the additional number of years that the member would have worked until age 60, for members with at least 10 years but not more than 18.518 years of service. The maximum benefit in this case is 331/3% of final compensation.

Improved Benefit

Employers have the option of providing the improved Non-Industrial Disability Retirement benefit. This benefit provides a monthly allowance equal to 30% of final compensation for the first 5 years of service, plus 1% for each additional year of service to a maximum of 50% of final compensation.

Members who are eligible for a larger service retirement benefit may choose to receive that benefit in lieu of a disability benefit. Members eligible to retire, and who have attained the normal retirement age determined by their service retirement benefit formula, will receive the same dollar amount for disability retirement as that payable for service retirement. For members who have earned service with multiple CalPERS employers, the benefit attributed to each employer is the total disability allowance multiplied by the ratio of service with a particular employer to the total CalPERS service.

Industrial (Job Related) Disability Retirement

This is a standard benefit for Safety members except those described in Section 20423.6. For excluded Safety members and all Miscellaneous members, employers have the option of providing this benefit. An employer may choose to provide the increased benefit option or the improved benefit option.

Eligibility

An employee is eligible for Industrial Disability Retirement if he or she becomes disabled while working, where disabled means the member is unable to perform the duties of the job because of a work-related illness or injury, which is expected to be permanent or to last indefinitely. A CalPERS member who has left active employment within this group is not eligible for this benefit, except to the extent described below.

Standard Benefit

The standard Industrial Disability Retirement benefit is a monthly allowance equal to 50% of final compensation.

Increased Benefit (75% of Final Compensation)

The increased Industrial Disability Retirement benefit is a monthly allowance equal to 75% final compensation for total disability.

Improved Benefit (50% to 90% of Final Compensation)

The improved Industrial Disability Retirement benefit is a monthly allowance equal to the Workman's Compensation Appeals Board permanent disability rate percentage (if 50% or greater, with a maximum of 90%) times the final compensation.

For a CalPERS member not actively employed in this group who became disabled while employed by some other CalPERS employer, the benefit is a return of accumulated member contributions with respect to employment in this group. With the standard or increased benefit, a member may also choose to receive the annuitization of the accumulated member contributions.

If a member is eligible for service retirement and if the service retirement benefit is more than the Industrial Disability Retirement benefit, the member may choose to receive the larger benefit.

Post-Retirement Death Benefit

Standard Lump Sum Payment

Upon the death of a retiree, a one-time lump sum payment of \$500 will be made to the retiree's designated survivor(s), or to the retiree's estate. The lump sum payment amount increases to \$2,000 for any death occurring on or after July 1, 2023 due to SB 1168.

Optional Lump Sum Payment

In lieu of the standard lump sum death benefit, employers have the option of providing a lump sum death benefit of \$600, \$3,000, \$4,000 or \$5,000.

Form of Payment for Retirement Allowance

Standard Form of Payment

Generally, the retirement allowance is paid to the retiree in the form of an annuity for as long as he or she is alive. The retiree may choose to provide for a portion of his or her allowance to be paid to any designated beneficiary after the retiree's death. CaIPERS provides for a variety of such benefit options, which the retiree pays for by taking a reduction in his or her retirement allowance. Such reduction takes into account the amount to be provided to the beneficiary and the probable duration of payments (based on the ages of the member and beneficiary) made subsequent to the member's death.

Improved Form of Payment (Post-Retirement Survivor Allowance)

Employers have the option to contract for the post-retirement survivor allowance.

For retirement allowances with respect to service subject to the modified Classic formula, 25% of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. For retirement allowances with respect to service subject to a PEPRA formula or a full or supplemental Classic formula, 50% of the retirement allowance will automatically be continued to certain statutory beneficiaries upon the death of the retiree, without a reduction in the retiree's allowance. This additional benefit is referred to as post-retirement survivor allowance (PRSA) or simply as survivor continuance.

In other words, 25% or 50% of the allowance, the continuance portion, is paid to the retiree for as long as he or she is alive, and that same amount is continued to the retiree's spouse (or if no eligible spouse, to unmarried child(ren) until they attain age 18; or, if no eligible child(ren), to a qualifying dependent parent) for the rest of his or her lifetime. This benefit will not be discontinued in the event the spouse remarries.

The remaining 75% or 50% of the retirement allowance, which may be referred to as the option portion of the benefit, is paid to the retiree as an annuity for as long as he or she is alive. Or, the retiree may choose to provide for some of this option portion to be paid to any designated beneficiary after the retiree's death. Benefit options applicable to the option portion are the same as those offered with the standard form. The reduction is calculated in the same manner but is applied only to the option portion.

Pre-Retirement Death Benefits

Basic Death Benefit

This is a standard benefit.

Eligibility

An employee's beneficiary (or estate) may receive the basic death benefit if the member dies while actively employed. A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this basic death benefit.

<u>Benefit</u>

The basic death benefit is a lump sum in the amount of the member's accumulated contributions, where interest is credited annually at the greater of 6% or the prevailing discount rate through the date of death, plus a lump sum in the amount of one month's salary for each completed year of current service, up to a maximum of six months' salary. For purposes of this benefit, one month's salary is defined as the member's average monthly full-time rate of compensation during the 12 months preceding death.

1957 Survivor Benefit

This is a standard benefit.

Eligibility

An employee's *eligible survivor(s)* may receive the 1957 Survivor benefit if the member dies while actively employed, has attained at least age 50 for classic and safety PEPRA members and age 52 for miscellaneous PEPRA members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other retirement systems with which CalPERS has reciprocity agreements). A CalPERS member must be actively employed with the CalPERS employer providing this benefit to be eligible for this benefit. An eligible survivor means the surviving spouse to whom the member was married at least one year before death or, if there is no eligible spouse, to the member's unmarried child(ren) under age 18. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this 1957 Survivor benefit.

Benefit

The 1957 Survivor benefit is a monthly allowance equal to one-half of the unmodified service retirement benefit that the member would have been entitled to receive if the member had retired on the date of his or her death. If the benefit is payable to the spouse, the benefit is discontinued upon the death of the spouse. If the benefit is payable to dependent child(ren), the benefit will be discontinued upon death or attainment of age 18, unless the child(ren) is disabled. The total amount paid will be at least equal to the basic death benefit.

This is a standard benefit for members in a risk pool.

Eligibility

An employee's *eligible survivor* may receive the Optional Settlement 2 Death benefit if the member dies while actively employed, has attained at least age 50 for classic and safety PEPRA members and age 52 for miscellaneous PEPRA members, and has at least 5 years of credited service (total service across all CalPERS employers and with certain other retirement systems with which CalPERS has reciprocity agreements). A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married at least one year before death. A member's survivor who is eligible for any other pre-retirement death benefit may choose to receive that death benefit instead of this Optional Settlement 2 Death benefit.

Benefit

The Optional Settlement 2 Death benefit is a monthly allowance equal to the service retirement benefit that the member would have received had the member retired on the date of his or her death and elected 100% to continue to the eligible survivor after the member's death. The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried child(ren) under age 18, if applicable. The total amount paid will be at least equal to the basic death benefit.

Special Death Benefit

This is a standard benefit for Safety members except those described in Section 20423.6. For excluded Safety members and all Miscellaneous members, employers may elect to provide this benefit.

Eligibility

An employee's *eligible survivor(s)* may receive the special death benefit if the member dies while actively employed and the death is job-related. A CalPERS member who is no longer actively employed with **any** CalPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried child(ren) under age 22. An eligible survivor who chooses to receive this benefit will not receive any other death benefit.

Benefit

The special death benefit is a monthly allowance equal to 50% of final compensation and will be increased whenever the compensation paid to active employees is increased but ceasing to increase when the member would have attained age 50. The allowance is payable to the surviving spouse until death at which time the allowance is continued to any unmarried child(ren) under age 22. There is a guarantee that the total amount paid will at least equal the basic death benefit.

If the member's death is the result of an accident or injury caused by external violence or physical force incurred in the performance of the member's duty, and there are *eligible* surviving child(ren) (*eligible* means unmarried child(ren) under age 22) in addition to an eligible spouse, then an **additional monthly allowance** is paid equal to the following:

- if 1 eligible child:
- if 2 eligible children:
- if 3 or more eligible children:

12.5% of final compensation 20.0% of final compensation 25.0% of final compensation

Alternate Death Benefit for Local Fire Members

This is an optional benefit available only to local fire members.

Eligibility

An employee's *eligible survivor(s)* may receive the alternate death benefit in lieu of the basic death benefit or the 1957 Survivor benefit if the member dies while actively employed and has at least 20 years of total CaIPERS service. A CaIPERS member who is no longer actively employed with **any** CaIPERS employer is not eligible for this benefit. An *eligible survivor* means the surviving spouse to whom the member was married prior to the onset of the injury or illness that resulted in death. If there is no eligible spouse, an eligible survivor means the member's unmarried child(ren) under age 18.

Benefit

The Alternate Death benefit is a monthly allowance equal to the service retirement benefit that the member would have received had the member retired on the date of his or her death and elected Optional Settlement 2. (A retiree who elects Optional Settlement 2 receives an allowance that has been reduced so that it will continue to be paid after his or her death to a surviving beneficiary.) If the member has not yet attained age 50, the benefit is equal to that which would be payable if the member had retired at age 50, based on service credited at the time of death. The allowance is payable as long as the surviving spouse lives, at which time it is continued to any unmarried child(ren) under age 18, if applicable. The total amount paid will be at least equal to the basic death benefit.

Cost-of-Living Adjustments (COLA)

Standard Benefit

Retirement and survivor allowances are adjusted each year in May for cost of living, beginning the second calendar year after the year of retirement. The standard cost-of-living adjustment (COLA) is 2%. Annual adjustments are calculated by first determining the lesser of 1) 2% compounded from the end of the year of retirement or 2) actual rate of price inflation. The resulting increase is divided by the total increase provided in prior years. For any given year, the COLA adjustment may be less than 2% (when the rate of price inflation is low), may be greater than the rate of price inflation (when the rate of price inflation is low after several years of high price inflation) or may even be greater than 2% (when price inflation is high after several years of low price inflation).

Improved Benefit

Employers have the option of providing a COLA of 3%, 4%, or 5%, determined in the same manner as described above for the standard 2% COLA. An improved COLA is not available with the 1.5% at 65 formula.

Purchasing Power Protection Allowance (PPPA)

Retirement and survivor allowances are protected against price inflation by PPPA. PPPA benefits are cost-of-living adjustments that are intended to maintain an individual's allowance at 80% of the initial allowance at retirement adjusted for price inflation since retirement. The PPPA benefit will be coordinated with other cost-of-living adjustments provided under the plan.

Employee Contributions

Each employee contributes toward his or her retirement based upon the retirement formula. The standard employee contribution is as described below.

- The percent contributed below the monthly compensation breakpoint is 0%.
- The monthly compensation breakpoint is \$0 for all PEPRA members and Classic members covered by a full or supplemental formula and \$133.33 for Classic members covered by a modified formula.
- The percent contributed above the monthly compensation breakpoint depends upon the benefit formula, as shown in the table below.

Benefit Formula	Percent Contributed above the
	Breakpoint
Miscellaneous, 1.5% at age 65	2%
Miscellaneous, 2% at age 60	7%
Miscellaneous, 2% at age 55	7%
Miscellaneous, 2.5% at age 55	8%
Miscellaneous, 2.7% at age 55	8%
Miscellaneous, 3% at age 60	8%
Miscellaneous, 2% at age 62	50% of the Total Normal Cost
Miscellaneous, 1.5% at age 65	50% of the Total Normal Cost
Safety, Half Pay at age 55	Varies by entry age
Safety, 2% at age 55	7%
Safety, 2% at age 50	9%
Safety, 3% at age 55	9%
Safety, 3% at age 50	9%
Safety, 2% at age 57	50% of the Total Normal Cost
Safety, 2.5% at age 57	50% of the Total Normal Cost
Safety, 2.7% at age 57	50% of the Total Normal Cost

The employer may choose to "pick-up" these contributions for classic members (Employer Paid Member Contributions or EPMC). EPMC is prohibited for new PEPRA members.

An employer may also include Employee Cost Sharing in the contract, where employees agree to share the cost of the employer contribution. These contributions are paid in addition to the member contribution.

Auxiliary organizations of the CSU system may elect reduced contribution rates, in which case the offset is \$317 and the contribution rate is 6% if members are not covered by Social Security. If members are covered by Social Security, the offset is \$513 and the contribution rate is 5%.

Refund of Employee Contributions

If the member's service with the employer ends, and if the member does not satisfy the eligibility conditions for any of the retirement benefits above, the member may elect to receive a refund of his or her employee contributions, which are credited with 6% interest compounded annually.

1959 Survivor Benefit

This is a pre-retirement death benefit available only to members not covered by Social Security. Any agency joining CalPERS subsequent to 1993 is required to provide this benefit if the members are not covered by Social Security. The benefit is optional for agencies joining CalPERS prior to 1994. Levels 1, 2 and 3 are now closed. Any new agency or any agency wishing to add this benefit or increase the current level may only choose the 4th or Indexed Level.

This benefit is not included in the results presented in this valuation. More information on this benefit is available on the CaIPERS website.
Appendix C

Classification of Optional Benefits

Classification of Optional Benefits

Below is the list of the available optional benefit provisions and their initial classification upon establishment of risk pools. When new benefits become available as a result of legislation, the Chief Actuary will determine their classification in accordance with the criteria established in the Board policy.

Class 0

Class 0 benefit surcharge is the increase in normal cost for a given benefit formula above the baseline PEPRA 2% at 62 benefit formula.

Class 1

Class 1 benefits have been identified as additional benefits which have a significant, ongoing effect on the total plan cost. In some cases, a Class 1 benefit may be an alternate benefit formula. These benefits vary by employer across the risk pool. Agencies contracting for a Class 1 benefit will be responsible for the past service liability associated with such benefit and will be required to pay a surcharge established by the actuary to cover the ongoing cost (normal cost) of the Class 1 benefit.

The table below shows the list of Class 0 and Class 1 benefits and their applicable surcharge for each benefit formula in the Miscellaneous Risk Pool.

Optional Benefit	2% at Age 62	1.5% at Age 65	2% at Age 60	2% at Age 55	2.5% at Age 55	2.7% at Age 55	3% at Age 60
Class 0 Benefit	0.00%	0.14%	2.28%	4.01%	5.54%	7.37%	8.64%
One Year Final Compensation	N/A	0.34%	0.56%	0.64%	0.72%	0.78%	0.82%
EPMC by contract, 7% EPMC by contract, 8%	N/A N/A	N/A N/A	1.04% 0.00%	1.15% 0.00%	1.29% 1.48%	1.40% 1.60%	1.46% 1.67%
25% PRSA	0.81%	0.46%	0.78%	0.79%	0.86%	0.92%	0.99%
50% PRSA	0.81%	0.46%	0.78%	0.79%	0.86%	0.92%	0.99%
3% Annual COLA	0.45%	0.27%	0.45%	0.53%	0.62%	0.68%	0.70%
4% Annual COLA	0.45%	0.27%	0.45%	0.53%	0.62%	0.68%	0.70%
5% Annual COLA IDR For Local Miscellaneous	0.45%	0.27%	0.45%	0.53%	0.62%	0.68%	0.70%
Members Increased IDR Allowance to 75%	0.32%	0.30%	0.28%	0.29%	0.28%	0.29%	0.29%
of Compensation	0.53%	0.52%	0.49%	0.50%	0.49%	0.50%	0.49%
Employee Cost Sharing* Employee Contribution Rate for CSUC Auxiliary Organizations	varies	varies	varies	varies	varies	varies	varies
Reduced to State Member Level - Covered by Social Security	N/A	N/A	2.00%	2.00%	2.00%	2.00%	2.00%
CSUC Auxiliary Organizations Reduced to State Member Level - Not Covered by Social Security	N/A	N/A	1.00%	1.00%	1.00%	1.00%	1.00%

For employers contracting for more than one Class 1 benefit, the surcharges listed in this table will be added together.

Class 2

Class 2 benefits have been identified to be the ancillary benefits providing one-time increases in benefits. These benefits vary by employer across the risk pool. Agencies contracting for a Class 2 benefit will be responsible for the past service liability associated with such benefit.

The following benefits shall be classified as Class 2:

- One-time 1% to 6% Ad Hoc COLA Increases for members who retired or died prior to January 1, 1998 (Section 21328)
- "Golden Handshakes" Section 20903 Two Years Additional Service Credit
- Credit for Prior Service Paid for by the Employer
- Military Service Credit (Section 20996)
- Credit for Local Retirement System Service for Employees of Agencies Contracted on a Prospective basis (Section 20530.1)
- Prior Service Credit for Employees of an Assumed Agency Function (Section 20936)
- Limit Prior Service to Members Employed on Contract Date (Section 20938)
- Public Service Credit for Limited Prior Service (Section 21031)
- Public Service Credit for Employees of an Assumed Agency or Function (Section 21025)

Class 3

Class 3 benefits have been identified to be additional benefits which have a minimal effect on the total plan cost. Class 3 benefits may vary by rate plan within each risk pool. However, the employer contribution rate will not vary within the risk pool due to the Class 3 benefits.

The following benefits shall be classified as Class 3:

- Full formula plus social security
- Post Retirement Lump Sum Death Benefit
- \$600 lump sum retired death benefit (Section 21622)
- \$2,000 lump sum retired death benefit (Section 21623.5)
- \$3,000 lump sum retired death benefit (Section 21623.5)
- \$4,000 lump sum retired death benefit (Section 21623.5)
- \$5,000 lump sum retired death benefit (Section 21623.5)
- Improved non-industrial disability allowance (Section 21427)
- Special death benefit for local safety members (Section 21540.5)
- Service Credit Purchased by Member
- Partial Service Retirement (Section 21118)
- Optional Membership for Part Time Employees (Section 20325)
- Extension of Reciprocity Rights for Elective Officers (Section 20356)
- Removal of Contract Exclusions Prospectively Only (Section 20503)
- Alternate Death Benefit for Local Fire Members credited with 20 or more years of service (Section 21547.7)

Appendix D

Participant Data

- Source of the Participant Data
- Data Validation Tests and Adjustments
- Summary of Pool Participants
- Summary of Valuation Data
- Active Members
- Transferred and Separated Members
- Retired Members and Beneficiaries
- Distribution of Plan Costs by Benefit Formula

Source of the Participant Data

The data was extracted from various databases within CalPERS and placed in the valuation system database by a series of extract programs. Included in this data are:

- Individual member and beneficiary information,
- Employment and payroll information,
- Accumulated contributions with interest,
- Service information,
- Benefit payment information,
- Information about the various organizations which contract with CalPERS, and
- Detailed information about the plan provisions applicable to each group of members.

Data Validation Tests and Adjustments

Once the information is extracted from the various computer systems into the database, update queries are then run against this data to correct for flaws found in the data. This part of the process is intended to validate the participant data for all CaIPERS plans. The data is then checked for reasonableness and consistency with data from the prior valuation.

Checks on the data include:

- A reconciliation of the membership of the plans,
- Comparisons of various member statistics (average attained age, average entry age, average salary, etc.) for each plan with those from the prior year valuation,
- Comparisons of pension amounts for each retiree and beneficiary receiving payments with those from the prior year valuation,
- Checks for invalid ages and dates, and
- Reasonableness checks on various key data elements such as years of service and salary

As a result of the tests on the data, a number of adjustments were determined to be necessary. These included:

Dates of hire and dates of entry were adjusted where necessary to be consistent with the service fields, the date of birth and each other.

Summary of Pool Participants

	June 30, 2021		June 30, 2022	
	Agencies	Rate Plans	Agencies	Rate Plans
City or Town	268	639	268	639
County	3	5	3	5
Joint Powers Authority	144	292	144	293
Non-profit	49	92	49	93
Special District	<u>687</u>	<u>1,386</u>	<u>687</u>	<u>1,392</u>
Total	1,151	2,414	1,151	2,422

Summary of Valuation Data

		June 30, 2021	June 30, 2022
1.	Number of Plans in the Risk Pool	2,414	2,422
2.	Active Members		
	a) Counts	33,339	34,926
	b) Average Attained Age	44.78	44.34
	c) Average Entry Age on Rate Plan	36.26	36.25
	d) Average Years of Credited Service	8.40	7.96
	e) Average Annual Covered Pay	\$79,233	\$81,467
	f) Annual Covered Payroll	\$2,641,544,193	\$2,845,309,050
	g) Projected Annual Payroll for Contribution Year	\$2,869,704,804	\$3,091,069,637
	h) Present Value of Future Payroll	\$24,578,775,128	\$26,748,613,381
3.	Transferred Members	15,703	16,350
4.	Separated Members	25,270	27,069
5.	Retired Members and Beneficiaries		
	a) Counts*	41,455	43,166
	b) Average Annual Benefits*	\$22,438	\$23,439
6.	Active to Retired Ratio [(2a) / (5a)]	0.80	0.81

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.

* Individuals in more than one coverage group counted more than once. Values do not match those on pages D-5 and D-6 where each retiree is counted only once.

Active Members

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.

	Years of Service at Valuation Date										
Attained Age	0-4	5-9	10-14	15-19	20-24	25+	Total				
15-24	1,110	10	0	0	0	0	1,120				
25-29	2,867	313	4	0	0	0	3,184				
30-34	3,168	1,113	174	13	1	0	4,469				
35-39	2,723	1,358	561	301	12	0	4,955				
40-44	2,234	1,218	674	685	222	13	5,046				
45-49	1,647	937	564	688	433	121	4,390				
50-54	1,342	849	529	698	457	366	4,241				
55-59	1,045	770	497	590	394	471	3,767				
60-64	609	530	359	431	310	313	2,552				
65 and Over	276	288	193	192	126	127	1,202				
All Ages	17,021	7,386	3,555	3,598	1,955	1,411	34,926				

Distribution of Active Members by Age and Service

Distribution of Average Annual Salaries by Age and Service

	Years of Service at Valuation Date										
Attained Age	0-4	5-9	10-14	15-19	20-24	25+	Average Salary				
15-24	\$44,541	\$58,753	\$0	\$0	\$0	\$0	\$44,668				
25-29	55,987	66,365	77,536	0	0	0	57,034				
30-34	63,446	75,052	75,001	85,593	57,156	0	66,850				
35-39	71,367	82,883	86,886	87,534	89,918	0	77,307				
40-44	79,661	90,651	93,802	92,838	96,274	110,011	86,800				
45-49	83,767	93,531	97,623	97,300	98,633	102,057	91,722				
50-54	87,321	97,231	99,769	96,255	102,359	109,596	95,871				
55-59	87,533	93,974	98,729	96,266	99,992	105,460	95,239				
60-64	76,511	90,801	93,915	91,649	99,913	100,241	90,237				
65 and Over	63,778	77,446	86,333	87,313	86,489	89,373	79,519				
Average	\$70,153	\$86,764	\$93,561	\$94,009	\$98,855	\$103,677	\$81,467				

Years of Service at Valuation Date										
Attained Age	0-4	5-9	10-14	15-19	20-24	25+	Total	Average Salary		
15-24	146	0	0	0	0	0	146	\$53,211		
25-29	898	27	0	0	0	0	925	65,309		
30-34	1,517	161	7	0	0	0	1,685	73,042		
35-39	1,790	351	93	4	0	0	2,238	85,502		
40-44	1,946	473	187	66	6	0	2,678	96,774		
45-49	1,731	451	222	82	23	1	2,510	107,178		
50-54	1,750	517	218	85	28	9	2,607	113,951		
55-59	1,259	439	173	78	27	4	1,980	110,017		
60-64	802	243	89	40	12	5	1,191	102,341		
65 and Over	269	77	28	9	5	2	390	104,851		
All Ages	12,108	2,739	1,017	364	101	21	16,350	\$97,154		

Distribution of Participants Transferred to Other CalPERS Plans by Age and Service

Distribution of Separated Participants with Funds on Deposit by Age and Service

Years of Service at Valuation Date										
Attained Age	0-4	5-9	10-14	15-19	20-24	25+	Total	Average Salary		
15-24	430	1	0	0	0	0	431	\$37,698		
25-29	1,775	36	1	0	0	0	1,812	41,924		
30-34	2,725	231	12	0	0	0	2,968	46,214		
35-39	3,204	451	88	17	0	0	3,760	48,234		
40-44	3,231	558	176	48	7	0	4,020	51,908		
45-49	2,824	532	187	96	28	4	3,671	53,882		
50-54	2,602	577	201	71	26	15	3,492	55,073		
55-59	2,168	460	146	43	18	9	2,844	52,276		
60-64	1,852	338	102	26	13	4	2,335	49,318		
65 and Over	1,493	179	34	25	3	2	1,736	42,748		
All Ages	22,304	3,363	947	326	95	34	27,069	\$49,783		

Retired Members and Beneficiaries

		Non-		Non-			
Attained Age	Service Retirement	Industrial Disability	Industrial Disability	Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	0	0	0	0	2	47	49
30-34	0	0	0	0	1	27	28
35-39	0	8	12	0	2	29	51
40-44	0	28	21	0	1	31	81
45-49	0	51	40	3	1	33	128
50-54	731	82	67	18	1	80	979
55-59	3,389	160	90	34	0	143	3,816
60-64	6,512	231	84	51	2	250	7,130
65-69	8,601	239	97	48	0	449	9,434
70-74	7,611	208	65	52	1	557	8,494
75-79	5,021	161	42	19	2	683	5,928
80-84	2,288	84	22	24	0	563	2,981
85 and Over	1,635	54	1	14	0	748	2,452
All Ages	35,788	1,306	541	263	13	3,640	41,551

Distribution of Retirees and Beneficiaries by Age and Retirement Type

Distribution of Average Annual Disbursements to Retirees and Beneficiaries by Age and Retirement Type

		Non-		Non-			
Attained Age	Service Retirement	Industrial Disability	Industrial Disability	Industrial Death	Industrial Death	Death After Retirement	Average
Under 30	\$0	\$0	\$0	\$0	\$237	\$6,151	\$5,910
30-34	0	0	0	0	316	8,176	7,895
35-39	0	9,029	341	0	48	7,267	5,631
40-44	0	13,847	1,198	0	106	8,128	8,209
45-49	0	13,791	4,524	43,306	97	16,268	12,119
50-54	18,346	11,567	2,370	22,919	210	16,644	16,611
55-59	24,706	15,140	5,083	16,998	0	17,764	23,513
60-64	27,822	15,533	4,860	20,858	1,931	18,611	26,773
65-69	27,089	14,096	6,132	23,229	0	20,405	26,207
70-74	26,482	15,445	4,938	16,207	214	21,454	25,651
75-79	24,714	13,358	6,776	16,941	48	19,962	23,698
80-84	21,871	13,220	10,378	14,718	0	18,578	20,863
85 and Over	18,716	12,160	13,376	7,860	0	16,998	17,983
All Ages	\$25,640	\$14,258	\$4,948	\$18,734	\$421	\$18,668	\$24,350

Retired Members and Beneficiaries (continued)

Years Retired	Service Retirement	Non- Industrial Disability	Industrial Disability	Non- Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	10,877	137	93	71	5	1,402	12,585
5-9	8,821	198	101	63	1	827	10,011
10-14	7,514	188	81	67	2	610	8,462
15-19	4,753	194	104	31	1	381	5,464
20-24	2,170	256	59	16	0	213	2,714
25-29	1,102	190	54	8	2	126	1,482
30 and Over	551	143	49	7	2	81	833
All Years	35,788	1,306	541	263	13	3,640	41,551

Distribution of Retirees and Beneficiaries by Years Retired and Retirement Type

Distribution of Average Annual Disbursement to Retirees and Beneficiaries by Years Retired and Retirement Type

Years Retired	Service Retirement	Non- Industrial Disability	Industrial Disability	Non- Industrial Death	Industrial Death	Death After Retirement	Average
Under 5 Yrs	\$27,440	\$15,339	\$5,420	\$24,003	\$133	\$20,391	\$26,330
5-9	26,128	16,248	4,165	20,010	316	19,924	25,157
10-14	27,691	15,067	5,341	17,448	158	18,911	26,476
15-19	24,458	16,279	4,313	14,781	17	14,686	23,044
20-24	18,389	13,521	7,184	14,619	0	15,437	17,433
25-29	16,243	12,475	5,123	5,479	1,931	13,583	15,051
30 and Over	11,849	10,354	3,477	8,177	147	9,342	10,797
All Years	\$25,640	\$14,258	\$4,948	\$18,734	\$421	\$18,668	\$24,350

Retired Members and Beneficiaries (continued)

Distribution of Total Annual Aggregate Disbursements to Retirees and Beneficiaries by Attained Age and Retirement Type (Includes PPPA Payments)

Attained Age	Service Retirement	Non-Industrial Disability	Industrial Disability	Non-Industrial Death	Industrial Death	Death After Retirement	Total
Under 30	\$0	\$0	\$0	\$0	\$473	\$289,105	\$289,579
30-34	0	0	0	0	316	220,751	221,067
35-39	0	72,233	4,093	0	96	210,743	287,165
40-44	0	387,706	25,158	0	106	251,978	664,947
45-49	0	703,360	180,969	129,917	97	536,843	1,551,185
50-54	13,410,714	948,534	158,814	412,547	210	1,331,500	16,262,318
55-59	83,728,630	2,422,374	457,476	577,923	0	2,540,208	89,726,611
60-64	181,176,809	3,588,235	408,242	1,063,735	3,862	4,652,635	190,893,518
65-69	232,993,814	3,368,858	594,757	1,114,973	0	9,161,753	247,234,156
70-74	201,552,110	3,212,486	320,984	842,782	214	11,949,823	217,878,398
75-79	124,089,096	2,150,702	284,594	321,888	97	13,633,831	140,480,209
80-84	50,041,976	1,110,448	228,317	353,226	0	10,459,405	62,193,372
85 and Over	30,600,329	656,645	13,376	110,042	0	12,714,480	44,094,872
Total	\$917,593,477	\$18,621,581	\$2,676,779	\$4,927,033	\$5,471	\$67,953,056	\$1,011,777,397

Distribution of Total Annual Aggregate Disbursements to Retirees and Beneficiaries by Years Retired and Retirement Type (Includes PPPA Payments)

Years Retired	Service Retirement	Non-Industrial Disability	Industrial Disability	Non- Industrial Death	Industrial Death	Death After Retirement	Total
Under 5 Yrs	\$298,465,844	\$2,101,511	\$504,103	\$1,704,209	\$666	\$28,588,522	\$331,364,854
5-9	230,471,790	3,217,081	420,679	1,260,607	316	16,477,150	251,847,623
10-14	208,071,349	2,832,681	432,630	1,169,047	316	11,535,975	224,041,998
15-19	116,251,112	3,158,051	448,517	458,199	17	5,595,249	125,911,145
20-24	39,904,949	3,461,394	423,840	233,901	0	3,288,017	47,312,101
25-29	17,899,555	2,370,247	276,644	43,830	3,862	1,711,474	22,305,613
30 and Over	6,528,879	1,480,616	170,366	57,240	294	756,669	8,994,063
Total	\$917,593,477	\$18,621,581	\$2,676,779	\$4,927,033	\$5,471	\$67,953,056	\$1,011,777,397

Distribution of Plan Costs by Benefit Formula

Benefit Formula	Accrued Liability	% of Pool	6/30/2022 Payroll	% of Pool
2.0% at age 62	\$1,207,027,861	5.5%	\$1,433,014,407	50.4%
2.0% at age 60	1,656,168,444	7.5%	234,827,735	8.3%
2.0% at age 55	7,801,687,172	35.4%	562,666,071	19.8%
2.5% at age 55	4,016,632,185	18.2%	223,048,207	7.8%
2.7% at age 55	4,969,745,502	22.6%	283,663,161	10.0%
3.0% at age 60	2,054,400,767	9.3%	108,089,469	3.8%
Inactive	316,073,071	1.4%	0	0.0%
Total	\$22,021,735,002		\$2,845,309,050	

Appendix E

Glossary

Accrued Liability (Actuarial Accrued Liability)

The Present Value of Benefits minus the present value of future Normal Cost or the Present Value of Benefits allocated to prior years. Different actuarial cost methods and different assumptions will lead to different measures of Accrued Liability.

Actuarial Assumptions

Assumptions made about certain events that will affect pension costs. Assumptions generally can be broken down into two categories: demographic and economic. Demographic assumptions include such things as mortality, disability, and retirement rates. Economic assumptions include discount rate, wage inflation, and price inflation.

Actuarial Methods

Procedures employed by actuaries to achieve certain funding goals of a pension plan. Actuarial methods include an actuarial cost method, an amortization policy, and an asset valuation method.

Actuarial Valuation

The determination as of a valuation date of the Normal Cost, Accrued Liability, and related actuarial present values for a pension plan. These valuations are performed annually or when an employer is contemplating a change in plan provisions.

Actuary

A business professional proficient in mathematics and statistics who measures and manages risk. A public retirement system actuary in California performs actuarial valuations necessary to properly fund a pension plan and disclose its liabilities and must satisfy the *Qualification Standards for Actuaries Issuing Statements* of *Actuarial Opinion in the United States* with regard to pensions.

Amortization Bases

Separate payment schedules for different portions of the Unfunded Accrued Liability (UAL). The total UAL of a rate plan can be segregated by cause. The impact of such individual causes on the UAL are quantified at the time of their occurrence, resulting in new amortization bases. Each base is separately amortized and paid for over a specific period of time. Generally, in an actuarial valuation, the separate bases consist of changes in UAL due to contract amendments, actuarial assumption changes, method changes, and/or gains and losses.

Amortization Period

The number of years required to pay off an Amortization Base.

Class 0 Benefit Surcharge

Class 0 benefit surcharge is the increase in normal cost for a given benefit formula above the baseline PEPRA 2% at 62 benefit formula.

Class 1 Benefits

Class 1 benefits have been identified as additional benefits which have a significant, ongoing effect on the total plan cost. In some cases, a Class 1 benefit may be an alternate benefit formula. These benefits vary by employer across the risk pool. Agencies contracting for a Class 1 benefit will be responsible for the past service liability associated with such benefit and will be required to pay a surcharge established by the actuary to cover the ongoing cost (normal cost) of the Class 1 benefit.

Class 2 Benefits

Class 2 benefits have been identified to be the ancillary benefits providing one-time increases in benefits. These benefits vary by employer across the risk pool. Agencies contracting for a Class 2 benefit will be responsible for the past service liability associated with such benefit.

Class 3 Benefits

Class 3 benefits have been identified to be additional benefits which have a minimal effect on the total plan cost. Class 3 benefits may vary by rate plan within each risk pool. However, the employer contribution rate will not vary within the risk pool due to the Class 3 benefits.

Glossary (continued)

Classic Member (under PEPRA)

A member who joined a public retirement system prior to January 1, 2013 and who is not defined as a new member under PEPRA. (See definition of New Member below.)

Discount Rate

This is the rate used to discount the expected future benefit payments to the valuation date to determine the Projected Value of Benefits. Different discount rates will produce different measures of the Projected Value of Benefits. The discount rate for funding purposes is based on the assumed long-term rate of return on plan assets, net of investment and administrative expenses. This rate is called the "actuarial interest rate" in Section 20014 of the California Public Employees' Retirement Law.

Entry Age

The earliest age at which a plan member begins to accrue benefits under a defined benefit pension plan. In most cases, this is the age of the member on their date of hire.

Entry Age Actuarial Cost Method

An actuarial cost method designed to fund a member's total plan benefit evenly over the course of his or her career. This method yields a total normal cost rate, expressed as a percentage of payroll, which is designed to remain level throughout the member's career.

Fresh Start

A Fresh Start is when multiple amortization bases are combined into a single base and amortized over a new Amortization Period.

Funded Ratio

Defined as the Market Value of Assets divided by the Accrued Liability. Different actuarial cost methods and different assumptions will lead to different measures of Funded Ratio. The Funded Ratio with the Accrued Liability equal to the funding target is a measure of how well funded a rate plan is. A ratio greater than 100% means the rate plan has more assets than the funding target and the employer need only contribute the Normal Cost. A ratio less than 100% means assets are less than the funding target and contributions in addition to Normal Cost are required.

Funded Status

Any comparison of a particular measure of plan assets to a particular measure of pension obligations. The methods and assumptions used to calculate a funded status should be consistent with the purpose of the measurement.

Funding Target

The Accrued Liability measure upon which the funding requirements are based. The funding target is the Accrued Liability under the Entry Age Actuarial Cost Method using the assumptions adopted by the board.

GASB 68

Statement No. 68 of the Governmental Accounting Standards Board. The accounting standard governing a state or local governmental employer's accounting and financial reporting for pensions.

New Member (under PEPRA)

A new member includes an individual who becomes a member of a public retirement system for the first time on or after January 1, 2013, and who was not a member of another public retirement system prior to that date, and who is not subject to reciprocity with another public retirement system.

Normal Cost

The portion of the Present Value of Benefits allocated to the upcoming fiscal year for active employees. Different actuarial cost methods and different assumptions will lead to different measures of Normal Cost. The Normal Cost under the Entry Age Actuarial Cost Method, using the assumptions adopted by the board, plus the required amortization of the UAL, if any, make up the required contributions.

PEPRA

The California Public Employees' Pension Reform Act of 2013.

Glossary (continued)

Present Value of Benefits (PVB)

The total dollars needed as of the valuation date to fund all benefits earned in the past or expected to be earned in the future for *current* members.

Risk Pool

Utilizing the law of large numbers, a risk pool is a collection of employer plans for the purpose of sharing risk. If a pooled plan has active members at the time of valuation, it belongs to the risk pool composed of all other pooled plans with the same benefit formula.

Traditional Unit Credit Actuarial Cost Method

An actuarial cost method that sets the Accrued Liability equal to the Present Value of Benefits assuming no future pay increases or service accruals. The Traditional Unit Credit Cost Method is used to measure the accrued liability on a termination basis.

Unfunded Accrued Liability (UAL)

The Accrued Liability minus the Market Value of Assets. If the UAL for a rate plan is positive, the employer is required to make contributions in excess of the Normal Cost.



Board Memorandum

December 14, 2023

To: General Manager

From: Art Aseo, Engineering & Capital Projects Manager

Subject: Water Quality Sampling Stations

Objective: Upgrade 42 routine water quality sampling stations.

Action Required: It is recommended that the Board of Directors authorize the General Manager to:

- 1) Appropriate \$40,000.00 from the potable capital improvement fund to establish a Water Quality Sampling Stations CIP; and
- Authorize the General Manager to enter into an agreement and issue a purchase order to MNS for \$30,200.00 to provide professional engineering services for the design of 42 water quality sampling stations.

Discussion: The California Department of Drinking Water approved Camrosa's revised site sampling plan. The sampling plan consists of 42 routine sites, 42 downstream sites, and 42 upstream sites strategically located in all five pressure zones of the potable water system. However, only the routine sites will require the installation of permanent sampling station. The sampling stations will be installed within existing water easements and in inconspicuous areas to reduce public visibility.

Currently, staff have been taking water samples from exterior hose bibs of customers' residences. Other existing sampling sites include hose bibs at reservoirs and public facilities (e.g., schools, church, police station, recreation center, club house, fire station, and YMCA). These sites are susceptible to potential contamination and/or access issues.

Installing permanent and dedicated sampling stations will allow staff to access sample points at their convenience without requesting permission from customers. Additionally, the sample stations are lockable to prevent tampering, contamination, or damage.

Scope of work for engineering services consists of:

- Project Management, Quality Assurance/Quality Control, and Meetings
- Utility Research and Field Survey
- Contract Document Development
 - o Plans, specifications, and construction cost estimate

Three proposals were received:

- MNS: \$30,200.00
- MKN: \$38,884.00
- P&I: \$128,898.00

Staff is requesting the appropriation of funds for engineering design services. Funding is available from the Potable Water Capital Improvement Fund. Once the project is designed and placed out to bid, staff will return to the Board with a request for additional construction funding.

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5

General Manager Tony L. Stafford

Camrosa Water District 7385 Santa Rosa Rd. Camarillo, CA 93012 Telephone (805) 482-4677 - FAX (805) 987-4797

Some of the important terms of this agreement are printed on pages 2 through 3. For your protection, make sure that you read and understand all provisions before signing. The terms on Page 2 through 3 are incorporated in this document and will constitute a part of the agreement between the parties when signed.

TO:	MNS Engineers, Inc.	DATE:	12/14/2023
	4580 E. Thousand Oaks Blvd., Ste. 101		
	Westlake Village, CA 91362	Agreement No.:	2024-85

The undersigned Consultant offers to furnish the following: provide professional engineering services for design of water quality stations project for Camrosa Water District, per proposal dated November 30, 2023

Contract price \$: Not to exceed \$30,200.00

Contract Term: 12/14/2023 – 12/31/2024

Instructions: Sign and return original. Upon acceptance by Camrosa Water District, a copy will be signed by its authorized representative and promptly returned to you. Insert below the names of your authorized representative(s).

Accepted: Camrosa Water District

Consultant: MNS Engineers, Inc.

By:		By:		
	Tony L. Stafford		Nick Panofsky, PE	
Title:	General Manager	Title:	Vice-President	
Date:		Date:		
Other authorized representative(s):		Other a	uthorized representative(s):	

Consultant agrees with Camrosa Water District (District) that:

- a. Indemnification: To the extent permitted by law, Consultant shall hold harmless, defend at its own expense, and indemnify the District, its directors, officers, employees, and authorized volunteers, against any and all liability, claims, losses, damages, or expenses, including reasonable attorney's fees and costs, arising from negligent acts, errors or omissions of Consultant or its officers, agents, or employees in rendering services under this contract; excluding, however, such liability, claims, losses, damages or expenses arising from the District's sole negligence or willful acts.
- b. **Minimum Insurance Requirements:** Consultant shall procure and maintain for the duration of the contract insurance against claims for injuries or death to persons or damages to property which may arise from or in connection with the performance of the work hereunder and the results of that work by the Consultant, his agents, representatives, employees or subcontractors.
- c. **Coverage:** Coverage shall be at least as broad as the following:
 - Commercial General Liability (CGL) Insurance Services Office (ISO) Commercial General Liability Coverage (Occurrence Form CG 00 01) including products and completed operations, property damage, bodily injury, personal and advertising injury with limit of at least two million dollars (\$2,000,000) per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (coverage as broad as the ISO CG 25 03, or ISO CG 25 04 endorsement provided to the District) or the general aggregate limit shall be twice the required occurrence limit.
 - 2. Automobile Liability (If applicable) Insurance Services Office (ISO) Business Auto Coverage (Form CA 00 01), covering Symbol 1 (any auto) or if Consultant has no owned autos, Symbol 8 (hired) and 9 (non-owned) with limit of one million dollars (\$1,000,000) for bodily injury and property damage each accident.
 - 3. Workers' Compensation Insurance as required by the State of California, with Statutory Limits, and Employer's Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease.
 - 4. **Waiver of Subrogation:** The insurer(s) named above agree to waive all rights of subrogation against the District, its directors, officers, employees, and authorized volunteers for losses paid under the terms of this policy which arise from work performed by the Named Insured for the District; but this provision applies regardless of whether or not the District has received a waiver of subrogation from the insurer.
 - 5. **Professional Liability** (also known as Errors & Omission) Insurance appropriate to the Consultant profession, with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.
- d. If Claims Made Policies:
 - 1. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.
 - 2. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of the contract of work.
 - 3. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Consultant must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

If the Consultant maintains broader coverage and/or higher limits than the minimums shown above, the District requires and shall be entitled to the broader coverage and/or higher limits maintained by the Consultant. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the District.

Other Required Provisions: The general liability policy must contain, or be endorsed to contain, the following provisions:

a. Additional Insured Status: District, its directors, officers, employees, and authorized volunteers are to be given insured status (at least as broad as ISO Form CG 20 10 10 01), with respect to liability arising out of work or operations

performed by or on behalf of the Consultant including materials, parts, or equipment furnished in connection with such work or operations.

b. Primary Coverage: For any claims related to this project, the Consultant's insurance coverage shall be primary at least as broad as ISO CG 20 01 04 13 as respects to the District, its directors, officers, employees, and authorized volunteers. Any insurance or self-insurance maintained by the District, its directors, officers, employees, and authorized volunteers shall be excess of the Consultant's insurance and shall not contribute with it.

Notice of Cancellation: Each insurance policy required above shall provide that coverage shall not be canceled, except with notice to the District.

Self-Insured Retentions: Self-insured retentions must be declared to and approved by the District The District may require the Consultant to provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or the District.

Acceptability of Insurers: Insurance is to be placed with insurers having a current A.M. Best rating of no less than A:VII or as otherwise approved by the District.

Verification of Coverage: Consultant shall furnish the District with certificates and amendatory endorsements or copies of the applicable policy language effecting coverage required by this clause. All certificates and endorsements are to be received and approved by the District before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Consultant's obligation to provide them. The District reserves the right to require complete, certified copies of all required insurance policies, including policy Declaration and Endorsements pages listing all policy endorsements. If any of the required coverages expire during the term of this agreement, the Consultant shall deliver the renewal certificate(s) including the general liability additional insured endorsement to Camrosa Water District at least ten (10) days prior to the expiration date.

Subcontractors: Consultant shall require and verify that all subcontractors maintain insurance meeting all the requirements stated herein, and Consultant shall ensure that the District, its directors, officers, employees, and authorized volunteers are an additional insured on Commercial General Liability Coverage.

Other Requirements:

- a. Consultant shall not accept direction or orders from any person other than the General Manager or the person(s) whose name(s) is (are) inserted on Page 1 as "other authorized representative(s)."
- b. Payment, unless otherwise specified on Page 1, is to be 30 days after acceptance by the District.
- c. Permits required by governmental authorities will be obtained at Consultant's expense, and Consultant will comply with applicable local, state, and federal regulations and statutes including Cal/OSHA requirements.
- d. Any change in the scope of the professional services to be done, method of performance, nature of materials or price thereof, or to any other matter materially affecting the performance or nature of the professional services will not be paid for or accepted unless such change, addition or deletion is approved in advance, in writing by the District. Consultant's "other authorized representative(s)" has/have the authority to execute such written change for Consultant.

The District may terminate this Agreement at any time, with or without cause, giving written notice to Consultant, specifying the effective date of termination.



mnsengineers.com

November 30, 2023

Camrosa Water District Attention: Mr. Art Aseo, PE Engineering and Capital Projects Manager 7385 Santa Rosa Road Camarillo, CA 93012

SUBJECT: Proposal for Professional Engineering Services for Design of Water Quality Stations Project

Dear Mr. Aseo,

MNS Engineers, Inc. (MNS) appreciates the opportunity to submit this proposal to provide professional engineering services for the Design of Water Quality Stations Project (Project) for the Camrosa Water District (District). We offer our highly qualified team to provide services for this Project.

Project Understanding

In 2019, the District submitted a plan to the California Department of Drinking Water (DDW) to update sampling locations througout the water system. Following review, DDW agreed with the District's approach and updated sampling locations.

The District is seeking professional engineering services for the design of 42 water quality testing stations throughout Camrosa's potable water distribution system. These stations are planned for locations in all five pressure zones within the southern portion of Ventura County.

It is our understanding the District would like MNS Engineers, Inc. (MNS) to prepare contract documents for bidding to construct the new water quality testing stations This proposal describes the work and fees proposed by MNS for these services.

Scope of Work

MNS proposes to perform the following scope of work for the Project.

Task 1 – Project Management, Quality Assurance/Quality Control, and Meetings

This task includes project management, quality assurance/quality control (QA/QC), and meetings associated with the Project.

Subtask 1.1 – Project Management

The Project Manager, Tyler Hunt, will provide ongoing coordination of the Project team including the District and the internal Project team. Tyler will monitor the budget and serve as the main point of contact with the District. Regular phone calls and e-mail updates will be sent from the Project Manager to the District's Project Manager to keep coordination open

MNS DETAILS

LEGAL NAME MNS Engineers, Inc.

FIRM OWNERSHIP

C-Corporation

YEAR FIRM ESTABLISHED 1962

CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS DIR No. 1000003564

CORPORATE OFFICE

201 N. Calle Cesar Chavez, Suite 300 Santa Barbara, CA 93103 805.692.6921 Office/Fax mnsengineers.com

LOCAL OFFICE

100 E Thousand Oaks Blvd. Suite 105 Thousand Oaks, CA 91360

(805) 648-4840

PROJECT CONTACT

Tyler Hunt, PE Lead Engineer (805) 788-8013 thunt@mnsengineers.com

AUTHORIZED SIGNATURE

Nick Panofsky, PE Vice-President (805) 722-2734 npanofsky@mnsengineers.com



PAGE 2

and up-to-date. The MNS Project Manager will submit monthly invoices with supporting documentation in a format acceptable to the District.

The MNS Project Manager is responsible for ensuring deadlines are met, reviews are completed, and the final products meet the expectations of the District.

Subtask 1.2 – Quality Assurance/Quality Control

In accordance with MNS company policy, all deliverables, calculations, recommendations, and other documentation will be reviewed by an experienced engineer, not otherwise associated with the Project, prior to submittal to the District. Documents will be reviewed to ensure technical excellence, the goals and expectations of the District are being met, and conformance with applicable design checklists and standards. For this project, all deliverables and other items requiring quality control reviews will be reviewed by Nick Panofsky, PE.

Subtask 1.3 – Meetings

Over the course of the Project, MNS will facilitate, and lead meetings and conference calls as required to move the Project forward and ensure the District is informed and in concurrence with the progress of the Project. MNS will develop a meeting agenda and will submit meeting minutes to The District within five business days of the Project Kick-off Meeting. We have budgeted for two meetings, which will occur virtually:

- Project Kick-off Meeting
- 90 Percent Design Review Meeting

The MNS Project Manager and Associate Engineer will attend each meeting.

Task 2 – Utility Research and Field Survey

MNS will work with District staff to obtain record drawings, prior studies, service connections locations, other planning documents, and other pertinent information for the Project. MNS will also contact utility agencies with below-grade facilities in the Project areas to obtain atlas maps and other available information regarding the type, size, location, material, and depth of existing utilities.

Information received will be incorporated into the Project base map and considered in the Project design. Potholing of existing utilities is not included in MNS's services.

An MNS team member will perform a field survey to observe and photographically document the general location for each proposed sampling station and determine a suggested specific location based on utility research and field observations. The field survey is assumed to require two full days.

Task 3 – Contract Document Development

MNS will develop a complete set of plans, specifications, and an accompanying Engineer's Opinion of Probable Construction Cost (PS&E) for the Project. Design documents will be delivered at the 90 percent and final design stages. Final design documents will be stamped by a Professional Civil Engineer registered in the State of California. We will provide electronic documents upon completion of the work. Electronic formats will include images prepared in Adobe PDF format and electronic files compatible with Microsoft Word and Excel, and AutoCAD, if requested.

Plans

MNS will prepare detailed drawings for the Project clearly defining the work to be completed. Plans will be prepared in the latest version of AutoCAD Civil 3D. Drawings will follow the District's drafting standards. We will base plans on existing District utility maps and publicly available aerial photography from Google Earth. Utility mapping will be based



PAGE 3

on District utility maps and known other utilities in the Project area. Site photos will be incorporated into the plans to provide specific sampling station location information.

An anticipated sheet list includes:

Sheet No.	Drawing No.	Description
1	G-01	Title Sheet
2	G-02	General and Construction Notes, Legend, Abbreviations
3	G-03	Sheet Layout Plan
4 to 7	C-01 to C-04	Water Sampling Station General Locations
8 to 14	C-5 to C-11	Water Sampling Station Specific Locations
15	C-12	Water Sample Station and Civil Details

Specifications

We will prepare technical specifications using the District's boilerplate front end specifications template. Technical specifications for this Project will be developed based on District Standards and the Standard Specifications for Public Works Construction (Greenbook). For work required, but not sufficiently specified in the District's standard template, MNS will provide recommended specifications for products, materials, and construction requirements. Specifications will be submitted with the 90 percent and final design deliverables.

Engineer's Opinion of Probable Construction Cost

MNS will prepare an Engineer's Opinion of Probable Construction Cost for the 90 percent and final design deliverables. We will base the opinion on recent projects of similar size and scope upon which we have worked and communications with vendors and material suppliers.

Project Team

Our highly qualified project team is available to provide the District with bidding support services. Tyler Hunt, PE, will serve as Project Manager and Ashleigh Keelean as Associate Engineer. Nick Panofsky, PE, will perform QA/QC reviews of the contract documents. Team resumes are available upon request.

Schedule

We are prepared to meet or exceed the schedule provided in the following table, assuming a Notice to Proceed date of January 4, 2023.

Milestone	Target Date
Kick-off Meeting	January 10, 2024
90 Percent Design Submittal	February 28, 2024
District Review	2 Weeks
Final Design Submittal	March 27, 2024



PAGE 4

Compensation

MNS proposes to perform the services described herein on a time and materials basis up to a not to exceed budget of **\$30,200** as summarized in the following table. A detailed Fee Estimate Spreadsheet is included as an attachment. It is assumed that most of the work will take place in 2024. Therefore, all fees are in accordance with the 2023 MNS Standard Fee Schedule plus annual escalation, also included as an attachment.

Task	Fee
Task 1 – Project Management	\$3,084
Task 2 – Utility Research and Field Survey	\$8,114
Task 3 – Contract Document Development	\$19,002
Tota	al \$30,200

Closing

Thank you for the opportunity to submit this proposal. We are excited and look forward to working with the District. Please feel free to contact me with any questions you may have at 805.788.8013 or thunt@mnsengineers.com. Thank you for your consideration.

Sincerely, **MNS Engineers, Inc.**

Tyler Hunt, PE Lead Engineer

Attachments:

MNS Standard Fee Schedule Fee Estimate Spreadsheet



2023 STANDARD SCHEDULE OF FEES

PROJECT/PROGRAM MANAGEMENT

Principal-In-Charge	.\$325
Senior Project/Program Manager	310
Project/Program Manager	260
Assistant Project/Program Manage	er 245
Senior Project Coordinator	185
Project Coordinator	155

CONSTRUCTION MANAGEMENT

ENGINEERING

Principal Engineer	\$290
Lead Engineer	255
Supervising Engineer	245
Senior Project Engineer	225
Project Engineer	200
Associate Engineer	180
Assistant Engineer	165

SURVEYING

Principal Surveyor	\$265
Lead Surveyor	255
Supervising Surveyor	220
Senior Project Surveyor	200
Project Surveyor	175
Associate Project Surveyor	165
Assistant Project Surveyor	150
Party Chief (PW)	180
Chainperson (PW)	150
One-Person Survey Crew (PW)	215

Principal Construction Manager	\$315
Senior Construction Manager	275
Senior Resident Engineer	250
Resident Engineer	240
Structure Representative	235
Construction Manager	220
Assistant Resident Engineer	200
Sr. Construction Inspector (PW)	175
Construction Inspector (PW)	168
Office Administrator	130

TECHNICAL SUPPORT

CADD Manager	\$200
Supervising Technician	170
Senior Technician	160
Engineering Technician	125

ADMINISTRATIVE SUPPORT

Senior Management Analyst\$	185
Management Analyst	155
IT Technician	140
Graphics/Visualization Specialist	150
Administrative Assistant	100

GOVERNMENT SERVICES

City Engineer	\$250
Deputy City Engineer	225
Assistant City Engineer	215
Plan Check Engineer	190
Permit Engineer	185
City Inspector	185
Senior City Inspector (PW)	195
City Inspector (PW)	185
Principal Stormwater Specialist	180
Senior Stormwater Specialist	170
Stormwater Specialist	160
Stormwater Technician	140
Building Official	220
Senior Building Inspector	235
Building Inspector	165
Planning Director	225
Senior City Planner	205
Assistant Planner	195
Senior Grant Writer	180
Grant Writer	170
Associate Grant Writer	150
Assistant Grant Writer	130

DIRECT EXPENSES

Use of outside consultants as well as copies, blueprints, survey stakes, monuments, computer plots, telephone, travel (out of area) and all similar charges directly connected with the work will be charged at cost plus fifteen percent (15%). Mileage will be charged at the current federal mileage reimbursement rate.

PREVAILING WAGE RATES

Rates shown with Prevailing Wage "(PW)" annotation are used for field work on projects subject to federal or state prevailing wage law and are subject to increases per DIR.

ANNUAL ESCALATION

Standard fee rates provided for each classification are subject to 3.5% annual escalation or the most recent US Bureau of Labor Statistics Consumer Price Index, whichever is higher.

OVERTIME

Overtime for non-exempt employees will be charged at 1.5 x hourly rate; overtime for exempt employees and other classification will be charged at 1 x hourly rate.

Camrosa Water District Design of Water Quality Stations

	EN	IGINEERI	NG	DESIGN SUPPOR T										
		Lead Engineer	Principal Engineer	Associate Engineer	CADD Technician	Resource Hours	l Hours*Rates	ıbursable Expenses	Engineers	ıbursable Expense Costs	mary	I MNS Resource Costs	l Subconsultant Costs & All nbursable Expenses 15% Markup	
	2024 Rate	\$264	\$300	\$186	\$129	Tota	Tota	Rein	MNS	Rein	Sum	Tota	Tota Rein With	Tota
1 – Project Management, Quality Assurance/Quality Contro	Task 1	6				6	11 504	Task 1		+0	Task 1	t4 504	+0	t4 504
1.1 Project Management		6	2			6	\$1,584	Task 1.1		\$0 +0		\$1,584	\$0 ¢0	\$1,584
1.2 Quality Assurance/Quality Control		2	2	2		2	\$600	Task 1.2		\$0 +0		\$600	\$U #0	\$600 ¢000
1.3 Meetings	Task 1.3	2		2		4	\$900	Task 1.3		\$U	Task 1.3	\$900 To	\$U	\$900
Task 1 Subtotal	Tack 2	8	2	2	0	12	\$3,004	Task 2	\$0	\$ 0	Tack 2	Id	SK I SUDIOLAI	ა ეს04
2 1 Utility Decearch	Task 2 1	2		16	8	26	\$4 536	Task 2 1		\$0	Task 2 1	\$4 536	\$0	\$4 536
2.1 Ouncy Research 2.2 Field Survey	Task 2.2	-		18		18	\$3.348	Task 2.2	\$200	\$200	Task 2.2	\$3.348	\$230	\$3.578
Task 2 Subtotal		.2	0	_34	8	44	7.884		\$200	\$200		Ta	sk 2 <u>Subtotal</u>	\$8,114
3 – Contract Document Development	Task 3							Task 3			Task 3			
3.1 90%	Task 3.1	8		40	32	80	\$13,680	Task 3.1		\$0	Task 3.1	\$13,680	\$0	\$13,680
3.2 Final	Task 3.2	4		16	10	30	\$5,322	Task 3.2		\$0	Task 3.2	\$5,322	\$0	\$5,322
Task 3 Subtotal		12	0	56	42	110	\$19,002		\$0	\$0		Та	sk 3 Subtotal	\$19,002
Sub-TotalHoursCost		22 \$5,808	2 \$600	92 \$17,112	50 \$6,450	166	\$29,970	Sub-Total	\$200	\$200	Grand Total	\$29,970	\$230	\$30,200



Board Memorandum

December 14, 2023

To: General Manager

From: Kevin Wahl, Superintendent of Operations

Subject: Emergency Leak Repair

Objective: Ratify action regarding emergency leak repair on Santa Rosa Road.

Action Required: Ratify the payment to Sam Hill & Sons, Inc. in the amount of \$98,610.71, for an emergency leak repair.

Discussion: On October 12, 2023, Sam Hill & Sons, Inc. was called to repair a non-potable distribution system leak on Santa Rosa Road at the intersection of Hill Canyon Road. This leak was on the 12-inch steel distribution pipeline.

This repair required open trenching, paving, and traffic control across multiple lanes of traffic on Santa Rosa Road. The work took seven workdays to complete. The total cost of the repair, including parts, materials, and site cleanup was \$98,610.71.

The Fiscal Year 2023-24 Budget has a line item for leak repairs.

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5 General Manager

Tony L. Stafford



Board Memorandum

December 14, 2023

To: General Manager

From: Terry Curson, District Engineer

Subject: Woodcreek Well Rehabilitation Project

Objective: Award a contract for the rehabilitation of Woodcreek Well.

Action Required: It is recommended that the Board of Directors:

- 1) Appropriate additional funding in the amount of \$575,000.00 for the Woodcreek Well Rehabilitation from the potable capital replacement fund; and
- 2) Authorize the General Manager to award a contract to General Pump Company, Inc., in the amount of \$541,351.22, for the rehabilitation of Woodcreek Well.

Discussion: The Woodcreek well was last rehabilitated approximately 10-years ago. At that time, the well was operating at 700 GPM. Today, well production has diminished to around 200 GPM. Additionally, the Woodcreek Well utilizes an oil lubrication system, which over time causes build-up of oil on the water surface. This can be problematic as it limits the operator's ability to increase pumping drawdown.

On October 12, 2023, the Board approved appropriations in the amount of \$120,000.00 to establish the Woodcreek Well Rehabilitation project and awarded contracts to Hopkins Groundwater Consulting and General Pump Company for Phase 1. The project was broken into two separate phases. The first phase consisted of removing the well and evaluating the existing condition of the well. Based on a video report, the well casing showed significant plugging and a considerable amount of fill (34-ft) at the bottom of the well. There appeared to be no damage to the screens or casing, and it is unknown at this time if the fill located at the bottom of the well is silt build-up or a more significant problem resulting in deposition of the well's gravel pack. Based on this existing information, staff are cautiously moving into phase two, which consists of cleaning, rehabilitation, and eventually the installation of a new pump, column pipe, shafting, and lubrication system.

Hopkins and General Pump have collaborated and developed a set of cleaning and rehabilitation specifications that that include:

- Multiple Brushing
- Airlifting
- Chemical Injection
- Swabbing
- Disinfection
- Videoing
- Swage Patch (if necessary)

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5

General Manager Tony L. Stafford Based on favorable rehabilitation results, General Pump will also provide a new pump assembly that includes all new stainless-steel shafting and a freshwater lubrication system. Staff considered the ability to clean-up and reutilize portions of the existing pump equipment, but the overall condition is only fair and given the cost to the pull the pump and pump assembly in the event of a future failure, it was decided to utilize all new equipment. General Pump will not purchase the equipment until after the well has been cleaned and rehabilitated, and the well casing is determined to be in a reasonable condition.

Funding is available from the District's Potable Capital Replacement Fund. Phase 1 has been completed.

Project Costs

Phase 1:	
Hydrogeological Design/inspection Services	\$57,020.00
Well Pulling & Video	<u>\$41,925.00</u>
Total Phase 1	\$98,945.00
Phase 2:	
Well Cleaning & Rehabilitation	\$279,566.00
New Pump, Column Piping, & fittings	<u>\$261,785.22</u>
Total Phase 2	\$541,351.22
Total Anticipated Project Cost:	\$640,296.22

Additional funding is available from the District's Potable Water Capital Replacement Fund.

SPECIFICATION TASK NO.	BID ITEM NO.	WORK TASK	UNIT	AMOUNT	COST PER BID UNIT	TOTAL BID ITEM COST
1	1	BRUSH BLANK WELL CASING	HR	3.25	\$4,991.00	\$16,220.00
1	2	AIRLIFT FILL FROM WELL	LS	1	\$40,710.00	\$40,710.00
2	3	BRUSH WELL SCREEN INTERVAL	HR	2.84	\$6,184.00	\$17,562.00
3	4	VIDEO SURVEY	LS	1	\$1,280.00	\$1,280.00
4	5	CHEMICAL MIXING AND INJECTION	LS	1	\$119,989.00	\$119,989.00
4	6	WELL SCREEN SWABBING	HR	4.34	\$3,430.00	\$14,885.00
4	7	AIRLIFT CHEMICAL REMOVAL	HR	6.5	\$4,830.00	\$31,392.00
5	8	WELL DISINFECTION	LS	1	\$16,982.00	\$16,982.00
6	9	SWAGE PATCH INSTALLATION	LS	1	\$20,546.00	\$20,546.00

CONTRACTOR BID SHEET

TOTAL

\$279,566.00



934 W. VERDULERA STREET - CAMARILLO, CA 93010 PHONE: (805) 482-1215 - FAX: (805) 484-2135

WELL & PUMP SERVICE SINCE 1952

"Serving All Southern California and Central Coast!"

Lic. #496765

December 1, 2023

Camrosa Water District 7385 Santa Rosa Road Camarillo, California 93012

Attn: Kevin Wahl

Subject: Woodcreek Well Pump Replacement with Fresh Water Flush water lube and well rehabilitation.

General Pump Company, Inc. (GPC) is pleased to provide this estimate to provide equipment and materials to install a replacement pump designed for 925 GPM at 660'TDH with Fresh Water Flush Lubrication system that allows for the water levels to be deeper while providing the necessary 5-foot bearing spacing to eliminate most risk of critical speed vibrations or damage. We intend on using Customer 200 HP motor and modify the existing discharge head.

The estimated cost is as follows:

Shop Time:

 Load-Unload materials and equipment as needed. Touch up pump and prepare suction for check valve ac Puild Straps to strap suction to column above pump 	laption	10 Hours 8 Hours
 Build Straps to strap suction to column above pump Tighten couplings, stab shafting and test fit retainers 		o Hours
Engineering support	10 Hours	Included
56 Hours Total Estimated Shop Labor	@ \$125.00/Hour	<u>\$7,000.00</u>
<u>Field Labor:</u>		
• Mobilize crew and equipment to site, set up rig, Install 502-feet on FWF column-Tube and Shaft	Pump with addition	al setting to
• Connect Pumping equipment to power supply, start an	d test pump	
• Overtime/man hour >8 weekdays and Saturdays up to	8 hours	
30 Hours 4 Man Crew and equipment	@ \$965.00/Hour	\$28,950.00
6 Hours 2 Man crew and equipment	@ \$400.00/Hour	\$2,400.00

24 Hours Overtime at \$80.00 per man Hour \$1,920.00

Total Field Labor\$33,270.00



Materials/Rentals (Taxable):

Total Estimated Project cost	<u>\$261,785.22</u>
Total Estimated Materials/Rental (Taxable)	<u>\$221,515.22</u>
• Estimated local tax	\$14,974.22
Estimated Freight	\$6,016.00
• Miscellaneous consumables including fittings, tape, banding etc.	\$1,364.00
Electrical components to connect motor leads	\$137.00
• Bolting and gasket kit, Motor oil and field consumables	\$364.00
• New SST airline, gauge, and fittings for 480-feet	\$2,001.00
• 11CHC-11 stage 925 GPM @ 660' TDH	\$29,991.00
 Flush Nut Packing box assembly and pre-lube system 	\$7,637.00
SST X 1-1/2" shaft and 5-foot bearings for Fresh Water Flush	\$159,031.00
• 502-foot setting of 8" X .322 Wall X 20' column assembly with 2-1/2"	

GPC's Standard Terms and Conditions apply and all invoices. Warranty for work and materials are restricted to parts and materials replaced as part of this project.

Regards,

Ray Reece

Ray Reece General Manager



Board Memorandum

December 14, 2023

To: Board of Directors

From: General Manager

Subject: Closed Session Conference with Legal Counsel – Litigation Matters

Objective: To confer with and receive advice from counsel regarding litigation matters.

Action Required: No action necessary; for information only.

Discussion: The Board will enter closed session to confer regarding anticipated litigation pursuant to Government Code 54956.9(d).

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5

General Manager Tony L. Stafford



Board Memorandum

December 14, 2023

To: Board of Directors

From: General Manager

Subject: Closed Session – Personnel Matters

Objective: Discuss personnel matters.

Action Required: No action necessary; for information only.

Discussion: Personnel matters may be discussed in closed session pursuant to Government Code 54957(b).

Board of Directors Andrew F. Nelson Division 1 Jeffrey C. Brown Division 2 Timothy H. Hoag Division 3 Eugene F. West Division 4 Terry L. Foreman Division 5

General Manager Tony L. Stafford



Read File

The following material is provided to members of the Board for information only and is not formally a part of the published agenda.

- A. Change Order Listing
- B. Cash Balances (10/2023)
- C. 2024 Board Calendar

							CURRENT PROJECT CHANG	GE ORDERS				
Project #	PW/Agreement#	PO#	Project	Total Budget	Available Budget	Contractor	Award Date Brd/	Gmgr Change Orde	Orig	inal Bid	Negotiated Value	Scope of Services/Change Order Description
900-18-03	2017 20	EV19 0024 D2	Effluent Pond Relining	\$ 1,501,500.00	D \$ 175,265.76	MNS Engineeers Inc	7/27/2017 80		ć	71 099 00	¢ 60.208.00	Award and up to \$14,000 out of coopo
	2017-30	1118-0034-KZ				Wind Engineeers, inc	7/27/2017 BD	CO #1	ڊ خ	7 165 00	\$ 7 165 00) Geotechnical Investigations (Included in 7/27/2
							7/27/2017 GM	CO #2	Ś	1.380.00	\$ 1.380.00) Groundwater management alternatives (Include
							2/28/2019 BD	CO #3	Ś	19.795.00	\$ 19.795.00) Additional project elements, slope stabilization
		FY20-0317-R1					5/28/2020 BD	CO #4	ś	11.330.00	\$ 11.330.00) Services to amend and update plans and specs
		FY21-0254-R1					5/13/2021 BD	CO#5	\$	15,355.00	\$ 15,355.00) Engineering support services during construction
										,	\$ 124.233.00	<u> </u>
											·,	
		FY21-0255-R1				Oakridge Geoscience, Inc.	5/13/2021 BD				\$ 22.200.00	compaction and material testing services
		FY22-0181					10/11/2021 GM	CO#1	\$	3,360.00	\$ 3,360.00) supplemental materials testing services
											\$ 25.560.00	
	RW21-01	FY21-0250-R3				BOSCO Constructors, Inc.	5/13/2021 BD		\$	1,055,401.00	\$ 1,055,401.00) Construction of CWRF Effluent Storage Basin In
							1/6/2022 GM	CO #1			\$ 2,746.03	Grinding and patching existing catch basin
							1/6/2022 GM	CO #2			\$ 7,968.23	Install Concrete Curb in lieu of Berm
											\$ 1,066,115.26	- j
900-18-02			CWRF Dewatering Press	\$ 2,158,000.00	0\$1,969,086.42							
	2017-33	FY18-0055				MNS Engineers, Inc.	8/31/2017 BD		\$	97,932.00	\$ 97,932.00	 Award and up to \$10,000 contingency
							12/8/2017 GM	CO #1	\$	5,370.00	\$ 5,370.00	Surveying services
							5/28/2020 BD	CO #2	\$	(44,900.00)	\$ (44,900.00	i) Credit
							5/28/2020 BD	CO #3	Ş	87,911.00	\$ 87,911.00	professional engineering services to amend and
							9/24/2020 BD	CO #4	Ş	24,670.00	\$ 24,670.00	Modify plans to rotate solids handling building
											\$ 170,983.00	1
CE0 45 04				¢ = 0.07 000 0								
650-15-01	2014 56	RE000057	PV Well (Lynwood Well)	\$ 5,967,000.00	J Ş 64,049.89	Porlitor & Ingalsha	10/22/2014 BD		ć	156 600 00	\$ 156 600 00	Award and to amond up to \$15,000 for out of
	2014-30	REQ00057					5/26/2015 GM	CO #1	ې د	2 950 00	\$ 150,000.00	Additional work field locating
							11/15/2016 GM	CO #2	ڊ خ	2,930.00	\$ 2,930.00) PV well rendering
							11/7/2017 GM	CO #2	Ś	14 922 00	\$ 14 922 00) Prenare Pre-bid documents for nump and moto
							7/26/2018 BD	CO #4	Ś	8.826.00	\$ 8.826.00	Construction services to pump only installation
							12/12/2019 BD	CO #5	Ś	34.956.00	\$ 34.956.00) Review iron and manganese filter & finalize co
							9/2/2020 GM	CO #6	\$	3,090.00	\$ 3,090.00) T&M Future FE/MN revisions
							3/11/2021 BD	CO #7	\$	4,935.00	\$ 4,935.00) Finalize plans and specifications
							3/11/2021 BD	CO #8	\$	795.00	\$ 795.00) engineering design of the removal of filters and
							3/11/2021 BD	CO #9	\$	7,182.00	\$ 7,182.00	engineering design of the removal of filters and
							6/24/2021 BD	CO #10	\$	76,062.00	\$ 76,062.00	engineering & construction support services
							1/13/2022 BD	CO #11	\$	55,803.00	\$ 55,803.00	construction support services- additonal work
							2/23/2023 BD	CO #12	\$	14,962.00	\$ 14,962.00	<u>construction support services- additonal work</u>
											\$ 384,904.00)
		FY22-0010				Unified Field Services	6/24/2021 BD		\$	2,965,198.00	\$ 2,965,198.00	 PV Well construction services
							2/15/2022 GM	CO #1	\$	-	\$ -	Add 23 working days no cost
							5/31/2022 GM	CO#2	Ş	18,515.19	\$ 18,515.19	PLC cost sharing
							12/12/2022 GM	CO# 3	Ş	17,023.00	\$ 16,338.00	 Custom Tee/Raise foundation for chlorine tank
							3/9/2023 GM	CO#4	Ş	49,565.00	\$ 46,203.08	trenching
							5/25/2023 BD	CO#5	ې د	22,865.45	\$ 22,865.45	thermostat, addti conduits & conductors
							10/4/2022 GM	CO#0	Ş	20,227.55	\$ 20,227.53 \$ 81.000.60	Tell paving added conduits wire & breaker
							10/4/2023 GW	0007			\$ 3170 347 67	
											\$ 5,170,547.67	
		EV22-0011				American Public Works Consulting Engineers	6/21/2021 PD				¢ 60 200 00) construction management services
		F122-0011				American Public Works consulting Engineers	5/2/2021 BD	CO #1			\$ 06,200.00	construction management services @ 100 hour
							2/23/2022 GW	CO#2			\$ 13,300.00	construction management services @ 100 hour
							2/25/2025 00	CONZ			¢ 97 700 00	
											\$ 87,700.00	
		REODOD36				Golden State Labor Compliance	7/16/2015 CM				\$ 2 000 00) Jahor compliance support
		FY19-0254				Gorden State Labor Compliance	7/26/2012 010	CO #1				labor compliance support
		FY22-0012					6/24/2021 BD	CO#2			\$ 24 500 00	1 Jabor compliance support
							5/3/2022 GM	CO# 3			\$ 9.024.00) labor compliance support
							2/23/2023 BD	CO#4			\$ 15,040.00) labor compliance support
							, -, 20				\$ 57.164.00	
		FY22-0306				Union Materials Testing						
						5	4/18/2022 GM				\$ 4,480.00	testing and inspection services
							9/14/2022 GM	CO#1			\$ 4,500.00	testing and inspection services
							2/10/2023 GM	CO#2			\$ 1,500.00	testing and inspection services
											\$ 10,480.00	j
	2023-91	POFY23-0163-R	1			Jordan, Gilbert & Bain Landscape Architects, Inc.	. GM	CO1			\$ 6,590.00	Landscape Architectural Services
							9/21/2023 GM	CO#1			⇒ 1,600.00	 Site visits/inspection during landcapte installat
											\$ 8,190.00	

600-20-02

7/27/20 BM) Included in 7/27/20 BM) zation and surface water management specs truction

asin Improvements

nd and update existing plans and specifications ilding 90 degrees

t-of-scope

motor lation ize contract plans & specs

ers and reconfiguration of the diesel generator ers and reconfiguration of the diesel generator

r vibration sensor aker

0 hours 0 hours

stallation
				12/6/2022 GM 12/12/2022 GM 2/22/2023 GM 4/19/2023 GM 3/23/2023 BD 3/23/2023 BD 3/23/2023 BD 3/23/2023 BD 5/22/2023 GM 6/5/2023 GM 8/7/2023 GM	Temp. Ext. CO#2 CO#3 CO #4 CO #4 CO #5 CO #5 CO #5 CO #6 CO #7 CO #8 CO #9	N/A \$ 95,610.00 \$ 5,067.00 \$ 27,000.00 \$ 6,800.00 \$ 15,276.00 \$ 15,694.00 \$ 23,524.00 \$ 23,525.00 \$ 38,279.00 \$ 76,000.00 \$ 3,000.00 \$	 zero cost, time only, to bridge longer contract negotiation fencing and one 1 bypass 5,067.00 modifications to grading of detention basin 24,958.86 Modifications to CO2 System 6,004.18 Addition of Auxillary Power Break for Generator 14,658.00 Edison Transformer Pad 14,796.00 Booster Pump/Temporary Power 23,524.00 Modification of tank finish bolted tanks 23,585.00 Additional wiring chemical tank, backwash tan and GAC control actuators 32,207.89 Addtl Newtork conduits, underground conduits, static grounding, pothole 6"waterline, pull boxes 76,000.00 Addtl grading work 2,300.00 Addtl drainage box extension
	FY22-0151		Michael K. Nunley & Associates	11/18/2021 BD 11/16/2022 GM	CO#1	\$ 179,850.00 \$ 23,956.09	 179,850.00 Conejo Wellfield construction management 23,956.09 Remainder construction management. 203,806.09
	FY22-0149		Royal CED	11/10/2021 BD 3/3/2023 GM	CO#1	\$ 1,054,110.97 \$ 1,899.17	1,054,110.97 1,899.17 PCM panel, elliminate mmcs, spare cabinet, plm bom panel 1,056,010.14
		ASRB GSA GSP					
	FY22-0136		Intera	10/6/2021 BD 8/17/2022 GM 8/17/2022 GM 8/17/2022 GM	CO#1 CO#2 CO#3		603,390.00 Development of groundwater sustainability plan 39,000.00 Hydrogeologic Conceptual Model Task 1 16,480.00 GSP team calls/coordination/project management 4,010.00 Water budget partition across bailey fault 642,390.00 Hydrogeologic Conceptual Model Task 1
400-24-01		Security Cameras \$ 155.000.00 \$ 9.750.	.48				
			Pacific Low Voltage	7/13/2023 BD 9/6/2023 GM			 141,145.00 installation of security cameras 1,255.00 install network bridget at Round Mountain Facility 142,400.00
		PVB Modeling					
2023-102	FY24-0016		Intera	5/25/2023 BD 9/21/2023 BD			167,490.00 PVB groundwater development plan 60,000.00 evaluate data how different areas respond to stresses 227,490.00 227,490.00
		GSP numerical model update					
2023-101	FY23-0322			5/25/2023 BD 10/18/2023 GM			96,240.00 GSP numerical model update 6,400.00 update model with pre-2011 delivery data 102,640.00 102,640.00
650-22-04		Camsprings waterline under Conjeo Creek					
	FY24-0054		J Vega Engineering	BD	6/8/202	23	381,825.00 construction camsprings waterline

FUNDS FY 23-24

UNRESTRICTED FUNDS		JUNE	JULY			AUGUST		SEPTEMBER		OCTOBER	% Invested			NOVEMBER		DECEMBER			JANUARY	
Investments																				
LAIF		7,210,206.59		7,279,843.43		7,279,843.43		7,279,843.43		11,745,473.64	269	6 1,2,	8							
PERSHING, LLC (T- BILLS)		32,744,886.00		32,744,886.00		32,744,886.00		32,975,661.00		32,972,554.70	749	έ 3								
		39,955,092.59		40,024,729.43		40,024,729.43		40,255,504.43		44,718,028.34	100%	5			-		-	-		-
Operating Accounts																				
U.S BANK DEPOSIT ACCOUNT		777,735.69		404,793.13		344,632.56		6,303,042.40		576,888.67										
U.S BANK DISBURSEMENTS ACCOUNT		1,665,279.99		483,893.49		464,552.05		486,946.85		1,036,566.00										
BANK OF AMERICA-RTL ACCOUNT		195,927.97	7 591,464.88			157,578.32		433,308.31		314,623.32										
		2,638,943.65		1,480,151.50		966,762.93		7,223,297.56		1,928,077.99					-		-			-
TOTAL	\$	42,594,036.24	\$	41,504,880.93	\$	40,991,492.36	\$	47,478,801.99	\$	46,646,106.33			\$		-	\$	-	-	\$	-
RESTRICTED FUNDS																				
PAYMENT FUND 2016		179,415,63		3,858,85		7,943,75		11,794,45		-	4.5.6.7									
RESERVES 2016		879 528 69		879 528 69		879 528 69		879 528 69		879 528 69	5									
WATER ACOULISITION FUND 2016		183 14		183 14		183 14		183 14		183 14	6									
WASTEWATER ACOULISITION FUND 2016		6 050 87		6 050 87		6 050 87		6 050 87		6 050 87	Ū									
TOTAL	\$	1.065.178.33	\$	889.621.55	\$	893.706.45	\$	897.557.15	\$	885.762.70			\$			\$	-		\$	
GRAND TOTAL	\$	43,659,214.57	\$	42,394,502.48	\$	41,885,198.81	\$	48,376,359.14	\$	47,531,869.03			\$		-	\$	-	-	\$	-
U.S. Treasury Bills																				
Financial Institution				Settlement		Maturity		Par		Market Price				Amour	nt		Yield to		Mark	et Value
	Cusip N	umber		Date		Date		Value		at Purchase							Maturity		С	urrent
Pershing, LLC	912796	YT0		11/7/2022		11/2/2023		14.000.000.00		95,5299				13.374.1	186.00		4.69%		13.9	997.900.00
Pershing LLC	9127962	728		3/17/2023		2/22/2024		10,000,000,00		96.01475				9.601.4	475.00		4.385%		9.1	333,100,00
Pershing LLC	912797	GX9	9/14/2023			3/14/2024		10.260.000.00		97,43561				9.996.893.70			5.293%		10.057.159.80	
Total							\$	34,260,000.00					\$	32,972,	554.70			-	\$ 33,8	388,159.80
Sarias 2016 Basanta Fund																				
Series 2010-Reserve Fullu			Ein	anaial Institution		Cottlomont		Viold to		Moturity				Amour		۸	ruad Incon			
Cusip Number			Financial Institution			Date		Worst		waturity				Amour	anount		Accided income			
09248u445			Blackro	ock Liquidity Funds		10/19/2016		5.14%		N/A				879,	528.69		3,834.	.17		
Series 2016-Water Acquisition Fund																				
Cusip Number			Financial Institution			Settlement Date		Yield to Worst		Maturity				Amount		Accrued Income		ne		
09248u445			Blackro	ock Liquidity Funds		10/19/2016		5.14%		N/A					183.14		0.93			
ANTICIPATED OUTFLOWS												FINAN	CE ME	ETING						
Water Purchases October 2023	-			792 915 33				TE						11/1	4/2023					
Payroll DD 11 1 11 2 & ME				450 000 00			JAI							11/1	-12023					
AD Charle Due 44/4 9 44/45				400,000.00																
AP Check Run 11/1 & 11/15				1,000,000.00																
Large CIP Project Payments				-																
Bond Payments			\$	2,232,815.33			٢on	iy Stafford -Gener	al M	anager										

Tamara Sexton-Finance Manager

Sandra Llamas-Senior Accountant

MEETING NOTES:

1. LAIF received \$65,630.21 in interest for quarter ended September 30, 2023

2. There was a transfer to LAIF in the amount of \$4,400,000.00

3. Cash balance in the amount of \$3,109.00 was transferred from Pershing LLC to Camrosa's deposit account. This amount is composed of \$3,106.30 difference between T-Bill that matured on Sept. 14, 2023

and the reinvested amount plus \$2.70 interest earned on the cash balances from September 14th to the time of transfer.

4. The payment fund received interest earnings in the amount of \$47.47 in the month of October.

5. The reserve fund received interest earnings in the amount of \$3,700.30 in the month of October. The full amount was transferred to the payment fund.

6. The water acquisition fund received interest earnings in the amount of \$0.90 in the month of October. The full amount was transferred to the payment fund.

7. The full balance in the payment fund in the amount of \$15,543.12 was transferred to Camrosa's deposit account per Section 3.03(d) of the Bond Indenture.

8. LAIF's average monthly rate of return for the period was 3.670%

2024 Camrosa Board Calendar

		JA	NUA	RY FEBRUARY MARCH												2024 Holidays											
S	М	Т	W	Т	F	S		S	М	Т	W	Т	F	S		S	M	Т	W	Т	F	S	January 1 st & 2 nd New Year's Holiday (Observed)				
	1	2	3	4	5	6				1		1	2	3							1	2	February 19 th - President's Day				
7	8	9	10	11	12	13		4	5	6	7	8	9	10		3	4	5	6	7	8	9	May 27 th - Memorial Day				
14	15	16	17	18	19	20		11	12	13	14	15	16	17		10	11	12	13	14	15	16	July 4 th - Independence Day				
21	22	23	24	25	26	27		18	19	20	21	22	23	24		17	18	19	20	21	22	23	September 2 nd - Labor Day				
28	29	30	31					25	26	27	28	29				24	25	26	27	28	29	30	November 11 th - Veteran's Day				
Ĩ																31							November 28th & 29th - Thanksgiving				
														_						-			December 24 th & 25 th - Christmas				
			APRII	L							MAY								JUNE				December 31 st - New Year's Eve				
S	М	Т	W	Т	F	S		S	M	Т	W	Т	F	S		S	Μ	Т	W	T	F	S					
	1	2	3	4	5	6				-	1	2	3	4								1	2024 Conferences				
7	8	9	10	11	12	13		5	6	7	8	9	10	11		2	3	4	5	6	7	8	CASA Winter Conf. (Palm Springs) Jan. 24th - 26th				
14	15	16	17	18	19	20		12	13	14	15	16	17	18		9	10	11	12	13	14	15	ACWA Spring Conf. (Sacramento) May 7th - 9th				
21	22	23	24	25	26	27		19	20	21	22	23	24	25		16	17	18	19	20	21	22	CASA 69th Annual Conf. (Monterey) July 31st - Aug. 2nd				
28	29	30						26	27	28	29	30	31			23	24	25	26	27	28	29	ACWA Fall Conf. (Palm Desert) Dec 3rd - 5th				
																30											
																							2024 AWA Meetings				
			JULY							А	UGU	ST						SEF	PTEM	BER			"Water Issues" Third Tuesday (except Apr., Aug., Dec.)				
S	Μ	Т	W	Т	F	S		S	Μ	Т	W	Т	F	S		S	Μ	Т	W	Т	F	S	AWA Board Meetings (See orange on calendar)				
	1	2	3	4	5	6						1	2	3		1	2	3	4	5	6	7	Waterwise Breakfast (See yellow on calendar)				
7	8	9	10	11	12	13		4	5	6	7	8	9	10		8	9	10	11	12	13	14	April 18 th - Annual Symposium				
14	15	16	17	18	19	20		11	12	13	14	15	16	17		15	16	17	18	19	20	21	August - DARK (No Meetings or Events)				
21	22	23	24	25	26	27		18	19	20	21	22	23	24		22	23	24	25	26	27	28	September 19th - Reagan Library Reception				
28	29	30	31					24	25	26	27	28	29	31		29	30						December 12 th - Holiday Mixer				
																							2024 VCSDA Meetings				
		00	стов	ER						NO	VEM	BER						DE	CEME	BER			February 6 th - Annual Dinner				
S	М	Т	W	Т	F	S		S	M	Т	W	Т	F	S		S	M	Т	W	Т	F	S	April 2 nd				
		1	2	3	4	5		3					1	2		1	2	3	4	5	6	7	June 4 th				
6	7	8	9	10	11	12		3	4	5	6	7	8	9		8	9	10	11	12	13	14	August 6 th				
13	14	15	16	17	18	19		10	11	12	13	14	15	16		15	16	17	18	19	20	21	October 1 st				
20	21	22	23	24	25	26		17	18	19	20	21	22	23		22	23	24	25	26	27	28	December 3 rd				
27	28	29	30	31				24	25	26	27	28	29	30		29	30	31									
Cam	osa V	Vater	Distric	ct																							
7385	7385 Santa Rosa Road					Note: Camrosa Board Meetings are highlighted in F									n RED). Boa	rd Me	eeting	gs are	held							
Cama	Camarillo, CA 93012						on the 2nd & 4th Thursday of each month at 5pm unless indicated.																				
												· · · · ·								_		_					
		Calleguas Board Meetings are held 1st & 3rd Wednesday - 5:00 PM																									